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NAWC WARMINSTER
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FIELD SAMPLING AND ANALYSIS PLAN
f r
SITE 8 SOIL REMOVAL
at the
NAVAL AIR WARFARE CENTER
WARMINSTER, PA

Issued:

AUGUST 12, 1999

Prepared for:

NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 Industrial Highway
Lester, PA 19113

Prepared by:

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Contract No. N62472-94-D-0398
Delivery Order No. 0018

Revision	Date	Prepared by:	Approved by:	Pages Affected
0	August 12, 1999	M. Watson	J. Irey, CHMM	0

Prepare in quintuplicate (original and 4 copies)

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NORTHNAVFACENGCOM 4335/3 (Rev. 6/80)

CONTROL NO. 90

CONTRACT NO.	DELIVERY ORDER #	ACTIVITY LOCATION
N62472-94-D-0398	0018	Warminster, PA

PROJECT TITLE:
Various Remedial Action at NAWC

FROM:	DATE
Foster Wheeler Environmental Corp. - Program QCM: Mark Miller	August 12, 1999
TO:	DATE
S. Lehman (3 copies)	August 12, 1999

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ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
94	SD-08, Statements, Field Sampling and Analysis Plan – Site 8 Soil Removal	M Miller			

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1.0 FIELD SAMPLING AND ANALYSIS PLAN

This Field Sampling and Analysis Plan applies to soil pile sampling for waste characterization at Site 8 at the Naval Air Warfare Center located in Warminster, PA. This brief Field Sampling and Analysis Plan has been prepared by Foster Wheeler Environmental Corporantion (FWENC) and submitted separately to allow the waste characterization and soil pile activities to proceed in parallel with other activities currently being conducted at the site.

1.1 SAMPLING PROCEDURES

Standard operating procedures for the collection of soil samples and decontamination of sampling equipment are provided in Appendix A. This Field Sampling and Analysis Plan describes the program which insures that the chemical data meet the Navy Installation Restoration Laboratory Quality Assurance Guide: Interim Guidance Document, Naval Facilities Engineering Service Center, February 1996, requirements for completeness, precision, accuracy, representativeness, comparability, dependability, and legal defensibility.

1.1.1 Sampling Objectives

Data generated by implementation of the field sampling and analysis plan was used to characterize the soil for off-site disposal or for re-use on the site.

Soil Sampling

- Soil sampling was performed at Site 8 to determine levels of contamination present in the soil stockpile for the purposes of waste characterization. Samples were collected from the soil pile which were representative, both horizontally and vertically, of the material in each pile. All samples were collected on July 23, 1999.

Table 1-1 presents the analytical and testing requirements, quantity of samples, depth of samples, analytical methodology, bottleware and preservation for sample analysis.

Soil samples were collected from approximately one foot below grade using a hand auger, stainless steel trowel and bowl in accordance with the Standard Operating Procedures (SOP) for soil sample collection provided in Appendix A.

TABLE 1-1
NAVAL AIR WARFARE CENTER
DELIVERY ORDER 020
SUMMARY OF ANALYTICAL TESTING PROCEDURES

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE QUANTITY	ANALYTICAL METHOD(1)	SAMPLE MATRIX	SAMPLE CONTAINER	SAMPLE PRESERVATIVE
Site 8 Soil Pile	One foot below grade	5	Pennsylvania Form U(2)	Soil	1 - 40 oz. jar 1 - 16 oz. jar 1 - 8 oz. jar	Cool to 4°C

Pennsylvania Form U

(1) Pennsylvania Form U Analysis(2) methods include: SW-846 1311 followed by 8260, 8270, 8150 and 6010/7471. USEPA 150.1, SW-846 Section 7.3, 9095 and 8080. USEPA 160.3, 160.4 and 413.1 ASTM D-3987-85 followed by USEPA 410.1, 160.3, 350.1 and 413.1.

(2) Pennsylvania Form U Analysis consists of the following analyses: TCLP organics, pH, Ignitability, Reactive Cyanide and Sulfide, Paint Filter Test, PCBs, Total Solids, Total Volatile Solids and Oil and Grease. In addition, ASTM Leach (D-3987-85) were conducted and the following analyses were performed on the leachate sample; Chemical Oxygen Demand, Total Solids, Ammonia-N and Oil and Grease.

The soil was estimated to be approximately 1683 yd^3. Five samples were collected throughout the pile at one foot below grade. This sampling strategy was conducted to minimize the need to mobilize heavy equipment to the site and uncover significant portions of the stockpile. A sample location figure is provided in Attachment B.

1.1.2 Sample Turnaround Time

Pennsylvania Form U results were submitted to FWENC within 48 hours of the Verified Time of Sample Reciept (VTSR). The complete hard copy data package containing all of the sample data was submitted within 7 days from the receipt of the facsimile copy.

The laboratory was instructed by FWENC to notify by telephone regarding any problems and conditions that affected the timeliness of analyses and data reporting. In particular, the laboratory was instructed to notify FWENC in advance regarding sample data that was delivered late and to specify the estimated delivery date. There were no issues regarding turnaround time concerning this data encountered by the laboratory.

1.1.3 Sample Tracking System

The objective of the sample identification system is to provide a framework for developing sample numbers that are unique to that sample, and convey information regarding sample type that will enable data users to easily identify sample locations. The procedures outlined in this section are consistent with the U.S. EPA Compendium of Superfund Field Operations Methods- EPA 540 P-87001.

Each sample was designated by an alpha-numeric code which will identify the site, matrix sampled, and contain a sequential sample number. The sample identification included the initials for the site name and the sample type, SPWC (soil pile, waste classification) and sample locations were identified by a two-character numeric code. Sample depths were not included because all sample locations were collected at one depth interval only.

FIRST SEGMENT		SECOND SEGMENT
AAAA	**XX**	**NN**
Site, Sample Type	Sample Number	Sample Depth, if necessary

Symbol Definition:	A = Alphabetic	N = Numeric	X = Alphabetic or Numeric
Sample Type:	SP = Soil Pile WC = Waste Classification		FB = Field Blank TB = Trip Blank

1.2 Quality Assurance/Quality Control (QA/QC)

All sampling procedures and quality control/quality assurance (QA/QC) requirements were consistent with those described in the Navy Installation Restoration Laboratory Quality Assurance Guide: Interim Guidance Document, Naval Facilities Engineering Service Center, February 1996. The laboratory will therefore submit a Laboratory Analysis Quality Assurance (QA) Plan in accordance with the requirements specified in the document referenced above.

In order to meet the data quality objectives of this Delivery Order, FWENC and its contracted laboratory used a reduced deliverable data package equivalent to the Navy's Level C analytical quality assurance/quality control data package level as described in Table 7.6 of the Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, NEESA 20.2-47-B, revised June 1988.

1.2.1 QA/QC Samples

Waste Characterization Samples

QA/QC samples are not required for waste characterization sampling. Laboratory QA/QC analyses were performed in accordance with each analytical method and included in the data package.

1.2.2 Sample Shipping and Packaging

Samples were packaged according to the Navy Installation Restoration Laboratory Quality Assurance Guide: Interim Guidance Document, Naval Facilities Engineering Service

Center, February 1996, or NEESA 20.2-47B, revised June 1988. Chain-of-Custody (COC) forms, sample labels, custody seals, and other sample documents were completed as specified in the above reference manual. All entries were made in permanent ink. If errors are made when completing any of these forms, the error was crossed out with a single line, initialed, and dated by the sampler.

Each sample was labeled with the following information:

- Site Name;
- Field Identification or sample station number;
- Date and time of sample collection;
- Designation as a grab or composite sample;
- Sample type (matrix);
- The signature of the sampler;
- Sample preservation and preservative used; and,
- The general types of analyses to be conducted.

Each environmental sample was properly identified and sealed in a polyethylene (PE) bag. The bag was placed in a cooler which has also been lined with a large PE bag. The samples were packed with sufficient ice (sealed in PE bags) to cool the samples to 4 degrees Celsius. Enough non-combustible adsorbent cushioning material (vermiculite) was used to minimize the possibility of container breakage. The large PE bag in the cooler was sealed and the container closed. Custody seals and nylon strapping tape was affixed to the cooler. All samples were picked up by the subcontract laboratory on the day of sample collection.

A COC record was used to record the custody of the samples, and will accompany the samples at all times. The following information was contained on the COC record:

- Project name;
- Signature of samplers;
- Sampling station number, date and time of collection, grab or composite;
- Designation;
- Signatures of individuals involved in the sample transfer;
- Sample matrix;
- Types of analysis to be conducted; and,
- Sample preservation and preservatives used.

1.2.3 Laboratory Data Reporting

As a minimum, laboratory reports presenting data will contain the following:

- Title of the project;
- Date report was prepared;
- Name, address and telephone number of the contractor;

- Sample identification numbers;
- Type of sample;
- Date on which analysis was performed;
- Any observations which may be relevant for interpretation of the data; and,
- The signature of the laboratory manager.

Each parameter tested included: name of parameter, EPA or other approved testing procedure references, detection limits, results of analysis, and the unit of the reported results.

The laboratory was provided the requirements equivalent for data set deliverables for Level C QA as outlined in Table 7.6 of the Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, NEESA 20.2-047B, revised June 1988.

Tabulated analytical results of the Pennsylvania Form U analyses are included in Attachment B. A copy of the complete laboratory Data Deliverable Package is included in Attachment C.

1.2.4 Records

Field Sampling and Monitoring Records

Records of field activities, which will support the integrity of the samples and field monitoring, were entered in a bound logbook with numbered pages. The records were dated and signed or otherwise authenticated on the day of entry. The logbook documents vital information, such as sample source, sampling methods, sample conditions, and field measurements. Any problems encountered and the corrective actions taken in the field was documented in the logbook.

Laboratory Records

In addition to the Level C QA data set deliverables, the laboratory will maintain a record, that will contain, at a minimum, the following information:

- Copies of relevant analyst notebook pages;
- Copies of relevant instrument logs;
- Raw instrument outputs (chromatograms, ion spectra, absorbency value, etc.);
- QC Charts;
- Documentation of Corrective Actions;
- Chain-of-Custody information;
- Automated data processing system output and/or calculations;
- Calibration data;
- Blank, spike and spike duplicate results.

APPENDIX A
STANDARD OPERATING PROCEDURES (SOPS)
FOR
SURFACE SOIL SAMPLING, SUBSURFACE SOIL SAMPLING, AND DECONTAMINATION PROCEDURES

APPENDIX A
STANDARD OPERATING PROCEDURES
for
SURFACE SOIL SAMPLING, SUBSURFACE SOIL SAMPLING, AND DECONTAMINATION PROCEDURES

Soil Sampling Procedures

Surface soil samples were obtained using a dedicated, disposable, stainless steel scoop, spoon or trowel to avoid cross contamination and minimize decontamination of sampling equipment. The following procedures apply to the collection of surface soils from a depth of 0-6 inches using a stainless steel scoop, spoon or trowel:

1. Wear protective gear as specified in the Health and Safety Plan. Samplers will don new sampling gloves prior to sampling at each new location.
2. Use a dedicated stainless steel scoop/spoon/trowel to scrape away surficial organic material (grass, leaves, etc.)
3. Obtain soil sample using the scoop/spoon/trowel by scooping soil from the surface to 6 inches below the surface.
4. Empty contents of the scoop/spoon/trowel into a dedicated stainless steel pan.
5. Fill volatile sample bottles immediately so as not to compromise sample integrity.
6. Homogenize soil in the pan using a dedicated utensil and transfer samples into the appropriate containers. Homogenization was completed as per the following procedure:

   > After collection of the volatile sample(s), the soil in the pan was scraped from the sides, corners and bottom of the pan, rolled to the middle of the pan, and initially mixed. The soil was quartered and moved to the four corners of the pan. Each corner will then be mixed individually, and when completed be rolled to the center of the pan and mixed once again.

7. Fill appropriate sample containers with homogenized materials randomly selected.
8. Place analytical samples in cooler and chill with ice. Samples were shipped within 24 hours to the designated laboratory.
9. Fill out field logbook, custody seals, labels, and Chain-of-Custody forms.

Shallow Subsurface Soil Sampling Procedure

Shallow subsurface soil samples are defined as samples collected from a depth greater than 0.5 feet using a stainless steel hand auger. For shallow subsurface soil sampling, the following procedures were used.

1. Collect the surface soil sample (i.e., 0-2.0 feet) following the steps outlined above.
2. Use a decontaminated hand driven stainless steel bucket auger.

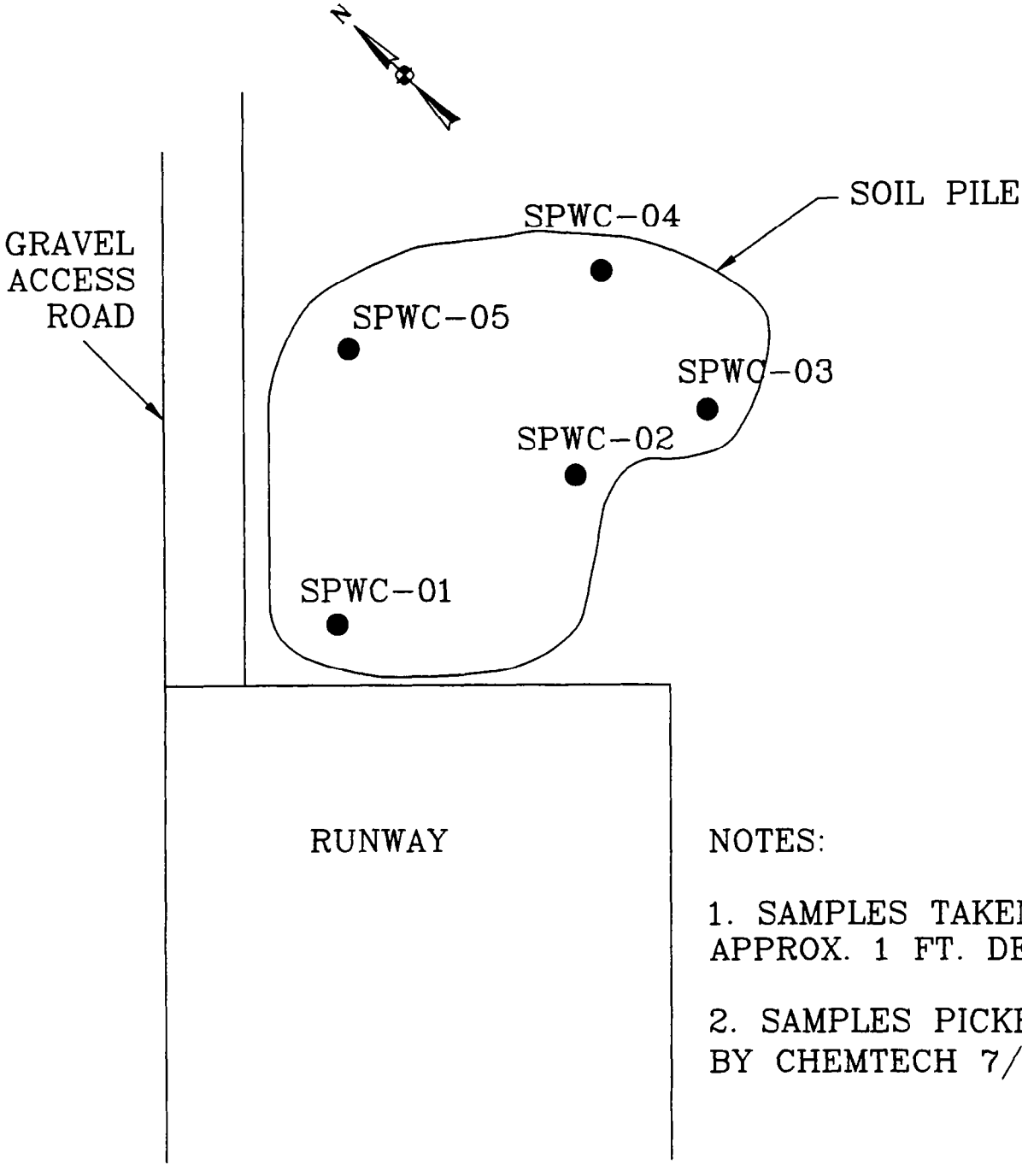
3. Begin turning the auger with a clockwise direction and continue until the desired sampling depth (i.e., 0.5-1.5 feet) is obtained (this would be achieved in a minimum of one attempt since the hand auger bucket is 1 foot long).
4. Fill the sample containers with soil using stainless steel spatulas or spoons. VOA samples are to be taken as discrete grab samples. These were taken immediately from the entire length of the split-spoon (as appropriate, and properly packaged. Solid samples for all other chemical analyses must be homogenized in decontaminated stainless steel bowls with stainless steel utensils prior to being put into containers. Appropriately label each sample container.
5. Place the analytical samples in a sample cooler and chill to 4°C.
6. Complete the necessary sampling paperwork (e.g., sample labels, custody seals, chain-of-custody forms, etc.) for the analytical samples. Record sample information in the field logbook.

Decontamination Procedures

This procedure is applicable for any equipment that was used to collect a sample for chemical analysis. Whenever feasible, field equipment was pre-cleaned (using this procedure at an equipment maintenance area, wrapped in aluminum foil, and dedicated to a particular sampling point. Laboratory and field decontamination of equipment used for collection of soil samples was as follows:

1. Alconox detergent wash
2. Potable water rinse
3. Nitric acid rinse (10% solution using ultra pure grade acid)
4. Distilled/deionized water rinse
5. Pesticide grade acetone rinse
6. Distilled/deionized water rinse
7. Air dry

APPENDIX B
SAMPLE LOCATION FIGURE
AND
PENNSYLVANIA FORM U ANALYTICAL RESULTS



NOTES:

1. SAMPLES TAKEN AT APPROX. 1 FT. DEPTH.

2. SAMPLES PICKED UP BY CHEMTECH 7/23/99

U.S. Navy RAC
NAWC WARMINSTER, PA

Site 8 Soil Pile
Sample Locations

FOSTER WHEELER ENVIRONMENTAL CORPORATION

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NAVAL AIR WARFARE CENTER, WARMINSTER
SITE 8 SOIL REMOVAL
WASTE CHARACTERIZATION OF SOIL PILES
PA FORM U ANALYTICAL RESULTS

SOIL PILE SAMPLE: SPWC-01

FLASH POINT	OIL & GREASE	pH	Reactive Cyanide	Reactive Sulfide	% SOLIDS	Total Volatile Solids	PAINT FILTER
> 100° C	327 mg/Kg	6.95	non-detect	non-detect	95.5	3470 mg/Kg	< 1.0 mL/ kg

POLYCHLORINATED BIPHENYLS
(detection limit 34 - 69 ug/kg)

Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	24

TCLP METALS

Arsenic	Lead	Barium	Cadmium	Mercury	Selenium	Silver	Chromium	Nickel	Copper	Zinc
non-detect	non-detect	600 ug/L	2.2 ug/L	non-detect	non-detect	non-detect	non-detect	4.8 ug/L	5.2 ug/L	30.2 ug/L

TCLP HERBICIDES & PESTICIDES
(detection limits 1-100 ug/L)

2,4-D	Silvex	2,4,5-T	Chlordane	Endrin	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Lindane
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP VOLATILES
(detection limit 50 ug/L)

Benzene	Carbon Tetra-chloride	Chlorobenzene	Chloroform	1,2-Dichlorethane	1,1-Dichlorethylene	2-Butanone	Tetrachloro-ethylene	Trichloro-ethylene	Vinyl Chloride
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP SEMI VOLATILES
(detection limit 100 - 250 ug/L)

Cresol	2,4 - Dinitro-toluene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-ethane	Nitro-benzene	Penta-chloro-phenol	Pyridine	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	1,4, - Dichloro-benzene	M -cresol	P-cresol	O - cresol
non - detect	non -detect	non -detect	non-detect	non -detect	non - detect	non -detect	non -detect	non-detect	non-detect	non - detect	non - detect	non - detect	non - detect

ASTM LEACH TEST REPORT

COD	Nitrogen - NH_4	Total Solids	Oil & Grease
23.0 mg/L	0.17 mg/L	85.0 mg/L	97.0 mg/L

NAVAL AIR WARFARE CENTER, WARMINSTER
SITE 8 SOIL REMOVAL
WASTE CHARACTERIZATION OF SOIL PILES
PA FORM U ANALYTICAL RESULTS

SOIL PILE SAMPLE: SPWC-02

FLASH POINT	OIL & GREASE	pH	Reactive Cyanide	Reactive Sulfide	% SOLIDS	Total Volatile Solids	PAINT FILTER
> 100° C	1170 mg/Kg	6.70	non-detect	non-detect	91.13	3490 mg/Kg	< 1.0 mL/ kg

POLYCHLORINATED BIPHENYLS
(detection limit 36 - 73 ug/kg)

Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP METALS

Arsenic	Lead	Barium	Cadmium	Mercury	Selenium	Silver	Chromium	Nickel	Copper	Zinc
non-detect	non-detect	264 ug/L	non-detect	non-detect	non-detect	non-detect	non-detect	2.7 ug/L	5.7 ug/L	11.0 ug/L

TCLP HERBICIDES & PESTICIDES
(detection limits 1-100 ug/L)

2,4-D	Silvex	2,4,5-T	Chlordane	Endrin	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Lindane
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP VOLATILES
(detection limit 50 ug/L)

Benzene	Carbon Tetra-chloride	Chlorobenzene	Chloroform	1,2-Dichlorethane	1,1-Dichlorethylene	2-Butanone	Tetrachloro-ethylene	Trichloro-ethylene	Vinyl Chloride
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP SEMI VOLATILES
(detection limit 100 - 250 ug/L)

Cresol	2,4 - Dinitro-toluene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-ethane	Nitro-benzene	Penta-chloro-phenol	Pyridine	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	1,4, - Dichloro-benzene	M -cresol	P-cresol	O - cresol
non - detect	non -detect	non -detect	non-detect	non -detect	non - detect	non -detect	non -detect	non-detect	non-detect	non - detect	non - detect	non - detect	non - detect

ASTM LEACH TEST REPORT

COD	Nitrogen - NH_4	Total Solids	Oil & Grease
26.0 mg/L	0.362 mg/L	129 mg/L	330 mg/L

NAVAL AIR WARFARE CENTER, WARMINSTER
SITE 8 SOIL REMOVAL
WASTE CHARACTERIZATION OF SOIL PILES
PA FORM U ANALYTICAL RESULTS

SOIL PILE SAMPLE: SPWC-03

FLASH POINT	OIL & GREASE	pH	Reactive Cyanide	Reactive Sulfide	% SOLIDS	Total Volatile Solids	PAINT FILTER
> 100° C	367 mg/Kg	6.20	non-detect	non-detect	91.54	3320 mg/Kg	< 1.0 mL/ kg

POLYCHLORINATED BIPHENYLS
(detection limit 36 - 72 ug/kg)

Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP METALS

Arsenic	Lead	Barium	Cadmium	Mercury	Selenium	Silver	Chromium	Nickel	Copper	Zinc
non-detect	non-detect	458 ug/L	non-detect	non-detect	non-detect	non-detect	non-detect	4.3 ug/L	4.3 ug/L	6.0 ug/L

TCLP HERBICIDES & PESTICIDES
(detection limits 1-100 ug/L)

2,4-D	Silvex	2,4,5-T	Chlordane	Endrin	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Lindane
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP VOLATILES
(detection limit 50 ug/L)

Benzene	Carbon Tetra-chloride	Chlorobenzene	Chloroform	1,2-Dichlorethane	1,1-Dichlorethylene	2-Butanone	Tetrachloro-ethylene	Trichloro-ethylene	Vinyl Chloride
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP SEMI VOLATILES
(detection limit 100 - 250 ug/L)

Cresol	2,4 - Dinitro-toluene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-ethane	Nitro-benzene	Penta-chloro-phenol	Pyridine	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	1,4, - Dichloro-benzene	M -cresol	P-cresol	O - cresol
non - detect	non -detect	non -detect	non-detect	non -detect	non - detect	non -detect	non -detect	non-detect	non-detect	non - detect	non - detect	non - detect	non - detect

ASTM LEACH TEST REPORT

COD	Nitrogen - NH_4	Total Solids	Oil & Grease
21.0 mg/L	0.346 mg/L	109 mg/L	146 mg/L

NAVAL AIR WARFARE CENTER, WARMINSTER
SITE 8 SOIL REMOVAL
WASTE CHARACTERIZATION OF SOIL PILES
PA FORM U ANALYTICAL RESULTS

SOIL PILE SAMPLE: SPWC-04

FLASH POINT	OIL & GREASE	pH	Reactive Cyanide	Reactive Sulfide	% SOLIDS	Total Volatile Solids	PAINT FILTER
> 100° C	360 mg/Kg	5.85	non-detect	non-detect	93.12	3310 mg/Kg	< 1.0 mL/ kg

POLYCHLORINATED BIPHENYLS
(detection limit 35 - 71 ug/kg)

Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP METALS

Arsenic	Lead	Barium	Cadmium	Mercury	Selenium	Silver	Chromium	Nickel	Copper	Zinc
non-detect	non-detect	242 ug/L	non-detect	non-detect	non-detect	non-detect	non-detect	2.5 ug/L	5.3 ug/L	11.1 ug/L

TCLP HERBICIDES & PESTICIDES
(detection limits 1-100 ug/L)

2,4-D	Silvex	2,4,5-T	Chlordane	Endrin	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Lindane
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP VOLATILES
(detection limit 50 ug/L)

Benzene	Carbon Tetra-chloride	Chlorobenzene	Chloroform	1,2-Dichlorethane	1,1-Dichlorethylene	2-Butanone	Tetrachloro-ethylene	Trichloro-ethylene	Vinyl Chloride
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP SEMI VOLATILES
(detection limit 100 - 250 ug/L)

Cresol	2,4 - Dinitro-toluene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-ethane	Nitro-benzene	Penta-chloro-phenol	Pyridine	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	1,4, - Dichloro-benzene	M -cresol	P-cresol	O - cresol
non - detect	non -detect	non -detect	non-detect	non -detect	non - detect	non -detect	non -detect	non-detect	non-detect	non - detect	non - detect	non - detect	non - detect

ASTM LEACH TEST REPORT

COD	Nitrogen - NH_4	Total Solids	Oil & Grease
24.0 mg/L	0.522 mg/L	105 mg/L	126 mg/L

NAVAL AIR WARFARE CENTER, WARMINSTER
SITE 8 SOIL REMOVAL
WASTE CHARACTERIZATION OF SOIL PILES
PA FORM U ANALYTICAL RESULTS

SOIL PILE SAMPLE: SPWC-05

FLASH POINT	OIL & GREASE	pH	Reactive Cyanide	Reactive Sulfide	% SOLIDS	Total Volatile Solids	PAINT FILTER
> 100° C	543 mg/Kg	5.90	non-detect	non-detect	92.9	3680 mg/Kg	< 1.0 mL/ kg

POLYCHLORINATED BIPHENYLS
(detection limit 35 - 71 ug/kg)

Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP METALS

Arsenic	Lead	Barium	Cadmium	Mercury	Selenium	Silver	Chromium	Nickel	Copper	Zinc
non-detect	non-detect	361 ug/L	non-detect	non-detect	non-detect	non-detect	non-detect	2.2 ug/L	5.9 ug/L	9.8 ug/L

TCLP HERBICIDES & PESTICIDES
(detection limits 1-100 ug/L)

2,4-D	Silvex	2,4,5-T	Chlordane	Endrin	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene	Lindane
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP VOLATILES
(detection limit 50 ug/L)

Benzene	Carbon Tetra-chloride	Chlorobenzene	Chloroform	1,2-Dichlorethane	1,1-Dichlorethylene	2-Butanone	Tetrachloro-ethylene	Trichloro-ethylene	Vinyl Chloride
non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect	non-detect

TCLP SEMI VOLATILES
(detection limit 100 - 250 ug/L)

Cresol	2,4 - Dinitro-toluene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-ethane	Nitro-benzene	Penta-chloro-phenol	Pyridine	2,4,5-Trichloro-phenol	2,4,6-Trichloro-phenol	1,4, - Dichloro-benzene	M -cresol	P-cresol	O - cresol
non - detect	non -detect	non -detect	non-detect	non -detect	non - detect	non -detect	non -detect	non-detect	non-detect	non - detect	non - detect	non - detect	non - detect

ASTM LEACH TEST REPORT

COD	Nitrogen - NH_4	Total Solids	Oil & Grease
28.0 mg/L	0.378 mg/L	160 mg/L	151 mg/L

APPENDIX C
LABAORATORY DATA DELIVERABLE

CHEMTECH 110 Route 4 • Englewood, New Jersey 07631 Phone: (201) 567-6868 Fax (201) 567-1333

DATA PACKAGE FOR FULL TCLP, PCBs & GENERAL CHEMISTRY

WARMINSTER NAVAL AIR STATION

FOSTER WHEELER ENVIROMENTAL
ONE OXFORD VALLEY, SUITE 200
LANGHORNE PA 19047
215-275-8155

CHEMTECH PROJECT #	12693NJ
ATTENTION	JIM IREY

Since 1967

CHEMTECH

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CHEMTECH CONSULTING GROUP

COVER PAGE

[redacted]

000001

SC 8/2

CHEMTECH

COVER PAGE

Lab Name: Chemtech Consulting Group Client: FOSTER WHEELER ENVIRONMENTAL
Lab Code: CHEM Project No.: 12693NJ Project Name: NAWC

Client Sample No.	Lab Sample ID
SPWC-01	78945
SPWC-02	78946
SPWC-03	78947
SPWC-04	78948
SPWC-05	78949
SPWC-01	78950
SPWC-02	78951
SPWC-03	78952
SPWC-04	78953
SPWC-05	78954

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designed, as verified by the following signature.

Signature: _____ Name: DIVYAJIT MEHTA

Date : 8/2/99 Title: LAB DIRECTOR

CHEMTECH CONSULTING GROUP

CHAIN OF CUSTODY RECORD

Please check one:

CHEMTECH
CHAIN OF CUSTODY RECORD

☐ 110 Route 4
Englewood, NJ 07631
(201) 567-6868
Fax (201) 567-1333

☐ 515 Route 9 S
Barnegat, NJ 08005
(609) 698-0199
Fax (609) 698-0910

☐ ANALAB/ICM Division
205 Campus Plaza 1
Edison, NJ 08837
Phone (732) 225-4111 Fax (732) 225-4110

CHEMTECH JOB NO

CHEMTECH QUOTE NO 12193

CLIENT INFORMATION

REPORT TO BE SENT TO

COMPANY: Foster Wheeler Environmental Corp

ADDRESS: One Oxford Valley, Suite 200

CITY: Langhorne STATE: PA ZIP: 19047

ATTENTION: Jim Irey

PHONE: (215) 275-8155 FAX: (215) 702-4045

PROJECT INFORMATION

PROJECT NAME: NAWC Warminster

PROJECT NO.: 1284

PROJECT MANAGER: J. Irey

LOCATION: Jacksonville Rd / RT 332 E

PHONE: (215) 441-8512 FAX (215) 441-8544

BILLING INFORMATION

BILL TO: FWENC PO #:

ADDRESS: One Oxford Valley Suite 200

CITY: Langhorne STATE: PA ZIP: 19047

ATTENTION: J. Irey PHONE (215) 275-8155

DATA TURNAROUND INFORMATION

☐ 21 DAYS
☐ 14 DAYS
☑ 7 DAYS
☐ OTHER

APPROVED BY (CHEMTECH'S PERSONNEL)

21 DAY TURNAROUND HARDCOPY, EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☐ NJ REDUCED
☐ NJ CLP
☐ USEPA CLP
☐ NYS CLP
☐ OTHER
☐ CHEMTECH FORMAT
☐ RESULTS ONLY
☐ NYS ASP
☐ DISKETTES

ANALYSIS

PA Form U

PRESERVATIVES

CHEMTECH SAMPLE ID	SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (E)	2	3	4	5	6	7	8	9
1. 78945	SPWC-01	SOIL		X	7/22/99	1411	3	✓								
2. 78946	SPWC-02	↓		↓	↓	1430	3	✓								
3. 78947	SPWC-03					1440	3	✓								
4. 78948	SPWC-04					1500	3	✓								
5. 78949	SPWC-05					1510	3	✓								
6.																
7.																
8																

COMMENTS

Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	7/22/99	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME 07/23/99 0[illegible]	RECEIVED FOR LAB BY 3. [signature]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp of Cooler 4°C

Comments:

FAX #

Please fax copy of results to Jeff Schneider (215) 702-4045

Page 1 of 1

Shipment Complete Yes ✓ No

Ver 6-99

WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

NO 25201

CHEMTECH CONSULTING GROUP

METHODOLOGY REVIEW

CHEMTECH

METHODOLOGY SUMMARY
PROJECT #12693NJ

TCLP VOLATILE ORGANICS
The analysis of TCLP Volatile Organics is based on Method 8260B.

TCLP SEMIVOLATILE ORGANICS
The analysis of TCLP Semivolatile Organics is based on Method 8270.

PCBs
The analysis of PCBs is based on Method 8082.

TCLP PESTICIDES
The analysis of TCLP Pesticides is based on Method 8081.

TCLP HERBICIDES
The analysis of TCLP Herbicides is based on Method 8150.

TCLP METALS
The analysis of TCLP Metals is based on Method 6010, except for Mercury which is based on Method 7471.

IGNITIBILITY
The analysis of Ignitibility is based on Method 1010.

OIL & GREASE
The analysis of Oil & Grease is based on Method 413.1.

CORROSIVITY
The analysis of Corrosivity is based on Method Y9045.

SULFIDE-REACTIVITY
The analysis of Sulfide-Reactivity is based on Method 9030.

CYANIDE-REACTIVITY
The analysis of Cyanide-Reactivity is based on Method 9010.

TOTAL VOLATILE SOLIDS
The analysis of Total Volatile Solids is based on Method 160.4.

PERCENT SOLIDS
The analysis of Percent Solids is based on Method 160.3.

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PAINT FILTER TEST
The analysis of Paint Filter Test is based on Method 9095.

CHEMICAL OXYGEN DEMAND
The analysis of Chemical Oxygen Demand is based on Method HAC-3000.

NITROGEN, AMMONIA
The analysis of Nitrogen, Ammonia is based on Method 350.1.

TOTAL SOLIDS
The analysis of Total Solids is based on Method 160.3.

CHEMTECH CONSULTING GROUP

LABORATORY CHRONICLE

000008

CHEMTECH

LABORATORY CHRONICLE
PROJECT # 12693NJ

ANALYSIS	COLLECTED	DIGESTED/ EXTRACTED	ANALYZED	ANALYST	SAMPLE CONDITION
TCLP Volatile Organics	07/22/99	NA	07/26/99	VP	Intact Cool (4oC)
TCLP Semivolatile Organics	07/22/99	07/26/99	07/28/99	BL	Intact Cool (4oC)
PCBs	07/22/99	07/24/99	07/27/99	JP	Intact Cool (40C)
TCLP Pesticides	07/22/99	07/26/99	07/29/99 07/30/99	JP	Intact Cool (4oC)
TCLP Herbicides	07/22/99	07/26/99	07/29/99	JP	Intact Cool (4oC)
TCLP Metals	07/22/99	07/27/99	07/28/99	SJ	Intact Cool (4oC)
Mercury	07/22/99	07/26/99	07/26/99	SBS	Intact Cool (4oC)
Ignitibility	07/22/99	NA	07/27/99	HCP	Intact Cool (4oC)
Oil & Grease	07/22/99	NA	07/27/99	HNP	Intact Cool (4oC)
Corrosivity	07/22/99	NA	07/26/99	HSP	Intact Cool (4oC)
Sulfide Reactivity	07/22/99	NA	07/27/99	PPS	Intact Cool (4oC)
Cyanide Reactivity	07/22/99	NA	07/27/99	PPS	Intact Cool (4oC)

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Total Volatile Solids	07/27/99	NA	07/27/99	BP	Intact Cool (4oC)
Chemical Oxygen Demand	07/27/99	NA	07/28/99	HSP	Intact Cool (4oC)
Nitrogen Ammonia	07/27/99	NA	07/27/99	ST	Intact Cool (4oC)
Total Solids	07/27/99	NA	07/27/99	HSP	Intact Cool (4oC)

CHEMTECH CONSULTING GROUP

CONFORMANCE/ NON-CONFORMANCE SUMMARY

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CONSULTING GROUP INC

TCL Volatiles & TCL Semivolatiles

GC/MS CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. 12693

	NO	YES
1. Chromatograms Labeled/Compounds Identified		✓
2. Tune Specifications		
a. BFB Meets Criteria		✓
b. DFTPP Meets Criteria		
3. Tuning Frequency Performed every 24 hrs for 600 series & 12 hrs for 8000 series		✓
4. Calibration Frequency Initial calibration performed within 30 days before sample analysis & cont. calibration percformed within 24 hrs of sample analysis for 600 series & 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 & concentrations in each blank:	✓	
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
7. Surrogate Recoveries Meet Criteria If not met, list compounds & their recoveries which fall outside acceptable range:		✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
8. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list compounds & their recoveries which fall outside acceptable range:		✓
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
9. Internal Standard Areas & Retention Time Shifts Meet Criteria Internal standard areas between -50% & +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: Alisa Chrembluski Date: 7/30/99

New Jersey Lab ID#: 02548 New York Lab ID#: 10624

PCBs

CHEMTECH
CONSULTING GROUP, INC.

GC CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. 1269315

	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 & concentrations in each blank: a. Volatile Fraction b. Pesticides/PCBs c. Herbicide Fraction d. Other	✓	
5. Surrogate Recoveries Meet Criteria If not met, list compounds & their recoveries which fall outside 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 compounds & their recoveries which fall outside 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 number of days exceeded for each sample:		✓
9. Analysis Holding time Met If not met, list number of days exceeded for each sample:		✓

Laboratory Supervisor: [illegible] Date: 7/30/99

New Jersey Lab ID#: 02548 New York Lab ID#: 10624

TCLP Pesticides CO, TCLP Herbicides

CHEMTECH
CONSULTING GROUP, INC.

GC CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. 12693415

	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 & concentrations in each blank: a. Volatile Fraction b. Pesticides/PCBs c. Herbicide Fraction d. Other		
5. Surrogate Recoveries Meet Criteria		✓
If not met, list compounds & their recoveries which fall outside 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 compounds & their recoveries which fall outside 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 number of days exceeded for each sample:		
9. Analysis Holding time Met		✓
If not met, list number of days exceeded for each sample:		

Laboratory Supervisor: [illegible] Date: 7/30/99

New Jersey Lab ID#: 02548 New York Lab ID#: 10624

TCH metals

CHEMTECH CONSULTING GROUP, INC

METALS ANALYSIS CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. 126973N5

	NO	YES
1. Calibration Summaries Meet Criteria		✓
2. ICP Interference Check Sample (ICS) Results Summary Submitted Meets Criteria (if applicable)		✓
3. Serial Dilution Summary Submitted Meets Criteria (if applicable)		✓
4. Laboratory Control Sample (LCS) Summary Submitted Meets Criteria (if applicable)		✓
5. Blank Contamination If yes, list compounds & concentrations in each blank:	✓	
6. Matrix Spike Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
7. Sample Duplicate Analysis Meet QC Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:		✓
8. Digestion and Analysis Holding Time Met If not met, list compounds and number of days exceeded for each sample:		✓

Laboratory Supervisor: [illegible] Date: 7/30/95

New Jersey Lab ID#: 02548 New York Lab ID#: 10624

CHEMTECH
CONSULTING GROUP INC

GENERAL CHEMISTRY
CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. 12693

	NO	YES
1. Blank Contamination	✓	
If yes, list compounds and concentrations in each blank:		
2. Matrix Spike Recoveries Meet Criteria		✓
If not met, list those compounds & their recoveries which fall outside the acceptable range:		
3. Sample Duplicate Analysis Meet QC Criteria		✓
If not met, list those compounds & their recoveries which fall outside the acceptable range:		
4. Analysis Holding Time Met		✓
If not met, list analyses and number of days exceeded for each sample:		

Laboratory Supervisor: [illegible] Date: 7/30/89

New Jersey Lab ID#: 02548 New York Lab ID#: 10624

CHEMTECH

DATA REPORTING QUALIFIERS - ORGANIC

For reporting results, the following "Results Qualifiers" are used:

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

U - Indicates the compound was analyzed for, but was not detected. Report the minimum detection limit for the sample with the U, ie "10 U". This is not necessarily the instrument detection limit. The figure represents the minimum detection limit attainable for this particular sample based on any concentration or dilution that may have been required.

J - Indicates an estimated value. This flag is used:
(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed).
(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit but greater than zero. If the detection limit was 10 ug/L and a concentration of 3 ug/L was calculated, report as "3 J".

B - Indicates the analyte was found in the blank as well as the sample; report as "12 B".

E - Indicates the analyte's's concentration exceeds the calibrated range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

P - This flag is used for a Pesticide/Aroclor target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

N - This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

CHEMTECH

DATA REPORTING QUALIFIERS - - INORGANIC

For reporting results, the following "Results Qualifiers" are used:

B - If the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

U - If the analyte was analyzed for, but not detected.

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 - The reported value was determined by the Method of Standard Additions (MSA).

W - Post-digestion spike for Furnace AA analysis is out of control limits (85 - 115%), while sample absorbance is less than 50% of spike absorbance.

*** -** Duplicate analysis not within control limits.

+ - Correlation coefficient for the MSA is less than 0.995.

***** -** Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

M (Method) qualifier

"P" for ICP
"A" for Flame AA
"F" for Furnace AA
"PM" for ICP when Microwave Digestion is used
"AM" for flame AA when Microwave Digestion is used
"FM" for furnace AA when Microwave Digestion is used
"CV" for Manual Cold Vapor AA
"AV" for automated Cold Vapor AA
"CA" for Midi-Distillation Spectrophotometric
"AS" for Semi-Automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"NR" if the analyte is not required to be analyzed

RESULTS SUMMARY

1A

SAMPLE NO.

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SPWC-01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIST Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78945

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11675.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1B
TCLP ANALYSIS DATA SHEET

SAMPLE NO.
SPWC-01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78945

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5127.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78945

Sample wt/vol: 30.3 (g/ml) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	34	U
11104-28-2------	Aroclor-1221	69	U
11141-16-5------	Aroclor-1232	34	U
53469-21-9------	Aroclor-1242	34	U
12672-29-6------	Aroclor-1248	34	U
11097-69-1------	Aroclor-1254	34	U
11096-82-5------	Aroclor-1260	24	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

L· ˙ Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78945TP

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78945

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-01

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78945TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	600			P
7440-43-9	Cadmium	2.2	B		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	4.8	B		P
7440-50-8	Copper	5.2	B		P
7440-66-6	Zinc	30.2			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000025

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78945
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-01
TIME SAMPLED- 1411 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	327	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.95	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3470	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	95.50	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

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~~n003EC~~

110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax: (201) 567-1333

515 Route 9
Barnegat, New Jersey 08005
Phone: (609) 698-0199 Fax: (609) 698-0910

NYSDOH Certification No. 10624
NJDEP Certification No. 02548

NJDEP Certification No. 15004

1A

SAMPLE NO

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SPWC-02

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78946

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11676.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-02

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78946

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5128.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

000027

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

I Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78946

Sample wt/vol: 30.2 (g/ml) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	73	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

L Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78946TP

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

000029

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78946

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-02

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78946TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	264			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.7	B		P
7440-50-8	Copper	5.7	B		P
7440-66-6	Zinc	11.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78946
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-02
TIME SAMPLED- 1430 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	1170	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.70	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3490	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	91.13	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000367

110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax: (201) 567-1333

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Barnegat, New Jersey 08005
Phone. (609) 698-0199 Fax: (609) 698-0910

NYSDOH Certification No. 10624
NJDEP Certification No. 02548

NJDEP Certification No. 15004

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

SPWC-03

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78947

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11677.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO

SPWC-03

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78947

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5129.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

L Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78947

Sample wt/vol: 30.3 (g/ml) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	72	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

L. Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78947TP

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78947

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-03

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78947TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	458			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	4.3	B		P
7440-50-8	Copper	4.3	B		P
7440-66-6	Zinc	6.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78947
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-03
TIME SAMPLED- 1440 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	367	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.20	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3320	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	91.54	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000371A

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110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax: (201) 567-1333

515 Route 9
Barnegat, New Jersey 08005
Phone (609) 698-0199 Fax: (609) 698-0910

NYSDOH Certification No. 10624
NJDEP Certification No. 02548

NJDEP Certification No. 15004

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

SPWC-04

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78948

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11678.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-04

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78948

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5130.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

L. Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78948

Sample wt/vol: 30.4 (g/ml) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

La. Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78948TP

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78948

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-04

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78948TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	242			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.5	B		P
7440-50-8	Copper	5.3	B		P
7440-66-6	Zinc	11.1	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78948
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-04
TIME SAMPLED- 1500 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	360	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	5.85	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3310	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	93.12	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000434
~~000360~~

110 Route 4
Englewood, New Jersey 07631
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Barnegat, New Jersey 08005
Phone: (609) 698-0199 Fax: (609) 698-0910

NYSDOH Certification No. 10624
NJDEP Certification No. 02548

NJDEP Certification No. 15004

1A

SAMPLE NO

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SPWC-05

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78949

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11679.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

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TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-05

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78949

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5131.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78949

Sample wt/vol: 30.5 (g/ml) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	71	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	35	U
12672-29-6------	Aroclor-1248	35	U
11097-69-1------	Aroclor-1254	35	U
11096-82-5------	Aroclor-1260	35	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

L Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78949TP

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78949

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-05

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78949TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	361			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.2	B		P
7440-50-8	Copper	5.9	B		P
7440-66-6	Zinc	9.8	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000049

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78949
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-05
TIME SAMPLED- 1510 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	543	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	5.90	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3680	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	92.90	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000 49 A
~~100370~~

110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax. (201) 567-1333

515 Route 9
Barnegat, New Jersey 08005
Phone (609) 698-0199 Fax (609) 698-0910

NYSDOH Certification No 10624
NJDEP Certification No. 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78950
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-01
TIME SAMPLED- 1411 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	23.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.170	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	97.0	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	85.0	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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NJDEP Certification No. 02548

NJDEP Certification No. 15004

CHEMTECH LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78951
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-02
TIME SAMPLED- 1430 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	26.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.362	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	330	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	129	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax: (201) 567-1333

515 Route 9
Barnegat, New Jersey 08005
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NYSDOH Certification No. 10624
NJDEP Certification No 02548

NJDEP Certification No. 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78952
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-03
TIME SAMPLED- 1440 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	21.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.346	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	109	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	146	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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110 Route 4
Englewood, New Jersey 07631
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NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No. 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78953
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-04
TIME SAMPLED- 1500 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	24.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.522	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	105	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	126	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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812

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Barnegat, New Jersey 08005
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NYSDOH Certification No. 10624
NJDEP Certification No. 02548

NJDEP Certification No. 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78954
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-05
TIME SAMPLED- 1510 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	28.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.378	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	160	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	151	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No. 15004

CHEMTECH CONSULTING GROUP

VOLATILES

SAMPLE DATA

A.

ANALYTICAL RESULTS SUMMARY

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINIST Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78945

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11675.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

SPWC-02

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78946

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11676.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-03

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78947

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11677.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-04

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78948

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11678.D

Level: (low/med) Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-05

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78949

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11679.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

B.

TUNING RESULTS SUMMARY

5A

TCLP VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 11693NJ Site: _____ Location: _____ Group: SPWC-01

Lab File ID: M11437.D BFB Injection Date: 6/28/99

Instrument ID: VOA 3 BFB Injection Time: 1650

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.2
75	30.0 - 60.0% of mass 95	43.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	91.9
175	5.0 - 9.0% of mass 174	6.1 (6.7)1
176	Greater than 95.0% but less than 101.0% of mass 174	89.2 (97.1)1
177	5.0 - 9.0% of mass 176	4.8 (5.4)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	M11438.D	6/28/99	1719
02	VSTD200	VSTD200	M11439.D	6/28/99	1805
03	VSTD100	VSTD100	M11440.D	6/28/99	1903
04	VSTD020	VSTD020	M11441.D	6/28/99	1948
05	VSTD010	VSTD010	M11442.D	6/28/99	2033
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5A

TCLP VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Lab File ID: M11670.D BFB Injection Date: 7/26/99

Instrument ID: VOA 3 BFB Injection Time: 0925

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.9
75	30.0 - 60.0% of mass 95	43.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.4 (0.4)1
174	Greater than 50.0% of mass 95	88.3
175	5.0 - 9.0% of mass 174	5.8 (6.5)1
176	Greater than 95.0% but less than 101.0% of mass 174	88.0 (99.7)1
177	5.0 - 9.0% of mass 176	5.8 (6.6)2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5002	M11672.D	7/26/99	1041
02	VBLK01	VBLK01	M11673.D	7/26/99	1253
03	EXTBLK	EXTBLK	M11674.D	7/26/99	1350
04	SPWC-01	O78945	M11675.D	7/26/99	1437
05	SPWC-02	O78946	M11676.D	7/26/99	1523
06	SPWC-03	O78947	M11677.D	7/26/99	1609
07	SPWC-04	O78948	M11678.D	7/26/99	1655
08	SPWC-05	O78949	M11679.D	7/26/99	1741
09	SPWC-05MS	O78949MS	M11680.D	7/26/99	1828
10	SPWC-05MSD	O78949SD	M11681.D	7/26/99	1913
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C.

METHOD BLANK RESULTS SUMMARY

4A

SAMPLE NO.

VBLK01

TCLP VOLATILE METHOD BLANK SUMMARY

Lab Name: CHEMTECH Contract: FOSTER

Project No.: 12693NJ Site: Location: Group: SPWC-01

Lab File ID: M11673.D Lab Sample ID: VBLK01

Date Analyzed: 7/26/99 Time Analyzed: 1253

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA 3

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EXTBLK	EXTBLK	M11674.D	1350
02	SPWC-01	O78945	M11675.D	1437
03	SPWC-02	O78946	M11676.D	1523
04	SPWC-03	O78947	M11677.D	1609
05	SPWC-04	O78948	M11678.D	1655
06	SPWC-05	O78949	M11679.D	1741
07	SPWC-05MS	O78949MS	M11680.D	1828
08	SPWC-05MSD	O78949SD	M11681.D	1913
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30				

COMMENTS:

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: VBLK01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: M11673.D

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	10	U
75-35-4	1,1-Dichloroethene	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
127-18-4	Tetrachloroethene	10	U
108-90-7	Chlorobenzene	10	U

1A

TCLP VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

EXTBLK

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: EXTBLK

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: M11674.D

Level: (low/med) _____ Date Received: _____

% Moisture: not dec. 100 Date Analyzed: 7/26/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-01-4	Vinyl Chloride	50	U
75-35-4	1,1-Dichloroethene	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	50	U
79-01-6	Trichloroethene	50	U
71-43-2	Benzene	50	U
127-18-4	Tetrachloroethene	50	U
108-90-7	Chlorobenzene	50	U

000063

D.

CALIBRATION SUMMARY

6A

TCLP VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: _____ Group: SPWC-01

Instrument ID: VOA 3 Calibration Date(s): 6/28/99 6/28/99

Heated Purge: (Y/N) N Calibration Times: 1719 2033

GC Column RTX624 ID: 0.53 (mm)

Lab File ID: RRF10 = M11442.D RRF20 = M11441.D
RRF50 = M11438.D RRF100 = M11440.D RRF200 = M11439.D

COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD	
Vinyl Chloride	*	0.934	0.893	1.006	0.973	0.946	0.950	4.5	*
1,1-Dichloroethene	*	0.936	0.890	1.029	1.039	0.995	0.978	6.5	*
Chloroform	*	2.794	2.601	2.895	2.871	2.912	2.814	4.5	*
1,2-Dichloroethane	*	1.944	1.818	2.051	2.017	2.072	1.981	5.2	*
2-Butanone		0.112	0.134	0.128	0.129	0.125	0.125	6.5	
Carbon Tetrachloride	*	0.370	0.350	0.413	0.399	0.409	0.388	7.0	*
Trichloroethene	*	0.386	0.356	0.412	0.427	0.402	0.397	6.8	*
Benzene	*	1.321	1.248	1.368	1.291	1.187	1.283	5.4	*
Tetrachloroethene	*	0.362	0.383	0.414	0.434	0.451	0.409	8.9	*
Chlorobenzene	*	0.955	0.922	0.982	0.999	0.997	0.971	3.4	*
Toluene-d8	*	1.021	0.991	0.996	1.012	1.043	1.013	2.1	*
Bromofluorobenzene	*	0.462	0.455	0.467	0.466	0.486	0.467	2.5	*
1,2-Dichloroethane-d4	*	1.326	1.222	1.342	1.340	1.405	1.327	5.0	*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

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7A

TCLP VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No. 12693NJ Site: Location: Group: SPWC-01

Instrument ID: VOA 3 Calibration Date: 7/26/99 Time: 1041

Lab File ID: M11672.D Init. Calib. Date(s): 6/28/99 6/28/99

Heated Purge: (Y/N) N Init. Calib. Times: 1719 2033

GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Vinyl Chloride	0.950	1.027		-8.1	25.0
1,1-Dichloroethene	0.978	1.109		-13.4	25.0
Chloroform	2.814	3.165		-12.5	25.0
1,2-Dichloroethane	1.981	2.247		-13.4	25.0
2-Butanone	0.125	0.145		-16.0	100.0
Carbon Tetrachloride	0.388	0.404		-4.1	25.0
Trichloroethene	0.397	0.421		-6.0	25.0
Benzene	1.283	1.472		-14.7	25.0
Tetrachloroethene	0.409	0.432		-5.6	25.0
Chlorobenzene	0.971	1.056		-8.8	25.0
Toluene-d8	1.013	1.226		-21.0	25.0
Bromofluorobenzene	0.467	0.595		-27.4	25.0
1,2-Dichloroethane-d4	1.327	1.657		-24.9	25.0

All other compounds must meet a minimum RRF of 0.010.

000066

E.

SURROGATE COMPOUND RECOVERY RESULTS SUMMARY

2A

TCLP VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTA

Project No.: 12693NJ Site: Location: Group: SPWC-01

	SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER #	TOT OUT
01	VBLK01	90	92	92		
02	EXTBLK	97	97	94		
03	SPWC-01	102	103	99		
04	SPWC-02	100	104	101		
05	SPWC-03	98	99	99		
06	SPWC-04	96	99	97		
07	SPWC-05	99	102	100		
08	SPWC-05MS	98	99	90		
09	SPWC-05MSD	103	105	104		
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	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

000068

F.

MS/ MSD RESULTS SUMMARY

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No. 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix Spike - Sample No.: SPWC-05

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Vinyl Chloride	250	0	260	104	(70-130)
1,1-Dichloroethene	250	0	260	104	(61-145)
Chloroform	250	0	250	100	(70-130)
1,2-Dichloroethane	250	0	260	104	(70-130)
2-Butanone	250	0	270	108	(70-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MS % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Vinyl Chloride	250	290	116	11	14	(70-130)
1,1-Dichloroethene	250	270	108	4	14	(61-145)
Chloroform	250	270	108	8	13	(70-130)
1,2-Dichloroethane	250	270	108	4	13	(70-130)
2-Butanone	250	280	112	4	13	(70-130)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Comments: _____

000070

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No. 12693NJ Site: _____ Location: _____ Group: SPWC-01

Matrix Spike - Sample No.: SPWC-05

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Carbon Tetrachloride	250	0	230	92	(70-130)
Trichloroethene	250	0	220	88	(71-120)
Benzene	250	0	250	100	(76-127)
Tetrachloroethene	250	0	240	96	(70-130)
Chlorobenzene	250	0	250	100	(75-130)

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MS % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Carbon Tetrachloride	250	250	100	8	14	(70-130)
Trichloroethene	250	250	100	13	14	(71-120)
Benzene	250	270	108	8	11	(76-127)
Tetrachloroethene	250	240	96	0	13	(70-130)
Chlorobenzene	250	250	100	0	13	(75-130)

RPD: 0 out of 10 outside limits
Spike Recovery: 0 out of 20 outside limits

* Values outside of QC limits

Comments: _____

000071

G.

INTERNAL STANDARD RESULTS SUMMARY

8A

TCLP VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: Group: SPWC-01

Lab File ID (Standard): M11672.D Date Analyzed: 7/26/99

Instrument ID: VOA 3 Time Analyzed: 1041

GC Column: RTX624 ID: 0.53 (mm) Heated Purge (Y/N) N

		IS1 (BCM) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
	12 HOUR STD	630938	12.23	3010496	14.21	3270241	20.45
	UPPER LIMIT	1261876	12.73	6020992	14.71	6540482	20.95
	LOWER LIMIT	315469	11.73	1505248	13.71	1635121	19.95
	SAMPLE NO.						
01	VBLK01	686622	12.23	3363166	14.21	3604489	20.45
02	EXTBLK	631792	12.24	3028247	14.21	3168247	20.46
03	SPWC-01	717073	12.24	3397061	14.22	3589588	20.45
04	SPWC-02	674956	12.24	3260024	14.21	3471742	20.46
05	SPWC-03	693643	12.24	3329335	14.22	3524999	20.46
06	SPWC-04	618220	12.24	2876661	14.22	3105532	20.46
07	SPWC-05	705337	12.23	3429088	14.22	3592892	20.46
08	SPWC-05MS	722937	12.23	3469326	14.22	3596780	20.45
09	SPWC-05MSD	667080	12.23	3176555	14.22	3417995	20.45
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

h00073

H.

CHROMATOGRAMS

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11675.D
Acq Time : 26 Jul 99 2:37 pm
Sample : 12693NJ-78945 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 15:40 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.24	128	717073	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	3397061	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.45	117	3589588	50.00 ug/L	0.00
System Monitoring Compounds					**%Recovery**
17) 1,2-Dichloroethane-d4	13.41	65	942774	49.54 ug/L	99.07%
36) Toluene-d8	17.35	98	3710588	51.04 ug/L	102.08%
45) Bromofluorobenzene	22.94	95	1733758	51.73 ug/L	103.45%
Target Compounds					**Qvalue**
10) Methylene Chloride	8.47	84	79517	4.99 ug/L	95

000075

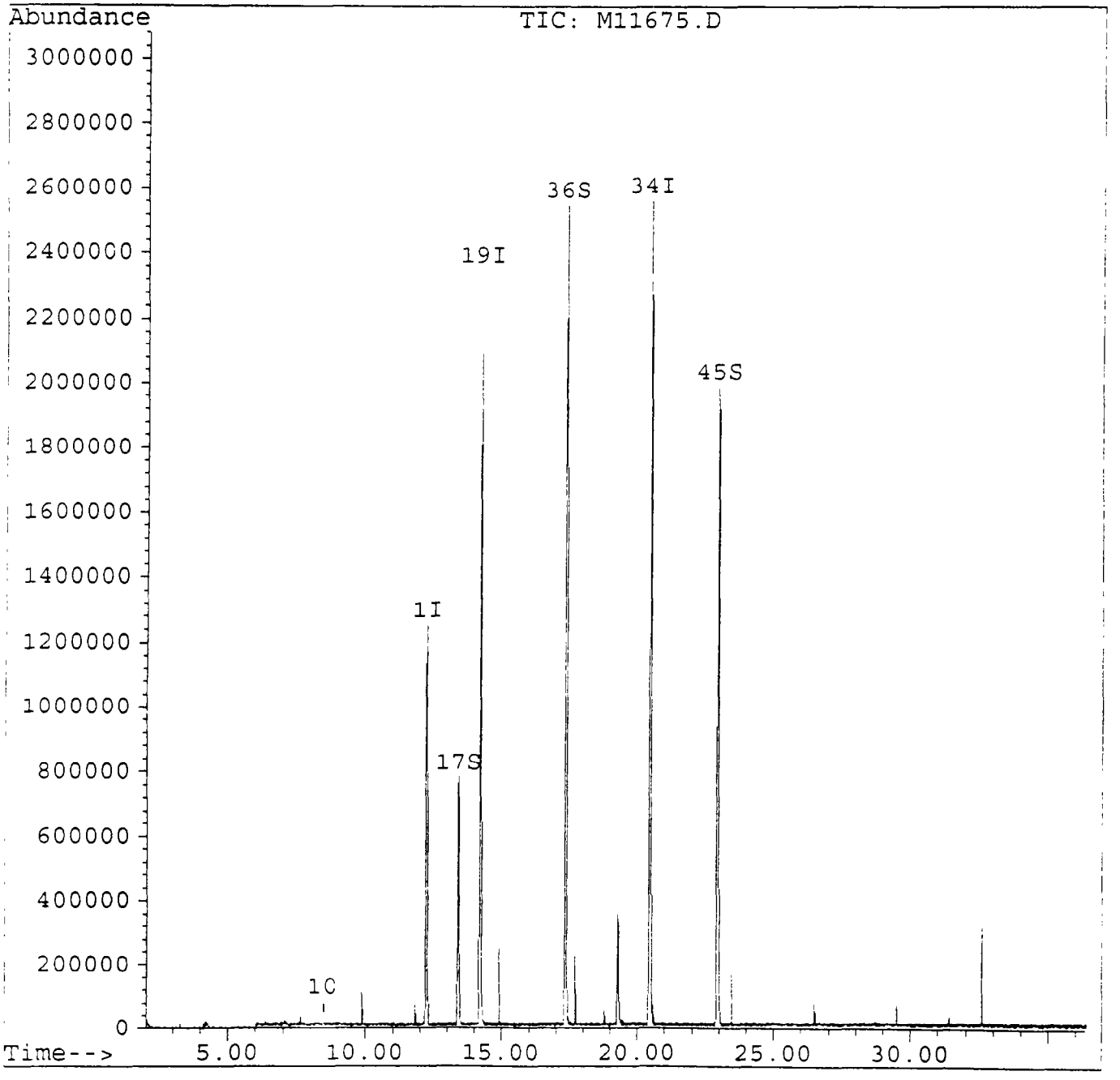
(#) = qualifier out of range (m) = manual integration

Quantitation Report

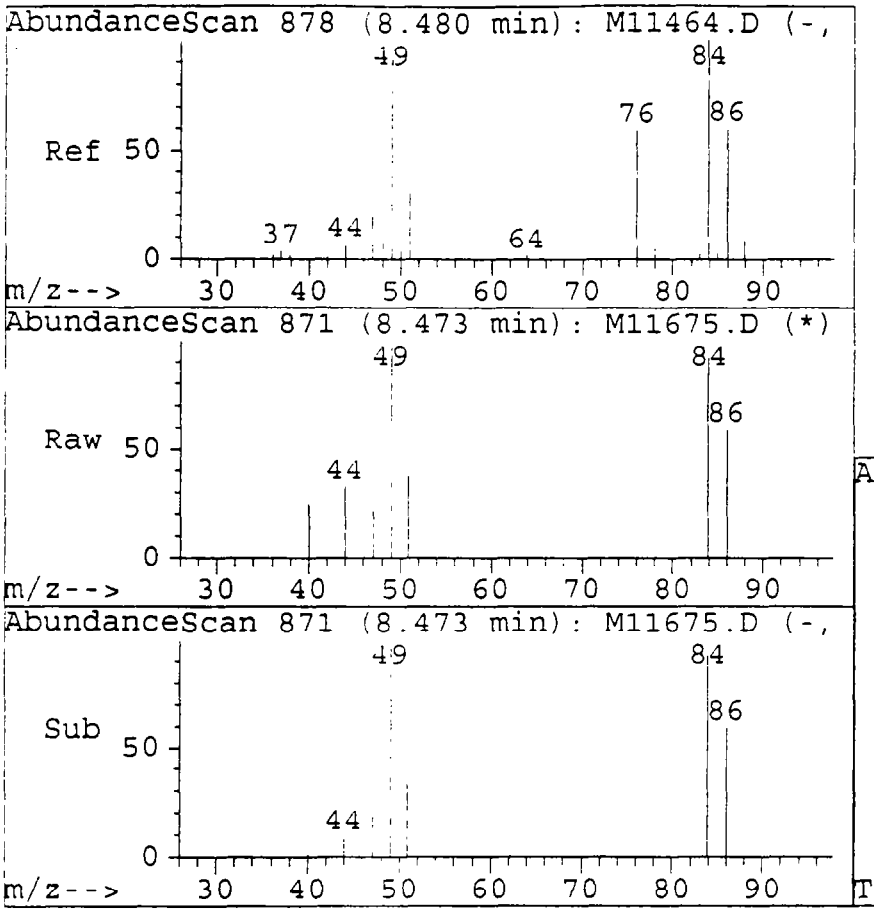
Data File : D:\HPCHEM\3\DATA\V3072699\M11675.D
Acq Time : 26 Jul 99 2:37 pm
Sample : 12693NJ-78945 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 15:40 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



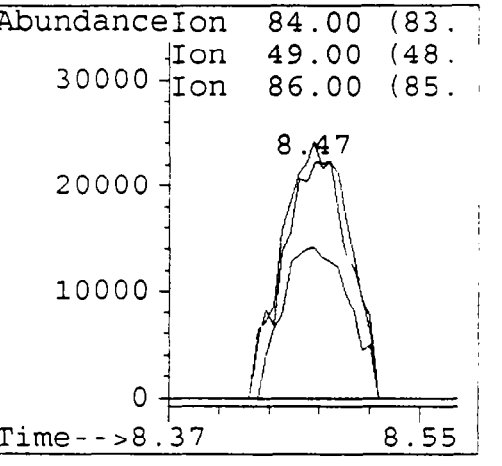
000076



#10
Methylene Chloride
Concen: 4.99 ug/L
RT: 8.47 min Scan# 871
Delta R.T. 0.01 min
Lab File: M11675.D
Acq: 26 Jul 99 2:37 pm

Tgt Ion:84 Resp: 79517

Ion	Ratio	Lower	Upper
84	100		
49	108.8	50.4	151.2
86	63.7	31.6	94.8
0	0.0	0.0	0.0



000077

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11676.D
Acq Time : 26 Jul 99 3:23 pm
Sample : 12693NJ-78946 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 16:02 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.24	128	674956	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.21	114	3260024	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.46	117	3471742	50.00 ug/L	0.00
System Monitoring Compounds					%Recovery
17) 1,2-Dichloroethane-d4	13.41	65	901683	50.33 ug/L	100.67%
36) Toluene-d8	17.36	98	3521531	50.08 ug/L	100.17%
45) Bromofluorobenzene	22.94	95	1681165	51.86 ug/L	103.72%
Target Compounds					Qvalue
8) Acetone	7.06	43	26784	5.42 ug/L	84
10) Methylene Chloride	8.49	84	102337	6.83 ug/L	89

000078

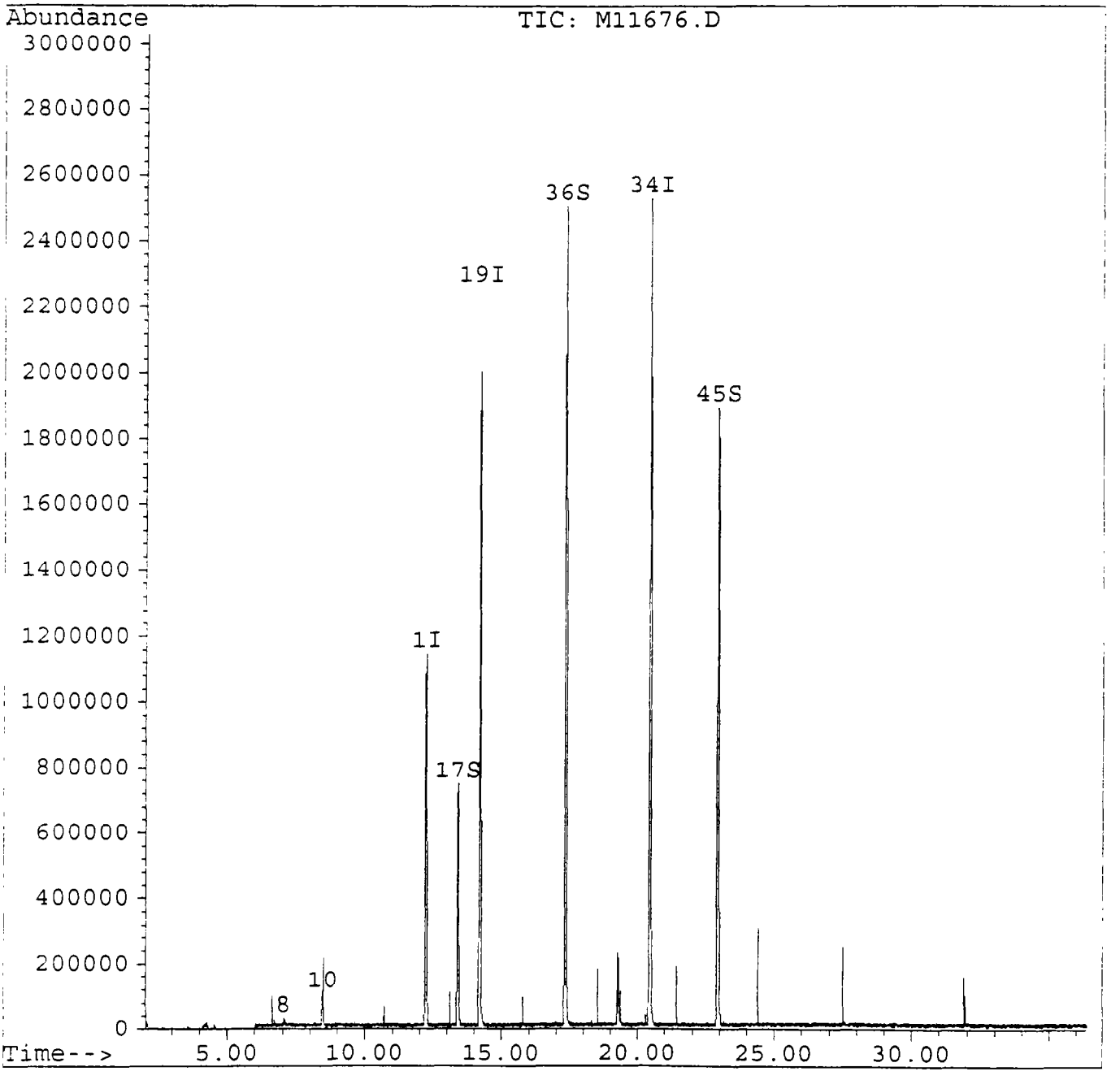
(#) = qualifier out of range (m) = manual integration

Quantitation Report

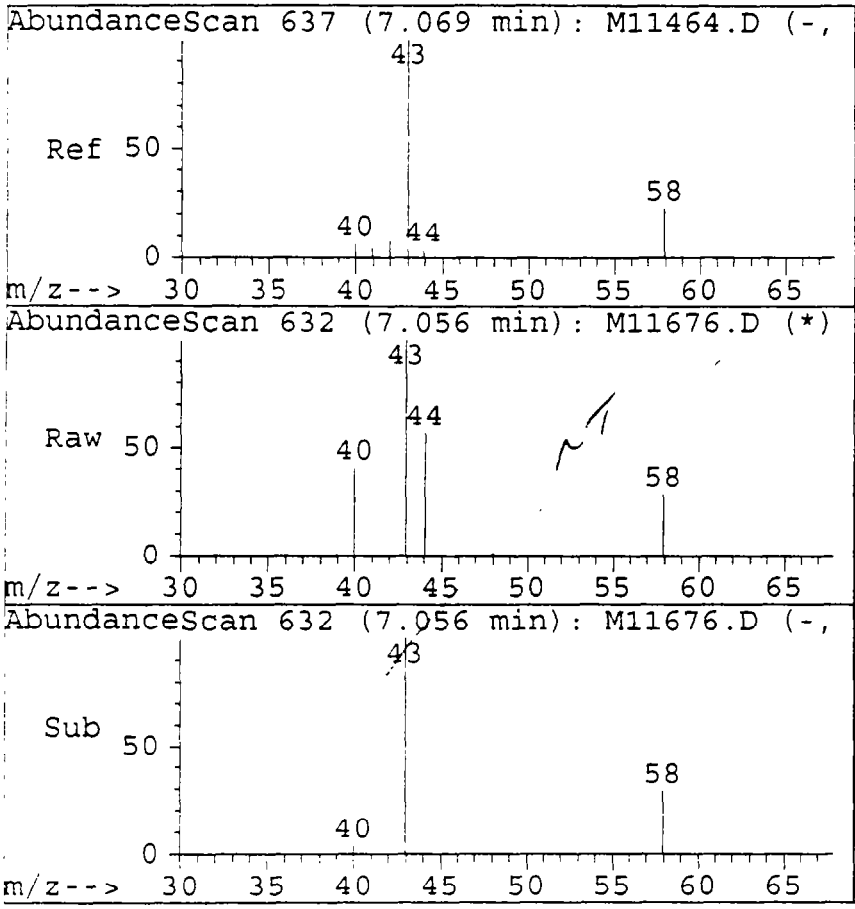
Data File : D:\HPCHEM\3\DATA\V3072699\M11676.D
Acq Time : 26 Jul 99 3:23 pm
Sample : 12693NJ-78946 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 16:02 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



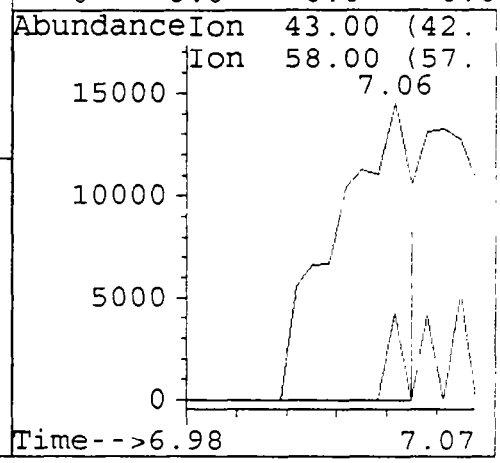
000079

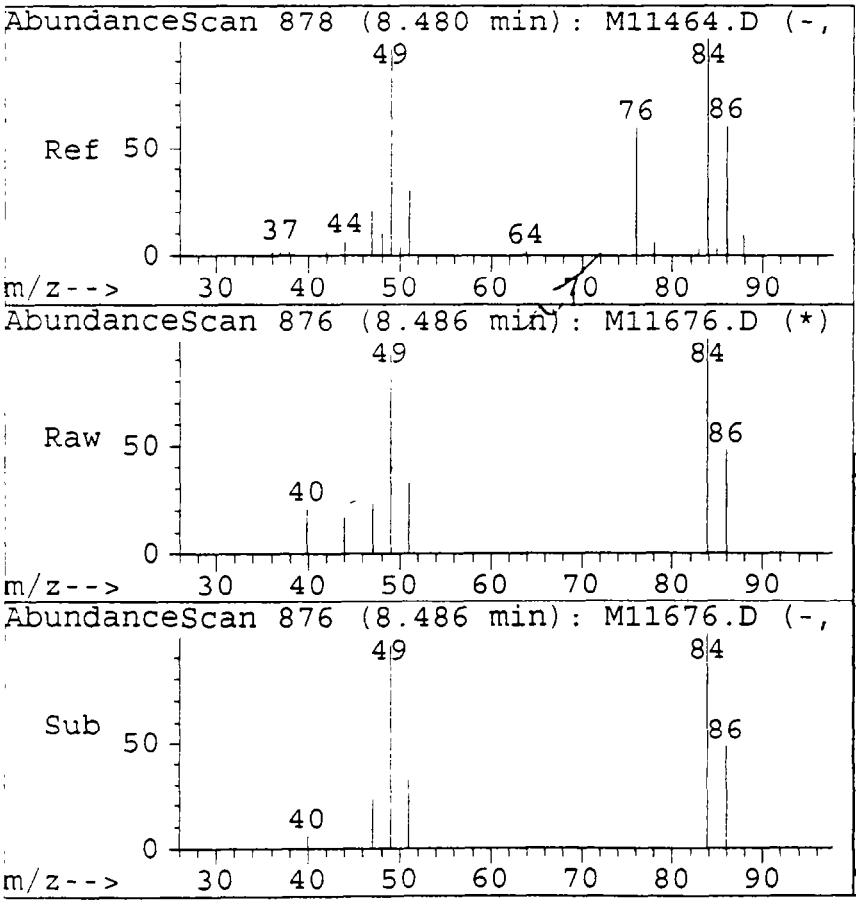


#8
Acetone
Concen: 5.42 ug/L
RT: 7.06 min Scan# 632
Delta R.T. 0.01 min
Lab File: M11676.D
Acq: 26 Jul 99 3:23 pm

Tgt Ion:43 Resp: 26784

Ion	Ratio	Lower	Upper
43	100		
58	29.0	10.7	32.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

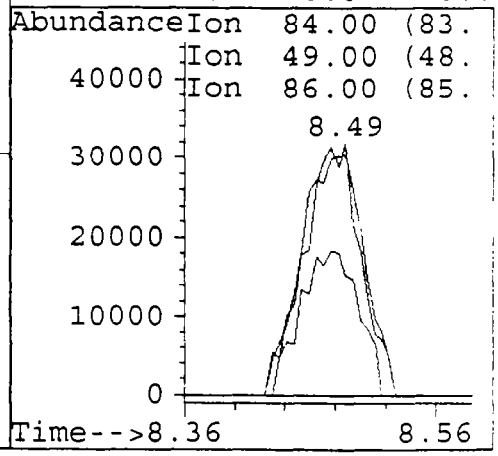




#10
Methylene Chloride
Concen: 6.83 ug/L
RT: 8.49 min Scan# 876
Delta R.T. 0.03 min
Lab File: M11676.D
Acq: 26 Jul 99 3:23 pm

Tgt Ion:84 Resp: 102337

Ion	Ratio	Lower	Upper
84	100		
49	95.0	50.4	151.2
86	47.7	31.6	94.8
0	0.0	0.0	0.0



000080

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11677.D
Acq Time : 26 Jul 99 4:09 pm
Sample : 12693NJ-78947 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 16:58 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.24	128	693643	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	3329335	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.46	117	3524999	50.00 ug/L	0.00
System Monitoring Compounds					**%Recovery**
17) 1,2-Dichloroethane-d4	13.41	65	909378	49.40 ug/L	98.79%
36) Toluene-d8	17.35	98	3510766	49.18 ug/L	98.35%
45) Bromofluorobenzene	22.94	95	1636876	49.73 ug/L	99.46%
Target Compounds					**Qvalue**
10) Methylene Chloride	8.48	84	82431	5.35 ug/L	91

000081

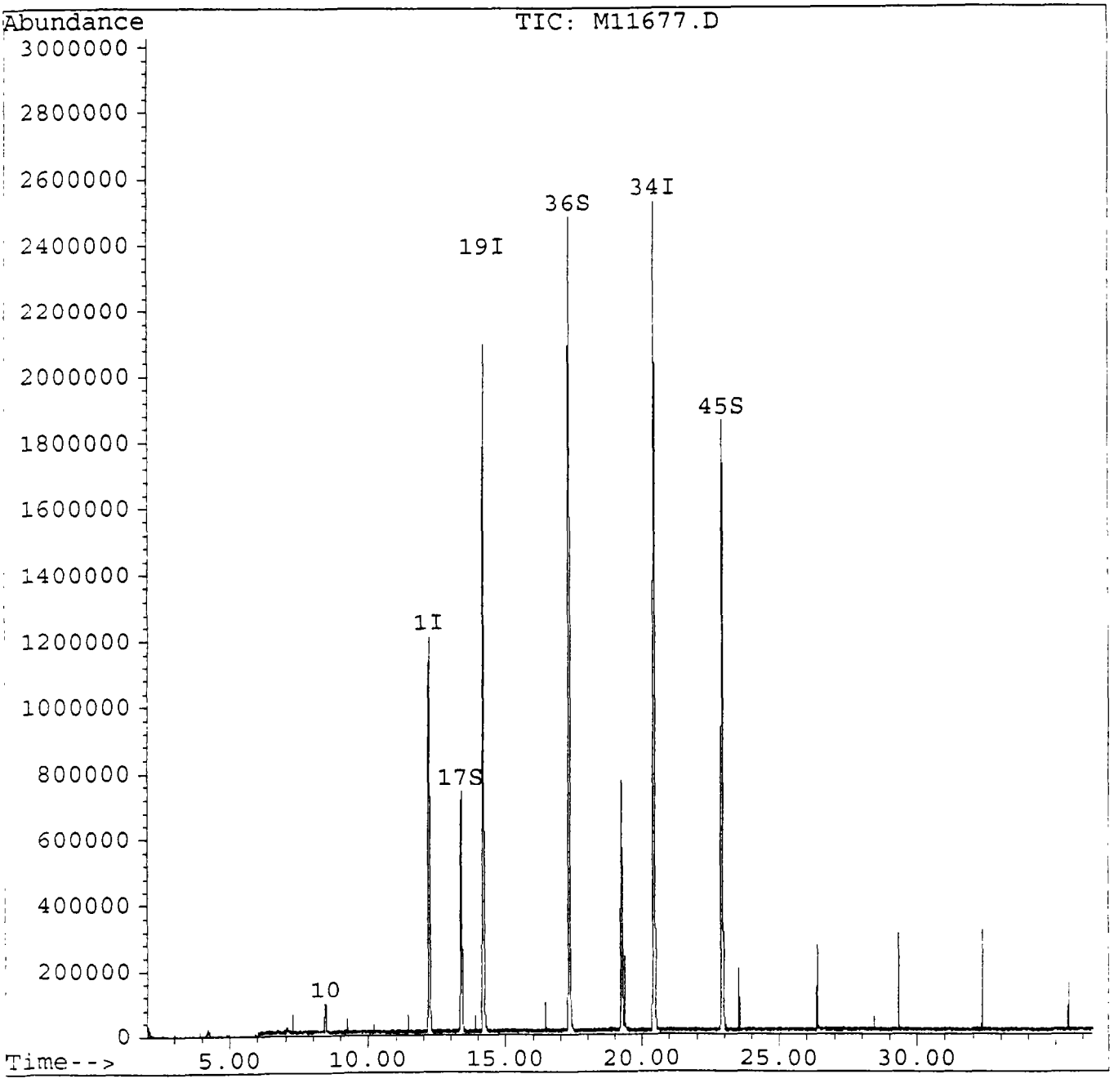
(#) = qualifier out of range (m) = manual integration

Quantitation Report

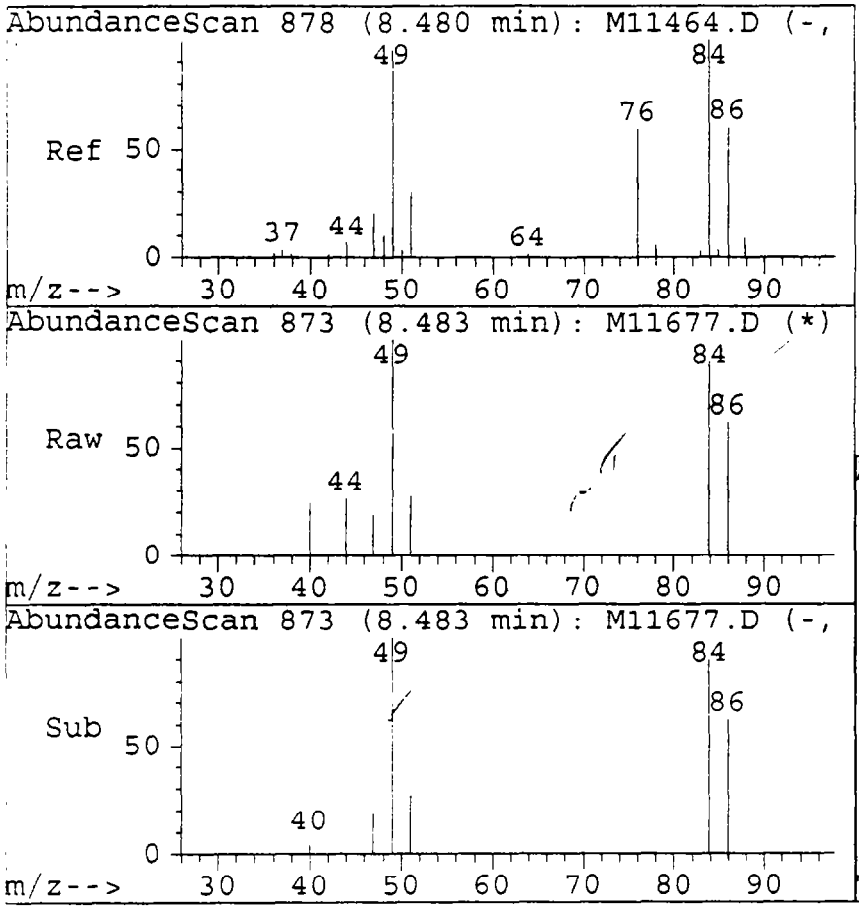
Data File : D:\HPCHEM\3\DATA\V3072699\M11677.D
Acq Time : 26 Jul 99 4:09 pm
Sample : 12693NJ-78947 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 16:58 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



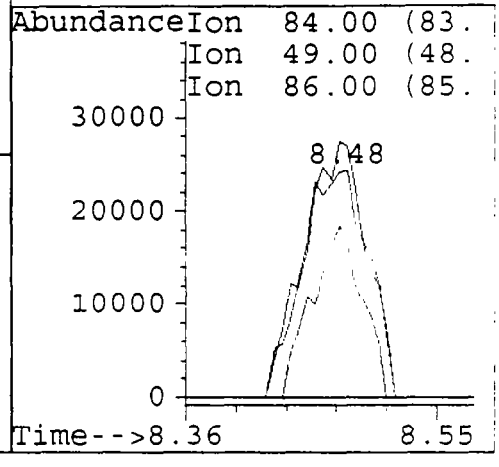
000082



#10
Methylene Chloride
Concen: 5.35 ug/L
RT: 8.48 min Scan# 873
Delta R.T. 0.02 min
Lab File: M11677.D
Acq: 26 Jul 99 4:09 pm

Tgt Ion:84 Resp: 82431

Ion	Ratio	Lower	Upper
84	100		
49	110.6	50.4	151.2
86	68.8	31.6	94.8
0	0.0	0.0	0.0



000083

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11678.D
Acq Time : 26 Jul 99 4:55 pm
Sample : 12693NJ-78948 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:16 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.24	128	618220	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	2876661	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.46	117	3105532	50.00 ug/L	0.00
System Monitoring Compounds					%Recovery
17) 1,2-Dichloroethane-d4	13.41	65	798191	48.65 ug/L	97.29%
36) Toluene-d8	17.35	98	3033892	48.24 ug/L	96.48%
45) Bromofluorobenzene	22.95	95	1440548	49.68 ug/L	99.35%
Target Compounds					Qvalue
10) Methylene Chloride	8.48	84	71497	5.21 ug/L	89

000084

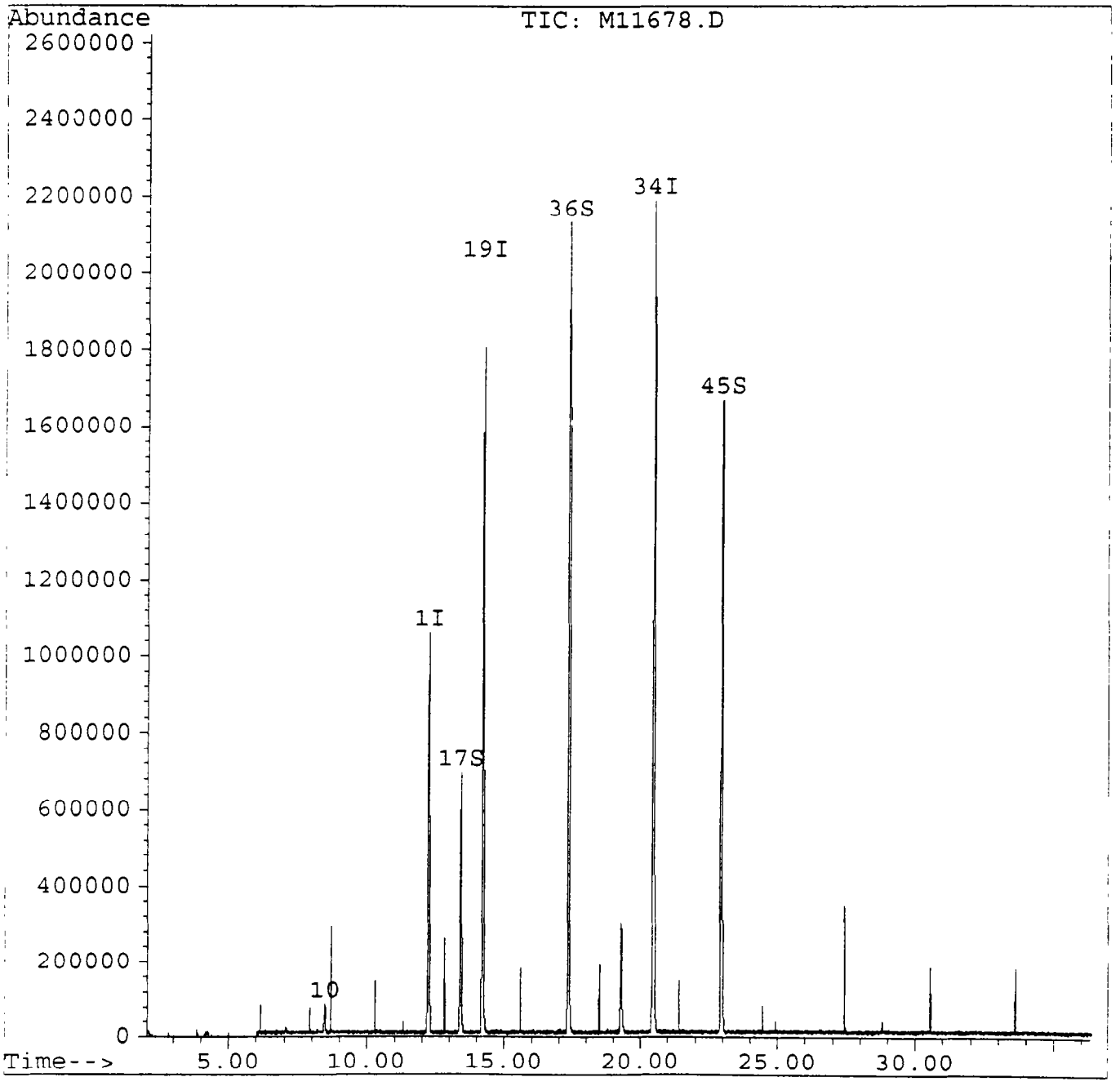
(#) = qualifier out of range (m) = manual integration

Quantitation Report

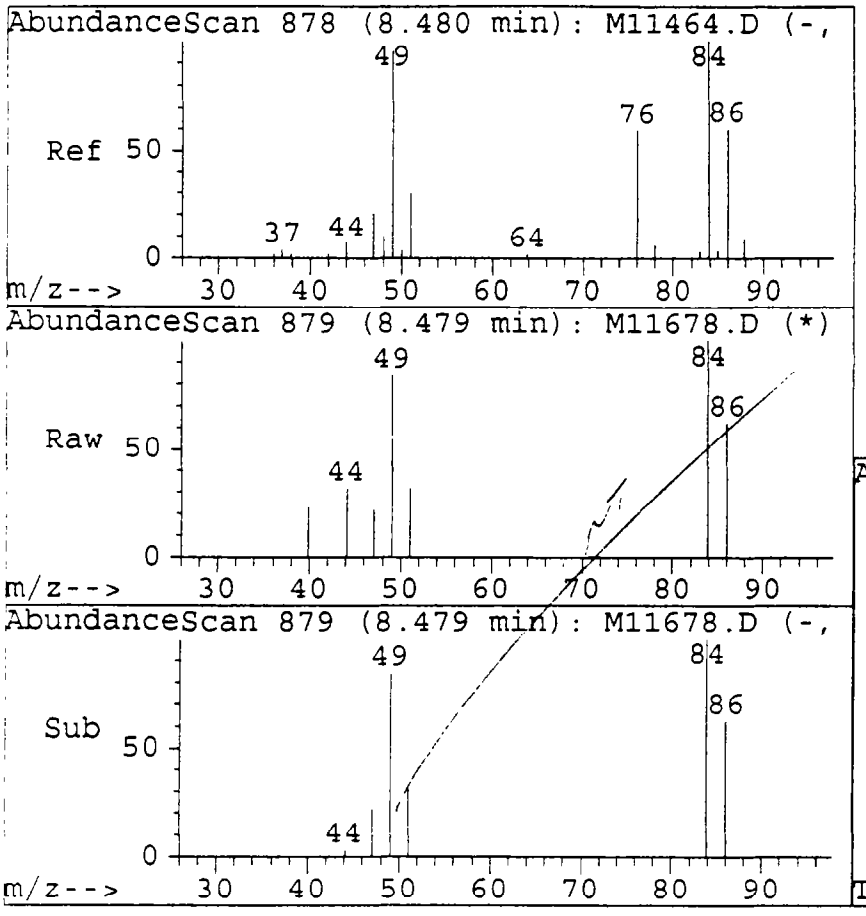
Data File : D:\HPCHEM\3\DATA\V3072699\M11678.D
Acq Time : 26 Jul 99 4:55 pm
Sample : 12693NJ-78948 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:16 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



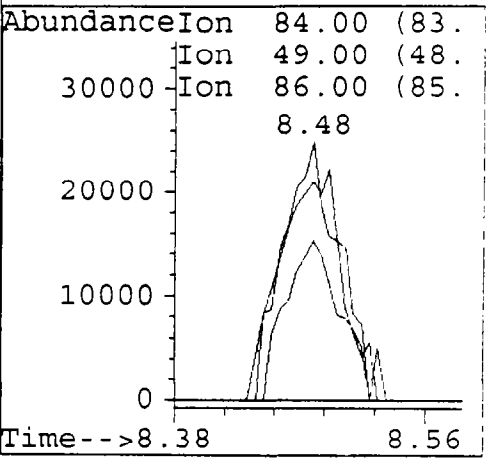
000085



#10
Methylene Chloride
Concen: 5.21 ug/L
RT: 8.48 min Scan# 879
Delta R.T. 0.02 min
Lab File: M11678.D
Acq: 26 Jul 99 4:55 pm

Tgt Ion:84 Resp: 71497

Ion	Ratio	Lower	Upper
84	100		
49	84.4	50.4	151.2
86	61.8	31.6	94.8
0	0.0	0.0	0.0



000086

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11679.D
Acq Time : 26 Jul 99 5:41 pm
Sample : 12693NJ-78949 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:16 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.23	128	705337	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	3429088	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.46	117	3592892	50.00 ug/L	0.00
System Monitoring Compounds					**%Recovery**
17) 1,2-Dichloroethane-d4	13.41	65	939486	50.19 ug/L	100.37%
36) Toluene-d8	17.35	98	3595402	49.41 ug/L	98.82%
45) Bromofluorobenzene	22.94	95	1712904	51.06 ug/L	102.11%
Target Compounds					**Qvalue**
10) Methylene Chloride	8.47	84	66603	4.25 ug/L	93

000087

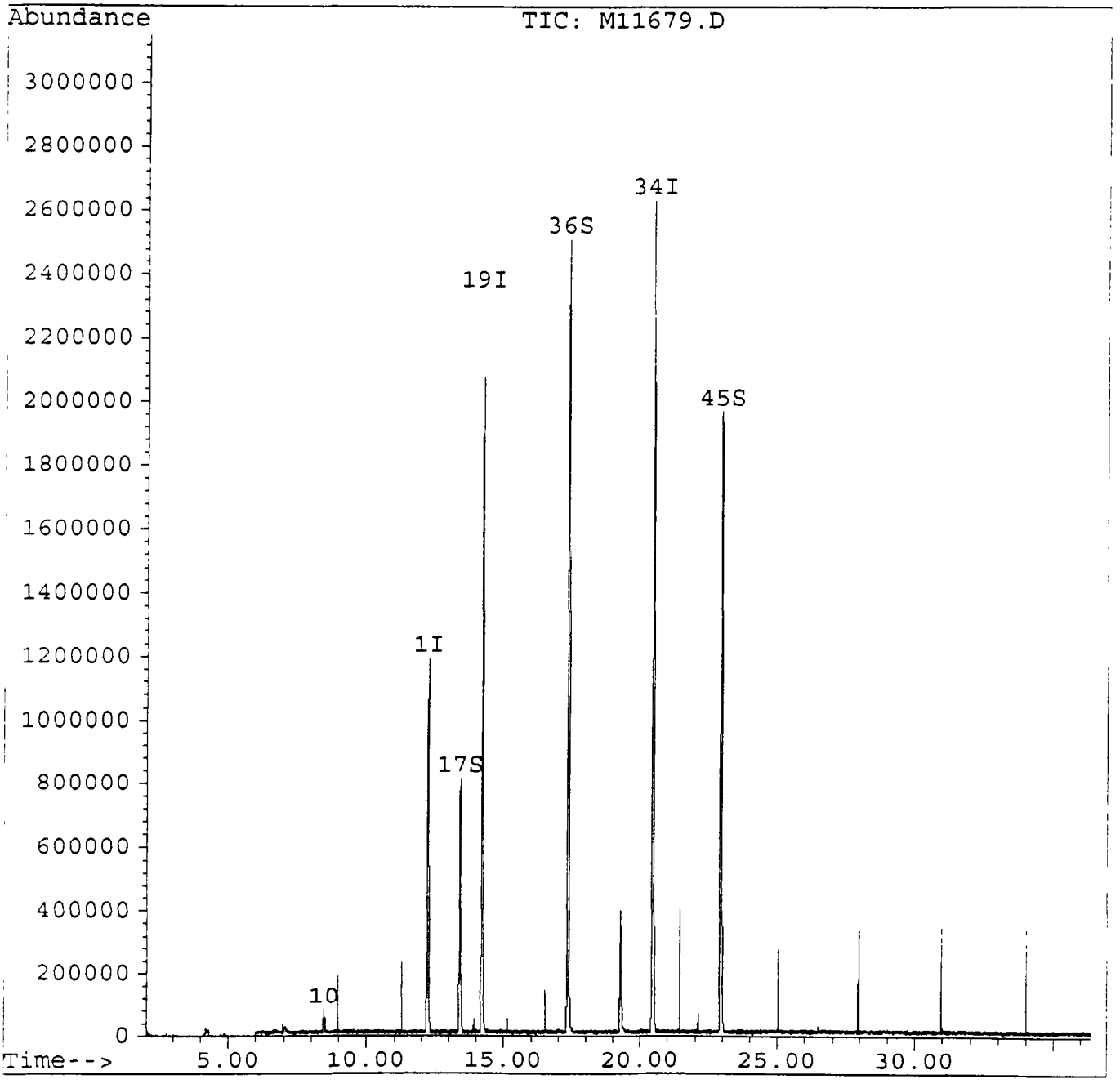
(#) = qualifier out of range (m) = manual integration

Quantitation Report

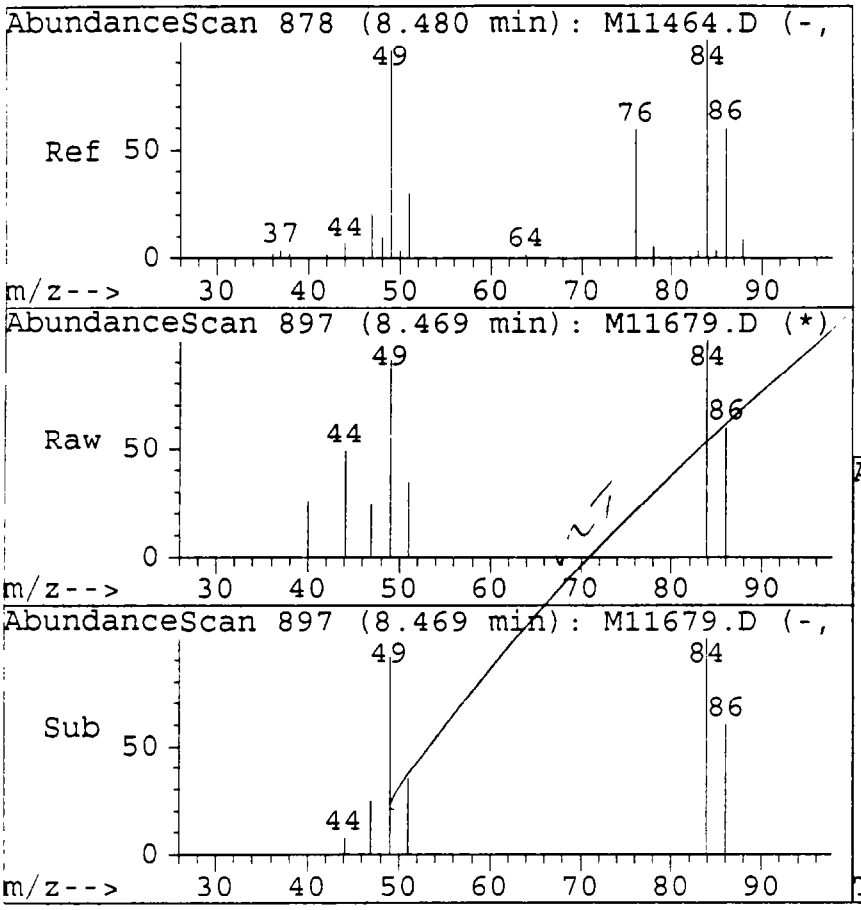
Data File : D:\HPCHEM\3\DATA\V3072699\M11679.D
Acq Time : 26 Jul 99 5:41 pm
Sample : 12693NJ-78949 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:16 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



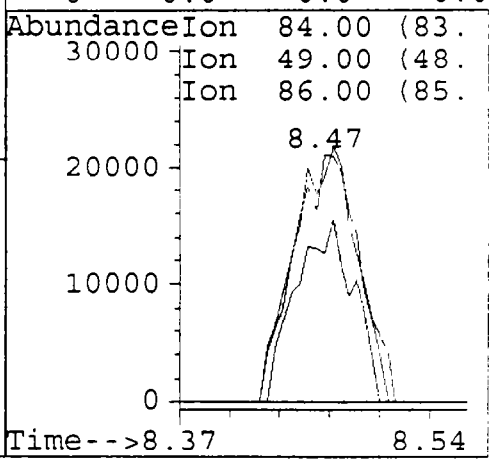
000088



#10
Methylene Chloride
Concen: 4.25 ug/L
RT: 8.47 min Scan# 897
Delta R.T. 0.01 min
Lab File: M11679.D
Acq: 26 Jul 99 5:41 pm

Tgt Ion:84 Resp: 66603

Ion	Ratio	Lower	Upper
84	100		
49	91.4	50.4	151.2
86	60.2	31.6	94.8
0	0.0	0.0	0.0



000089

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11680.D
Acq Time : 26 Jul 99 6:28 pm
Sample : 12693NJ-78949MS 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:17 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.23	128	722937	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	3469326	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.45	117	3596780	50.00 ug/L	-0.01
System Monitoring Compounds					%Recovery
17) 1,2-Dichloroethane-d4	13.41	65	860129	44.83 ug/L	89.66%
36) Toluene-d8	17.35	98	3575382	49.08 ug/L	98.17%
45) Bromofluorobenzene	22.94	95	1660756	49.45 ug/L	98.90%
Target Compounds					Qvalue
2) Chloromethane	3.84	50	972513	48.56 ug/L	92
3) Vinyl Chloride	4.02	62	715483	52.08 ug/L	97
4) Bromomethane	4.93	94	779578	53.29 ug/L	96
5) Chloroethane	5.12	64	619889	56.16 ug/L	97
6) Trichlorofluoromethane	5.73	101	1572594	48.55 ug/L	98
7) 1,1-Dichloroethene	7.27	61	740186	52.36 ug/L	92
8) Acetone	7.06	43	286343	54.09 ug/L	89
9) Carbon Disulfide	8.43	76	3151709	53.84 ug/L	99
10) Methylene Chloride	8.46	84	894031	55.69 ug/L	97
11) trans-1,2-Dichloroethene	9.17	61	1213836	59.95 ug/L	95
12) TBA	7.63	59	807995	559.43 ug/L	96
13) MTBE	8.90	73	2844292	57.07 ug/L	97
14) 1,1-Dichloroethane	10.17	63	1839911	54.16 ug/L	100
15) cis-1,2-Dichloroethene	11.53	96	1472654	52.83 ug/L	91
16) Chloroform	11.88	83	2046087	50.28 ug/L	97
18) 1,2-Dichloroethane	13.61	62	1462750	51.08 ug/L	97
20) Vinyl Acetate	10.22	43	2032264	56.50 ug/L	96
21) 2-Butanone	11.19	43	465993	53.53 ug/L	94
22) 1,1,1-Trichloroethane	12.74	97	1554937	44.59 ug/L	99
23) Carbon Tetrachloride	13.29	117	1229728	45.66 ug/L	98
24) Benzene	13.64	78	4477105	50.29 ug/L	99
25) Trichloroethene	14.91	130	1224908	44.51 ug/L	94
26) 1,2-Dichloropropane	15.26	63	1265771	50.84 ug/L	97
27) Bromodichloromethane	15.74	83	1661164	46.52 ug/L	96
28) 2-Chloroethyl Vinyl Ether	16.34	63	760665	42.81 ug/L	93
29) cis-1,3-Dichloropropene	16.84	75	2018901	47.92 ug/L	95
30) trans-1,3-Dichloropropene	17.85	75	1769923	47.51 ug/L	97
31) 1,1,2-Trichloroethane	18.18	97	1213679	49.53 ug/L	95
32) Dibromochloromethane	19.26	129	1561404	49.93 ug/L	95
33) Bromoform	22.49	173	1086431	49.80 ug/L	96
35) 4-Methyl-2-Pentanone	16.42	43	975136	53.66 ug/L	95
37) Toluene	17.51	91	5081981	52.70 ug/L	99
38) Tetrachloroethene	18.85	166	1430992	48.68 ug/L	99
39) 2-Hexanone	18.17	43	668004	62.51 ug/L	84

(#) = qualifier out of range (m) = manual integration

000090

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11680.D
Acq Time : 26 Jul 99 6:28 pm
Sample : 12693NJ-78949MS 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:17 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
40)	Chlorobenzene	20.54	112	3442747	49.29 ug/L	99
41)	Ethylbenzene	20.61	91	5573181	50.76 ug/L	95
42)	m+ p-Xylenes	20.77	106	4250471	101.91 ug/L	97
43)	o-xylene	21.68	91	4456526	51.13 ug/L	93
44)	Styrene	21.74	104	3480994	49.67 ug/L	98
46)	1,1,2,2-Tetrachloroethane	22.74	83	1915844	54.59 ug/L	96
47)	1,3-Dichlorobenzene	25.07	146	2942451	50.82 ug/L	99
48)	1,4-Dichlorobenzene	25.25	146	2894141	48.88 ug/L	99
49)	1,2-Dichlorobenzene	26.00	146	2793013	48.84 ug/L	98
50)	Naphthalene	30.58	128	4357132	48.55 ug/L	100

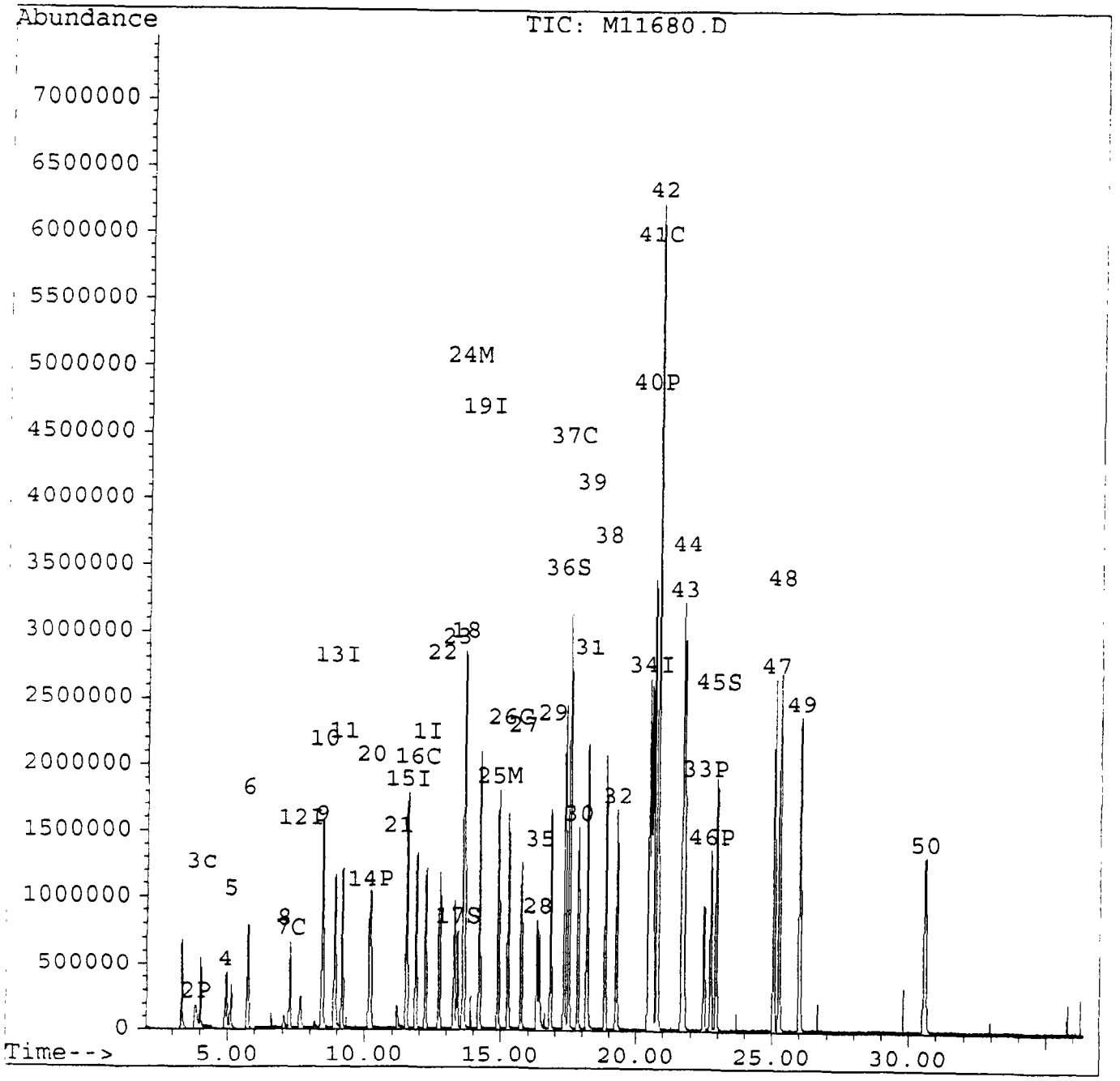
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11680.D
Acq Time : 26 Jul 99 6:28 pm
Sample : 12693NJ-78949MS 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 19:17 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



000092

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11681.D
Acq Time : 26 Jul 99 7:13 pm
Sample : 12693NJ-78949MSD 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 27 9:28 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.23	128	667080	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.22	114	3176555	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.45	117	3417995	50.00 ug/L	0.00
System Monitoring Compounds					%Recovery
17) 1,2-Dichloroethane-d4	13.41	65	923240	52.15 ug/L	104.29%
36) Toluene-d8	17.35	98	3579370	51.71 ug/L	103.42%
45) Bromofluorobenzene	22.94	95	1676027	52.51 ug/L	105.03%
Target Compounds					Qvalue
2) Chloromethane	3.85	50	967108	52.34 ug/L	89
3) Vinyl Chloride	4.01	62	743098	58.62 ug/L	99
4) Bromomethane	4.93	94	792360	58.69 ug/L	95
5) Chloroethane	5.12	64	627496	61.60 ug/L	94
6) Trichlorofluoromethane	5.73	101	1568498	52.48 ug/L	97
7) 1,1-Dichloroethene	7.27	61	702608	53.86 ug/L	91
8) Acetone	7.07	43	301280	61.67 ug/L	82
9) Carbon Disulfide	8.44	76	3098137	57.35 ug/L	98
10) Methylene Chloride	8.47	84	1003836	67.77 ug/L	97
11) trans-1,2-Dichloroethene	9.18	61	1161614	62.17 ug/L	98
12) TBA	7.65	59	785276	589.23 ug/L	97
13) MTBE	8.91	73	2939900	63.92 ug/L	98
14) 1,1-Dichloroethane	10.18	63	1830581	58.39 ug/L	97
15) cis-1,2-Dichloroethene	11.53	96	1485326	57.75 ug/L	99
16) Chloroform	11.88	83	1993502	53.09 ug/L	99
18) 1,2-Dichloroethane	13.61	62	1423138	53.86 ug/L	97
20) Vinyl Acetate	10.23	43	2005214	60.89 ug/L	96
21) 2-Butanone	11.21	43	451886	56.69 ug/L	98
22) 1,1,1-Trichloroethane	12.75	97	1535991	48.10 ug/L	99
23) Carbon Tetrachloride	13.29	117	1220807	49.51 ug/L	99
24) Benzene	13.64	78	4430177	54.35 ug/L	100
25) Trichloroethene	14.91	130	1281494	50.86 ug/L	91
26) 1,2-Dichloropropane	15.27	63	1260196	55.28 ug/L	99
27) Bromodichloromethane	15.75	83	1678082	51.33 ug/L	95
28) 2-Chloroethyl Vinyl Ether	16.34	63	821391	50.49 ug/L	93
29) cis-1,3-Dichloropropene	16.84	75	1982259	51.38 ug/L	96
30) trans-1,3-Dichloropropene	17.85	75	1785418	52.34 ug/L	98
31) 1,1,2-Trichloroethane	18.18	97	1212663	54.05 ug/L	96
32) Dibromochloromethane	19.27	129	1552092	54.21 ug/L	93
33) Bromoform	22.49	173	1064300	53.28 ug/L	98
35) 4-Methyl-2-Pentanone	16.42	43	975082	56.46 ug/L	99
37) Toluene	17.52	91	4892695	53.39 ug/L	99
38) Tetrachloroethene	18.85	166	1362437	48.77 ug/L	98
39) 2-Hexanone	18.18	43	619601	61.01 ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11681.D
Acq Time : 26 Jul 99 7:13 pm
Sample : 12693NJ-78949MSD 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 27 9:28 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
40)	Chlorobenzene	20.54	112	3294368	49.63 ug/L	95
41)	Ethylbenzene	20.61	91	5666120	54.30 ug/L	97
42)	m+ p-Xylenes	20.77	106	4169680	105.20 ug/L	96
43)	o-xylene	21.68	91	4423738	53.41 ug/L	98
44)	Styrene	21.74	104	3477700	52.22 ug/L	99
46)	1,1,2,2-Tetrachloroethane	22.74	83	1837020	55.08 ug/L	95
47)	1,3-Dichlorobenzene	25.07	146	2764393	50.24 ug/L	98
48)	1,4-Dichlorobenzene	25.26	146	2834497	50.38 ug/L	100
49)	1,2-Dichlorobenzene	26.01	146	2784879	51.25 ug/L	99
50)	Naphthalene	30.58	128	4247946	49.81 ug/L	100

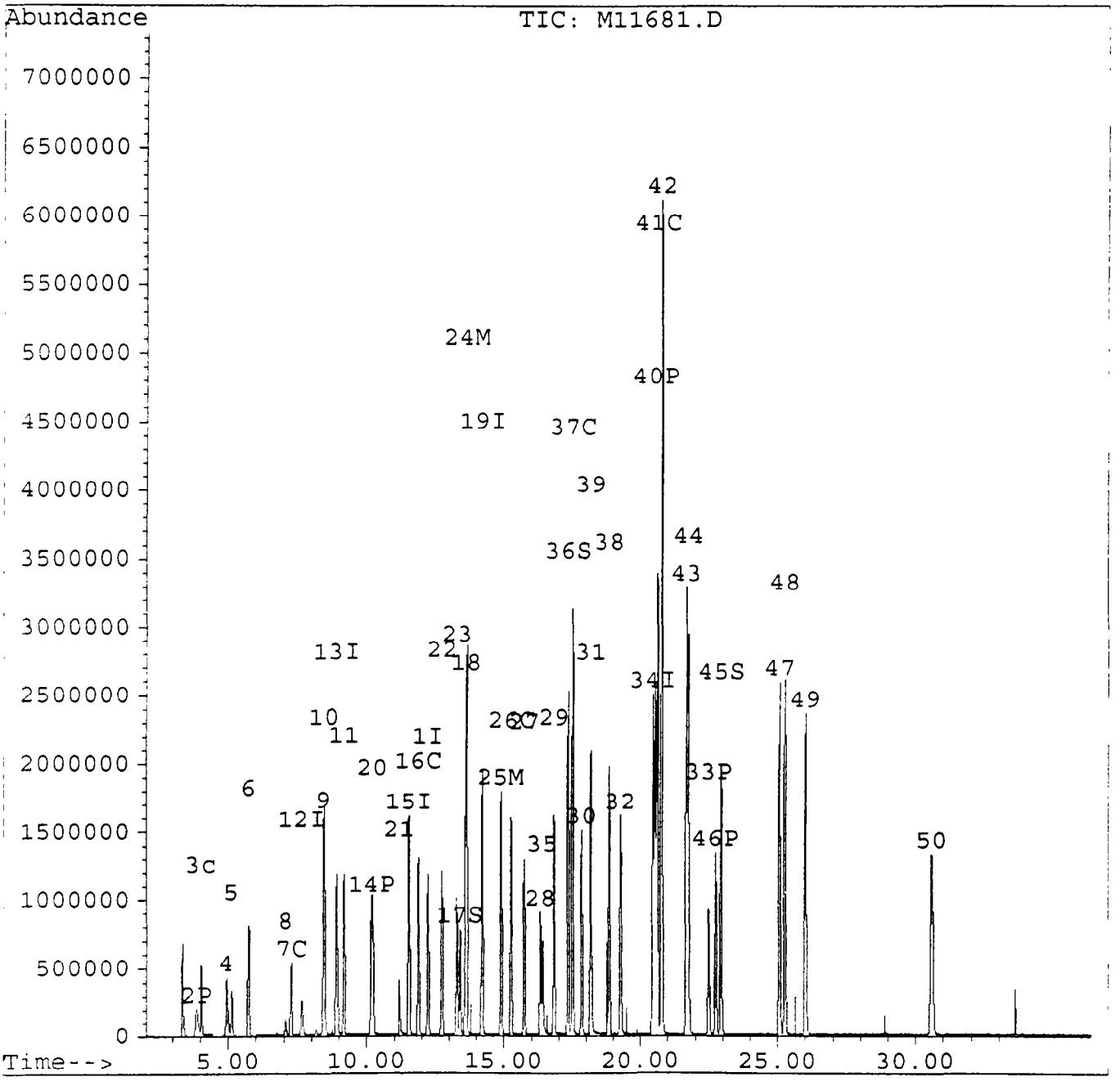
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11681.D
Acq Time : 26 Jul 99 7:13 pm
Sample : 12693NJ-78949MSD 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 27 9:28 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



000095

Quantitation Report

JJ 7-26-99

Data File : D:\HPCHEM\3\DATA\V3072699\M11673.D
Acq Time : 26 Jul 99 12:53 pm
Sample : PRO BLK
Misc : 5ML
Quant Time: Jul 26 13:34 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.23	128	686622	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.21	114	3363166	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.45	117	3604489	50.00 ug/L	0.00
System Monitoring Compounds					%Recovery
17) 1,2-Dichloroethane-d4	13.40	65	835402	45.84 ug/L	91.68%
36) Toluene-d8	17.35	98	3274519	44.86 ug/L	89.71%
45) Bromofluorobenzene	22.94	95	1550065	46.05 ug/L	92.11%
Target Compounds					Qvalue

000096

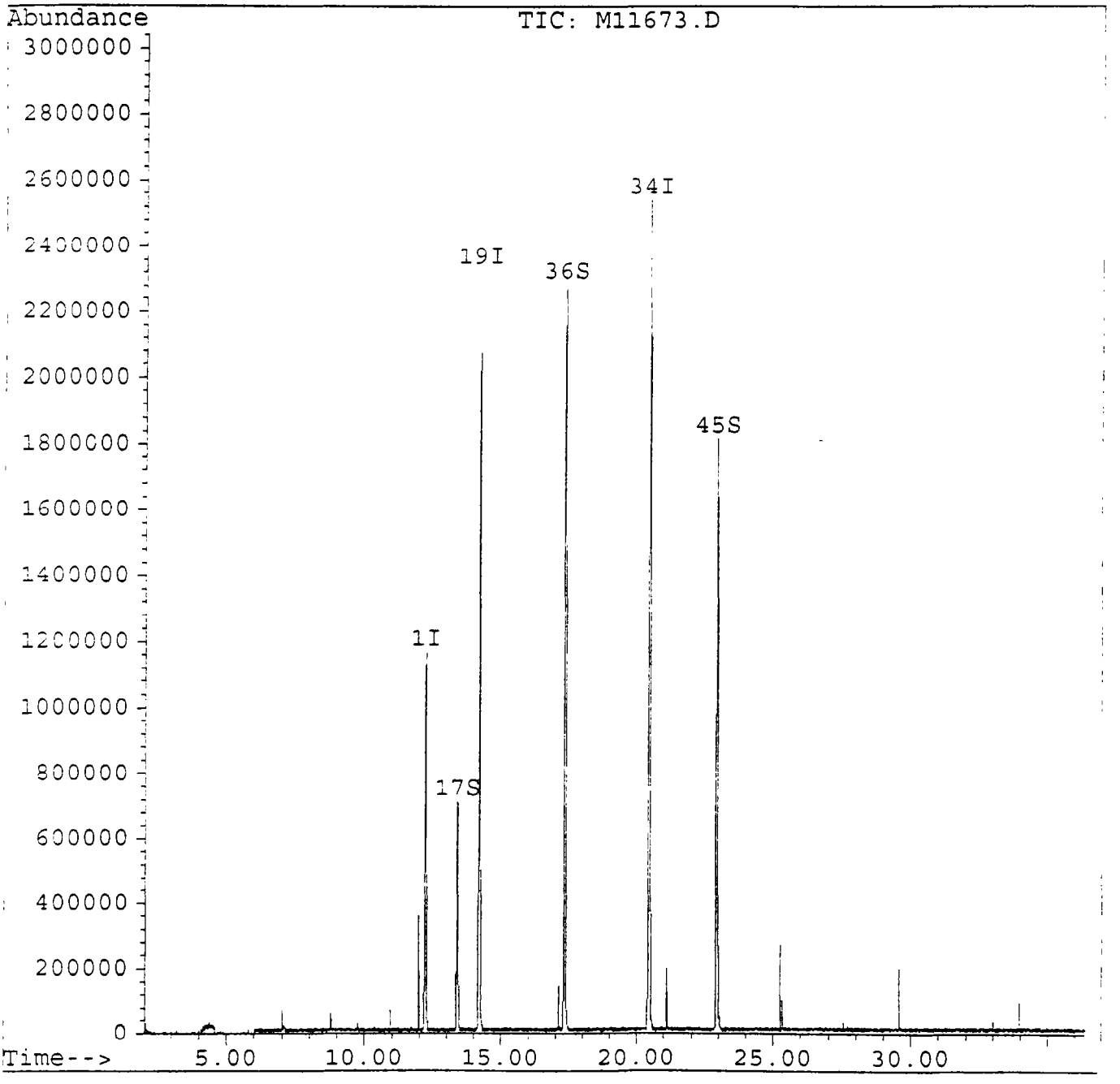
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11673.D
Acq Time : 26 Jul 99 12:53 pm
Sample : PRO BLK
Misc : 5ML
Quant Time: Jul 26 13:34 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



000097

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11674.D
Acq Time : 26 Jul 99 1:50 pm
Sample : TCLP EXT BLK 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 15:40 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	12.24	128	631792	50.00 ug/L	0.00
19) 1,4-Difluorobenzene	14.21	114	3028247	50.00 ug/L	0.00
34) Chlorobenzene-d5	20.46	117	3168247	50.00 ug/L	0.00
System Monitoring Compounds					**%Recovery**
17) 1,2-Dichloroethane-d4	13.41	65	784404	46.78 ug/L	93.56%
36) Toluene-d8	17.35	98	3096228	48.25 ug/L	96.51%
45) Bromofluorobenzene	22.94	95	1439126	48.64 ug/L	97.29%
Target Compounds					**Qvalue**
10) Methylene Chloride	8.46	84	45563	3.25 ug/L	92

000098

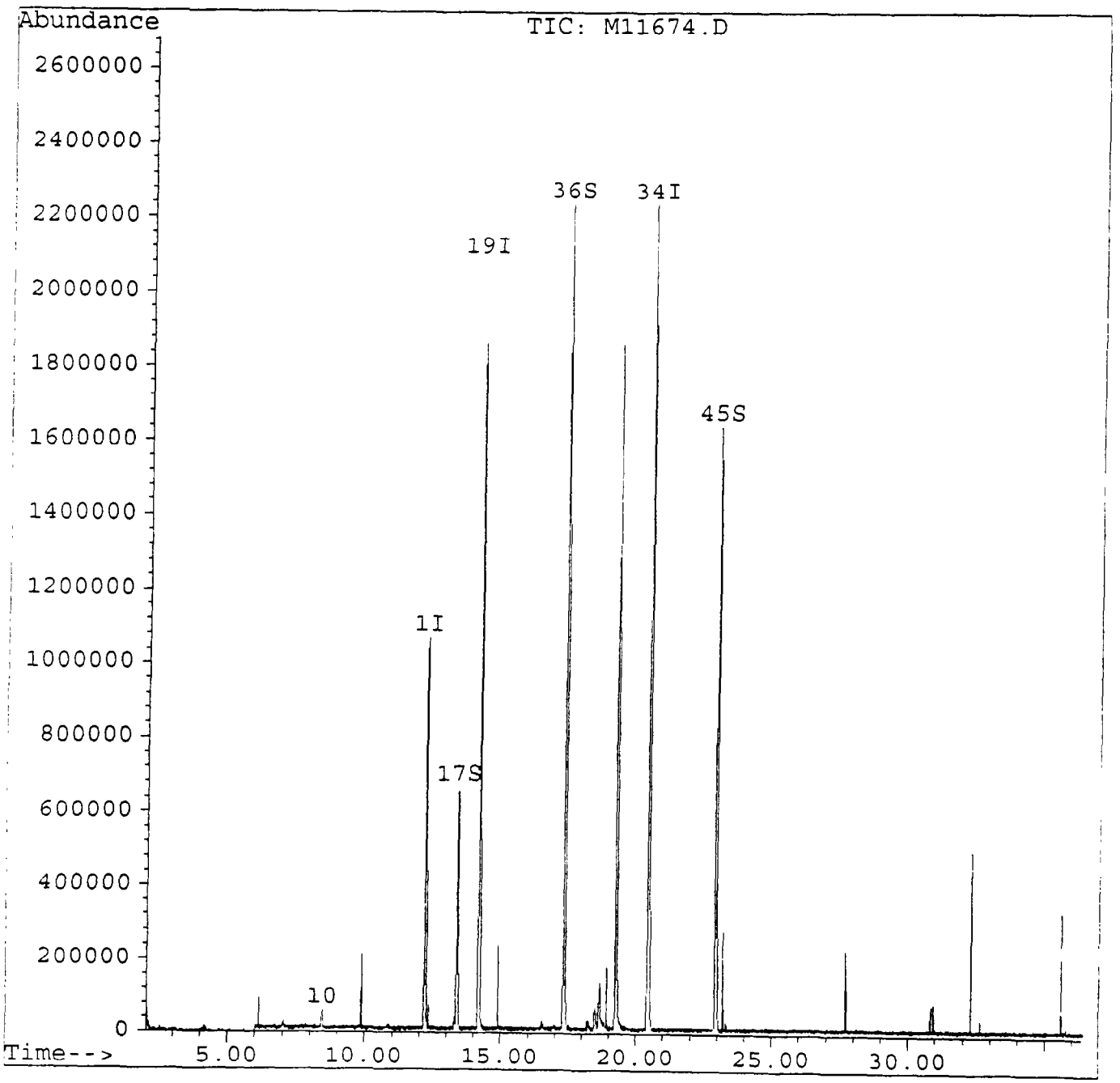
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3072699\M11674.D
Acq Time : 26 Jul 99 1:50 pm
Sample : TCLP EXT BLK 5 X DIL TCLP
Misc : 5ML
Quant Time: Jul 26 15:40 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30628BW.M
Title : VOA Standards for 5 point calibration
Last Update : Mon Jun 28 21:30:24 1999
Response via : Multiple Level Calibration



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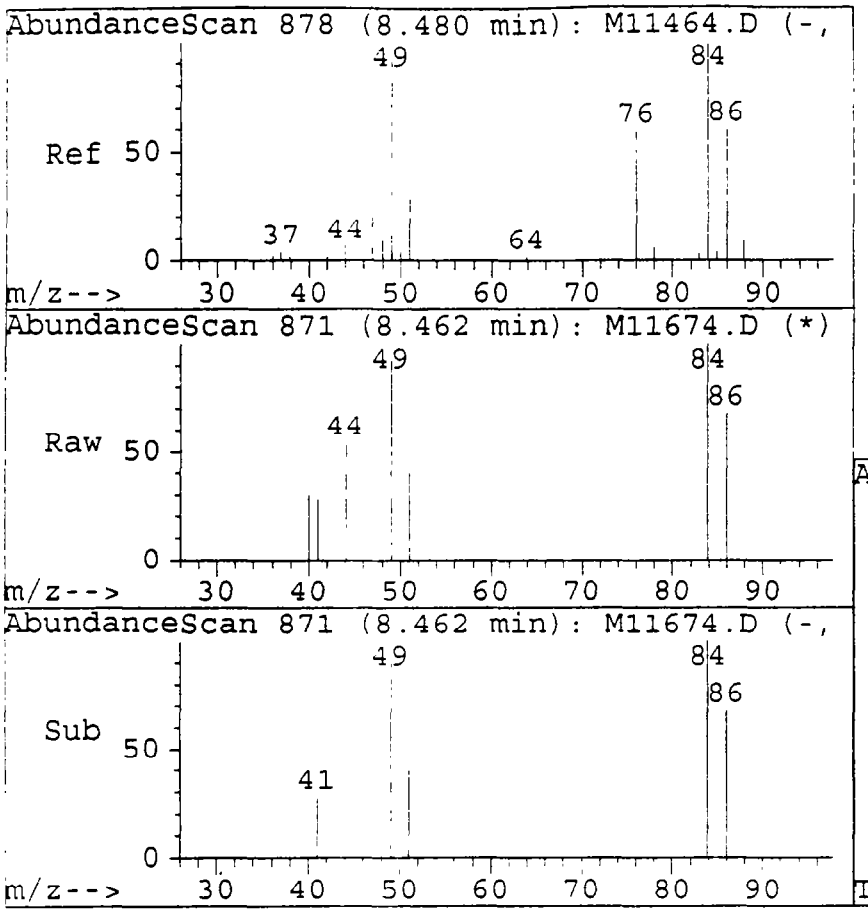
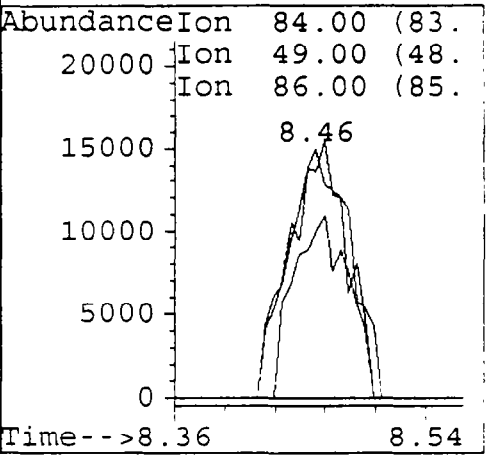


#10
Methylene Chloride
Concen: 3.25 ug/L
RT: 8.46 min Scan# 871
Delta R.T. 0.00 min
Lab File: M11674.D
Acq: 26 Jul 99 1:50 pm

Tgt Ion:84 Resp: 45563

Ion	Ratio	Lower	Upper
84	100		
49	91.6	50.4	151.2
86	67.7	31.6	94.8
0	0.0	0.0	0.0



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II.

SEMI-VOLATILE DATA

A.

ANALYTICAL RESULTS SUMMARY

1B
TCLP ANALYSIS DATA SHEET

SAMPLE NO.
SPWC-01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78945

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5127.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

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1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-02

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78946

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5128.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-03

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78947

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5129.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

SPWC-04

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78948

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5130.D

Level: (low/med) _____ Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1B
TCLP ANALYSIS DATA SHEET

SAMPLE NO.
SPWC-05

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: O78949

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5131.D

Level: (low/med) Date Received: 7/23/99

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

B.

TUNING RESULTS SUMMARY

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINISTE Group: SPWC-01

Lab File ID: B4958.D DFTPP Injection Date: 7/17/99

Instrument ID: BNA1 DFTPP Injection Time: 2055

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	65.2
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198	48.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	24.9
365	Greater than 1.00% of mass 198	3.6
441	Present, but less than mass 443	15.1
442	Greater than 40.0% of mass 198	93.9
443	17.0 - 23.0% of mass 442	18.7 (19.9)2

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

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD020	SSTD020	B4959.D	7/17/99	2126
02	SSTD050	SSTD050	B4960.D	7/17/99	2219
03	SSTD080	SSTD0801	B4961.D	7/17/99	2313
04	SSTD120	SSTD120	B4962.D	7/18/99	0006
05	SSTD160	SSTD160	B4963.D	7/18/99	0059
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name : CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINISTE Group: SPWC-01

Lab File ID: B5123.D DFTPP Injection Date: 7/28/99

Instrument ID: BNA1 DFTPP Injection Time: 1100

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	43.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.1
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	25.6
365	Greater than 1.00% of mass 198	3.3
441	Present, but less than mass 443	15.3
442	Greater than 40.0% of mass 198	99.1
443	17.0 - 23.0% of mass 442	19.1 (19.3)2

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

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD080	SSTD0802	B5124.D	7/28/99	1127
02	SBLK01	SBLK01	B5125.D	7/28/99	1217
03	E.BLANK	E.BLANK	B5126.D	7/28/99	1308
04	SPWC-01	O78945	B5127.D	7/28/99	1410
05	SPWC-02	O78946	B5128.D	7/28/99	1501
06	SPWC-03	O78947	B5129.D	7/28/99	1552
07	SPWC-04	O78948	B5130.D	7/28/99	1644
08	SPWC-05	O78949	B5131.D	7/28/99	1735
09					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
20					
21					
22					

C.

METHOD BLANK RESULTS SUMMARY

4B

SAMPLE NO.

SEMIVOLATILE METHOD BLANK SUMMARY

SBLK01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINI Group: SPWC-01

Lab File ID: B5125.D Lab Sample ID: SBLK01

Instrument ID: BNA1 Date Extracted: 7/26/99

Matrix: (soil/water) WATER Date Analyzed: 7/28/99

Level: (low/med) Time Analyzed: 1217

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	E.BLANK	E.BLANK	B5126.D	07/28/99
02	SPWC-01	O78945	B5127.D	07/28/99
03	SPWC-02	O78946	B5128.D	07/28/99
04	SPWC-03	O78947	B5129.D	07/28/99
05	SPWC-04	O78948	B5130.D	07/28/99
06	SPWC-05	O78949	B5131.D	07/28/99
07				
08				
09				
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11				
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COMMENTS:

000112

1B
TCLP ANALYSIS DATA SHEET

SAMPLE NO.
SBLK01

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: SBLK01

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5125.D

Level: (low/med) Date Received:

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

1B

TCLP ANALYSIS DATA SHEET

SAMPLE NO.

E.BLANK

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINIS Group: SPWC-01

Matrix: (soil/water) WATER Lab Sample ID: E.BLANK

Sample wt/vol: 100.0 (g/mL ML Lab File ID: B5126.D

Level: (low/med) Date Received:

% Moisture: 100 decanted: (Y/N): N Date Extracted: 7/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/28/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
110-86-1	Pyridine	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-48-7	2-Methylphenol	100	U
106-44-5	3+4-Methyphenols	200	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
87-68-3	Hexachlorobutadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	250	U
121-14-2	2,4-Dinitrotoluene	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	250	U

D.

CALIBRATION SUMMARY

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No. 12693NJ Site: Location: INISTER Group: SPWC-01

Instrument ID: BNA1 Calibration Date(s): 7/17/99 7/18/99

Calibration Times: 2126 0059

Lab File ID: RRF20 = B4959.D RRF50 = B4960.D
RRF80 = B4961.D RRF120 = B4962.D RRF160 = B4963.D

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD	
Pyridine		1.537	1.671	1.483	1.500	1.681	1.574	6.0	
1,4-Dichlorobenzene	*	1.633	1.735	1.526	1.547	1.688	1.626	5.5	*
2-Methylphenol	*	1.156	1.191	1.096	1.110	1.240	1.159	5.1	*
3+4-Methyphenols	*	1.150	1.212	1.080	1.072	1.171	1.137	5.3	*
Hexachloroethane	*	0.702	0.742	0.666	0.650	0.716	0.695	5.4	*
Nitrobenzene	*	0.740	0.586	0.504	0.467	0.399	0.539	24.3	*
Hexachlorobutadiene		0.245	0.237	0.213	0.215	0.226	0.227	6.0	
2,4,6-Trichlorophenol	*	0.534	0.588	0.525	0.516	0.504	0.533	6.1	*
2,4,5-Trichlorophenol	*	0.488	0.508	0.470	0.472	0.374	0.462	11.2	*
2,4-Dinitrotoluene	*	0.438	0.509	0.475	0.466	0.481	0.474	5.4	*
Hexachlorobenzene	*	0.364	0.359	0.307	0.319	0.327	0.335	7.5	*
Pentachlorophenol	*	0.174	0.208	0.204	0.218	0.240	0.208	11.5	*
Nitrobenzene-d5	*	0.483	0.495	0.455	0.448	0.469	0.470	4.1	*
2-Fluorobiphenyl	*	1.575	1.595	1.425	1.357	1.301	1.451	9.0	*
Phenol-d5	*	1.735	1.795	1.563	1.578	1.768	1.688	6.5	*
2-Fluorophenol	*	1.269	1.378	1.262	1.318	1.506	1.347	7.5	*
Terphenyl-d14	*	1.265	1.306	1.120	1.150	1.218	1.212	6.4	*
1,2-Dichlorobenzene-d4	*	0.972	0.987	0.862	0.856	0.939	0.923	6.6	*
2-Chlorophenol-d4	*	1.389	1.417	1.250	1.238	1.379	1.334	6.3	*
2,4,6-Tribromophenol		0.287	0.325	0.308	0.295	0.298	0.302	4.9	

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

000116

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No. 12693NJ Site: Location: NAWC WARMINIST Group: SPWC-01

Instrument ID: BNA1 Calibration Date: 7/28/99 Time: 1127

Lab File ID: B5124.D Init. Calib. Date(s): 7/17/99 7/18/99

Init. Calib. Times: 2126 0059

COMPOUND	$\overline{RRF}$	RRF80	MIN RRF	%D	MAX %D
Pyridine	1.574	1.230		21.9	
1,4-Dichlorobenzene	1.626	1.593	0.500	2.0	20.0
2-Methylphenol	1.159	1.129	0.700	2.6	
3+4-Methyphenols	1.137	1.125	0.600	1.1	
Hexachloroethane	0.695	0.692	0.300	0.4	
Nitrobenzene	0.539	0.732	0.200	-35.8	
Hexachlorobutadiene	0.227	0.260		-14.5	20.0
2,4,6-Trichlorophenol	0.533	0.553	0.200	-3.8	20.0
2,4,5-Trichlorophenol	0.462	0.531	0.200	-14.9	
2,4-Dinitrotoluene	0.474	0.503	0.200	-6.1	
Hexachlorobenzene	0.335	0.358	0.100	-6.9	
Pentachlorophenol	0.208	0.236	0.050	-13.5	20.0
Nitrobenzene-d5	0.470	0.479	0.200	-1.9	20.0
2-Fluorobiphenyl	1.451	1.434	0.700	1.2	20.0
Phenol-d5	1.688	1.650	0.800	2.3	20.0
2-Fluorophenol	1.347	1.301	0.600	3.4	20.0
Terphenyl-d14	1.212	1.155	0.500	4.7	20.0
1,2-Dichlorobenzene-d4	0.923	0.907	0.500	1.7	20.0
2-Chlorophenol-d4	1.334	1.305	0.500	2.2	20.0
2,4,6-Tribromophenol	0.302	0.315		-4.3	

All other compounds must meet a minimum RRF of 0.010.

000117

E.

SURROGATE COMPOUND RECOVERY RESULTS SUMMARY

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: _____ Location: NAWC WARMINISTER Group: SPWC-01

	SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (PHL) #	S4 (2FP) #	S5 0 #	S6 0 #	S7 0 #	S8 (TBP) #	TOT OUT
01	SBLK01	94	77	74	81	75	86	81	88	
02	E.BLANK	82	77	69	73	69	81	74	80	
03	SPWC-01	75	68	64	65	68	69	71	83	
04	SPWC-02	76	65	64	65	64	69	70	77	
05	SPWC-03	71	62	67	67	63	72	73	72	
06	SPWC-04	63	62	59	59	62	63	64	72	
07	SPWC-05	79	70	71	72	69	75	78	78	
08										
09										
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30										

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (PHL) = Phenol-d5	(10-94)
S4 (2FP) = 2-Fluorophenol	(21-100)
S5 0 = Terphenyl-d14	(33-141)
S6 0 = 1,2-Dichlorobenzene-d4	(16-110)
S7 0 = 2-Chlorophenol-d4	(33-110)
S8 (TBP) = 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

000119

F.

MS/ MSD RESULTS SUMMARY

3C

TCLP WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NEWARK AIRPORT Group: MTH-1D

Matrix Spike - Sample No.: MTH-5C

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Pyridine	100	0	70	70	30-150
1,4-Dichlorobenzene	100	0	78	78	30-150
2-Methylphenol	100	0	83	83	30-150
3+4-Methyphenols	200	0	92	46	30-150
Hexachloroethane	100	0	84	84	30-150
Nitrobenzene	100	0	89	89	30-150
Hexachlorobutadiene	100	0	77	77	30-150
2,4,6-Trichlorophenol	100	0	70	70	30-150
2,4,5-Trichlorophenol	100	0	94	94	30-150
2,4-Dinitrotoluene	100	0	87	87	30-150
Hexachlorobenzene	100	0	95	95	30-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Pyridine	100	67	67	4	30	30-150
1,4-Dichlorobenzene	100	76	76	3	30	30-150
2-Methylphenol	100	79	79	5	30	30-150
3+4-Methyphenols	200	92	46	0	30	30-150
Hexachloroethane	100	80	80	5	30	30-150
Nitrobenzene	100	89	89	0	30	30-150
Hexachlorobutadiene	100	76	76	1	30	30-150
2,4,6-Trichlorophenol	100	69	69	1	30	30-150
2,4,5-Trichlorophenol	100	91	91	3	30	30-150
2,4-Dinitrotoluene	100	87	87	0	30	30-150
Hexachlorobenzene	100	95	95	0	30	30-150

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Comments:

000121

3C

TCLP WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NEWARK AIRPORT Group: MTH-1D

Matrix Spike - Sample No.: MTH-5C

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Pentachlorophenol	100	0	100	100	30-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Pentachlorophenol	100	100	100	0	30	30-150
RPD: 0 out of 12 outside limits						
Spike Recovery: 18 out of 24 outside l						

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Comments:

G.

INTERNAL STANDARD SUMMARY

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINSTER Lab Sample ID: SPWC-01

Lab File ID (Standard): B5124.D Date Analyzed: 7/28/99

Instrument ID: BNA1 Time Analyzed: 1127

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	526689	7.54	1682316	10.64	946846	15.13
	UPPER LIMIT	1053378	8.04	3364632	11.14	1893692	15.63
	LOWER LIMIT	263345	7.04	841158	10.14	473423	14.63
	SAMPLE NO.						
01	SBLK01	527479	7.55	1587434	10.64	915219	15.12
02	E.BLANK	583094	7.55	1844056	10.64	991390	15.12
03	SPWC-01	613655	7.55	1859672	10.63	1077984	15.12
04	SPWC-02	549570	7.55	1679395	10.64	931993	15.12
05	SPWC-03	539096	7.55	1790956	10.64	964581	15.12
06	SPWC-04	548075	7.56	1787262	10.65	960156	15.12
07	SPWC-05	494249	7.55	1579890	10.65	866270	15.12
08							
09							
10							
11							
12							
13							
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16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

000124

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: FOSTER WHEELER ENVIRONMENTAL

Project No.: 12693NJ Site: Location: NAWC WARMINSTER Group: SPWC-01

Lab File ID (Standard): B5124.D Date Analyzed: 7/28/99

Instrument ID: BNA1 Time Analyzed: 1127

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	12 HOUR STD	1487088	18.89	1140799	25.78	1042040	29.23
	UPPER LIMIT	2974176	19.39	2281598	26.28	2084080	29.73
	LOWER LIMIT	743544	18.39	570400	25.28	521020	28.73
	SAMPLE NO.						
01	SBLK01	1491952	18.87	1174180	25.76	1059192	29.21
02	E.BLANK	1628970	18.88	1451750	25.76	1232846	29.22
03	SPWC-01	1726140	18.88	1379759	25.77	1216006	29.22
04	SPWC-02	1509074	18.89	1167419	25.76	1006748	29.22
05	SPWC-03	1521499	18.89	1171897	25.77	1058801	29.23
06	SPWC-04	1541100	18.88	1206284	25.78	1032172	29.23
07	SPWC-05	1390718	18.89	1029317	25.78	918392	29.23
08							
09							
10							
11							
12							
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18							
19							
20							
21							
22							

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

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

000125

H.

CHROMATOGRAMS

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5127.D
Acq Time : 28 Jul 99 2:10 pm
Sample : 12693NJ-78945-QT163
Misc :
Quant Time: Jul 28 18:40 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	613655	40.00 ng	-0.12
21) Naphthalene-d8	10.63	136	1859672	40.00 ng	-0.14
36) Acenaphthene-d10	15.12	164	1077984	40.00 ng	-0.13
57) Phenanthrene-d10	18.88	188	1726140	40.00 ng	-0.14
69) Chrysene-d12	25.77	240	1379759	40.00 ng	-0.14
80) Perylene-d12	29.22	264	1216006	40.00 ng	-0.12

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	5.00	112	5381938	260.53 ng	
6) 2-Chlorophenol-d4	7.19	132	5808148	283.71 ng	
7) Phenol-d5	7.23	99	6671450	257.64 ng	
13) 1,2-Dichlorobenzene-d4	7.97	152	1964078	138.66 ng	
22) Nitrobenzene-d5	9.02	82	3274302	149.87 ng	
40) 2-Fluorobiphenyl	13.53	172	5290288	135.32 ng	
55) 2,4,6-Tribromophenol	17.26	330	2710289	332.48 ng	
72) Terphenyl-d14	23.23	244	5693820	136.22 ng	

Target Compounds Qvalue

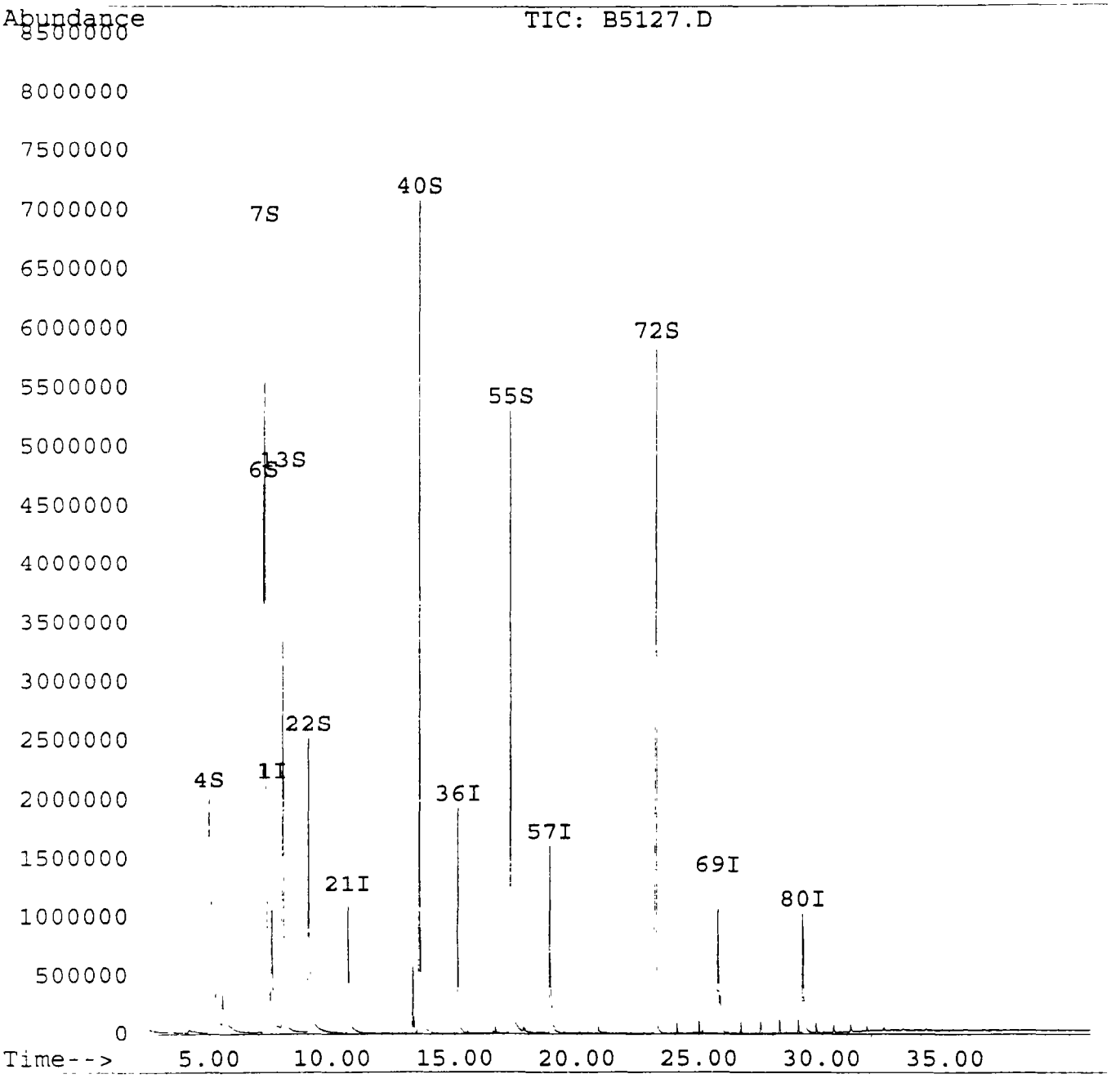
(#) = qualifier out of range (m) = manual integration
B5127.D B10717C.M Wed Jul 28 18:40:13 1999 BNA Page 1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5127.D
Acq Time : 28 Jul 99 2:10 pm
Sample : 12693NJ-78945-QT163
Misc :
Quant Time: Jul 28 18:40 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000128

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5128.D
Acq Time : 28 Jul 99 3:01 pm
Sample : 12693NJ-78946-QT163
Misc :
Quant Time: Jul 28 18:40 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	549570	40.00 ng	-0.12
21) Naphthalene-d8	10.64	136	1679395	40.00 ng	-0.13
36) Acenaphthene-d10	15.12	164	931993	40.00 ng	-0.13
57) Phenanthrene-d10	18.89	188	1509074	40.00 ng	-0.13
69) Chrysene-d12	25.76	240	1167419	40.00 ng	-0.14
80) Perylene-d12	29.22	264	1006748	40.00 ng	-0.13

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	4.99	112	4789709	258.90 ng	
6) 2-Chlorophenol-d4	7.20	132	5145383	280.64 ng	
7) Phenol-d5	7.24	99	5961040	257.05 ng	
13) 1,2-Dichlorobenzene-d4	7.97	152	1761621	138.87 ng	
22) Nitrobenzene-d5	9.02	82	3003326	152.22 ng	
40) 2-Fluorobiphenyl	13.54	172	4382518	129.66 ng	
55) 2,4,6-Tribromophenol	17.26	330	2163902	307.03 ng	
72) Terphenyl-d14	23.22	244	4493898	127.07 ng	

Target Compounds Qvalue

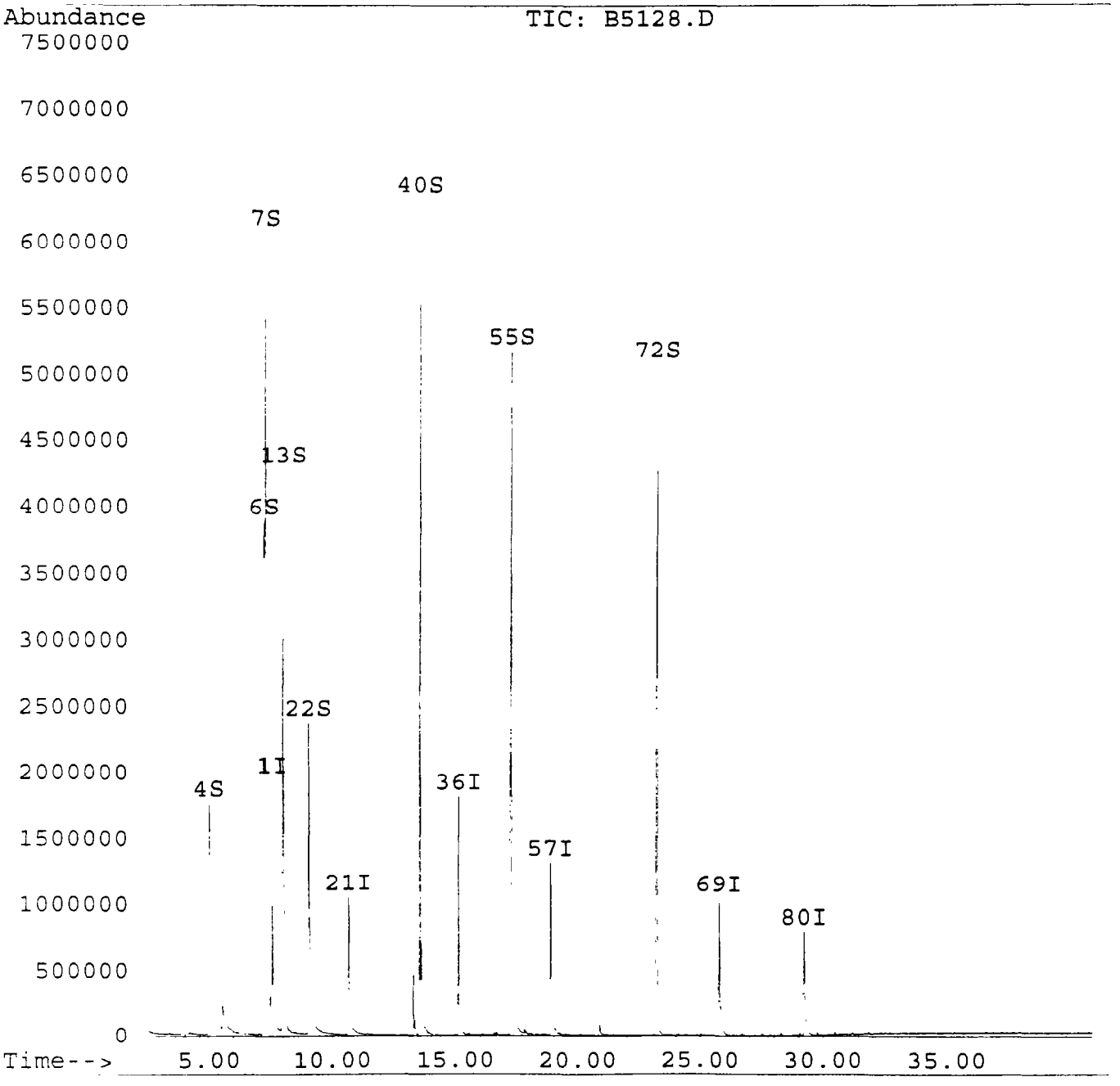
000129

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5128.D
Acq Time : 28 Jul 99 3:01 pm
Sample : 12693NJ-78946-QT163
Misc :
Quant Time: Jul 28 18:40 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000130

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5129.D
Acq Time : 28 Jul 99 3:52 pm
Sample : 12693NJ-78947-QT163
Misc :
Quant Time: Jul 28 18:41 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	539096	40.00 ng	-0.12
21) Naphthalene-d8	10.64	136	1790956	40.00 ng	-0.13
36) Acenaphthene-d10	15.12	164	964581	40.00 ng	-0.13
57) Phenanthrene-d10	18.89	188	1521499	40.00 ng	-0.13
69) Chrysene-d12	25.77	240	1171897	40.00 ng	-0.14
80) Perylene-d12	29.23	264	1058801	40.00 ng	-0.11
System Monitoring Compounds					**%Recovery**
4) 2-Fluorophenol	5.00	112	4896755	269.83 ng	
6) 2-Chlorophenol-d4	7.20	132	5240957	291.41 ng	
7) Phenol-d5	7.24	99	6087595	267.61 ng	
13) 1,2-Dichlorobenzene-d4	7.98	152	1803320	144.92 ng	
22) Nitrobenzene-d5	9.02	82	2968996	141.11 ng	
40) 2-Fluorobiphenyl	13.55	172	4363590	124.74 ng	
55) 2,4,6-Tribromophenol	17.26	330	2089858	286.51 ng	
72) Terphenyl-d14	23.23	244	4451185	125.38 ng	
Target Compounds					**Qvalue**
67) Di-n-butylphthalate	20.89	149	149965	2.07 ng	98

000131

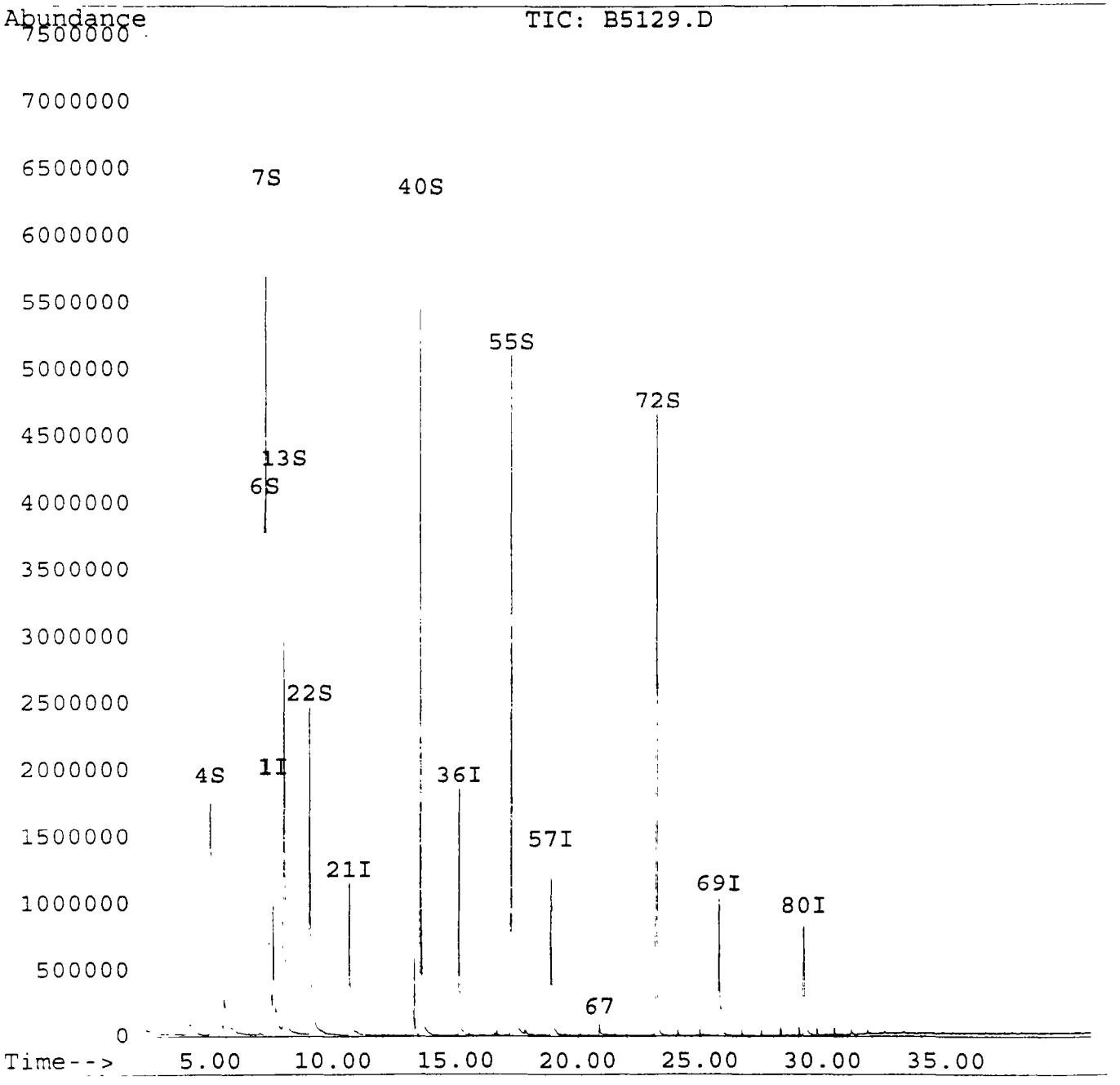
(#) = qualifier out of range (m) = manual integration

Quantitation Report

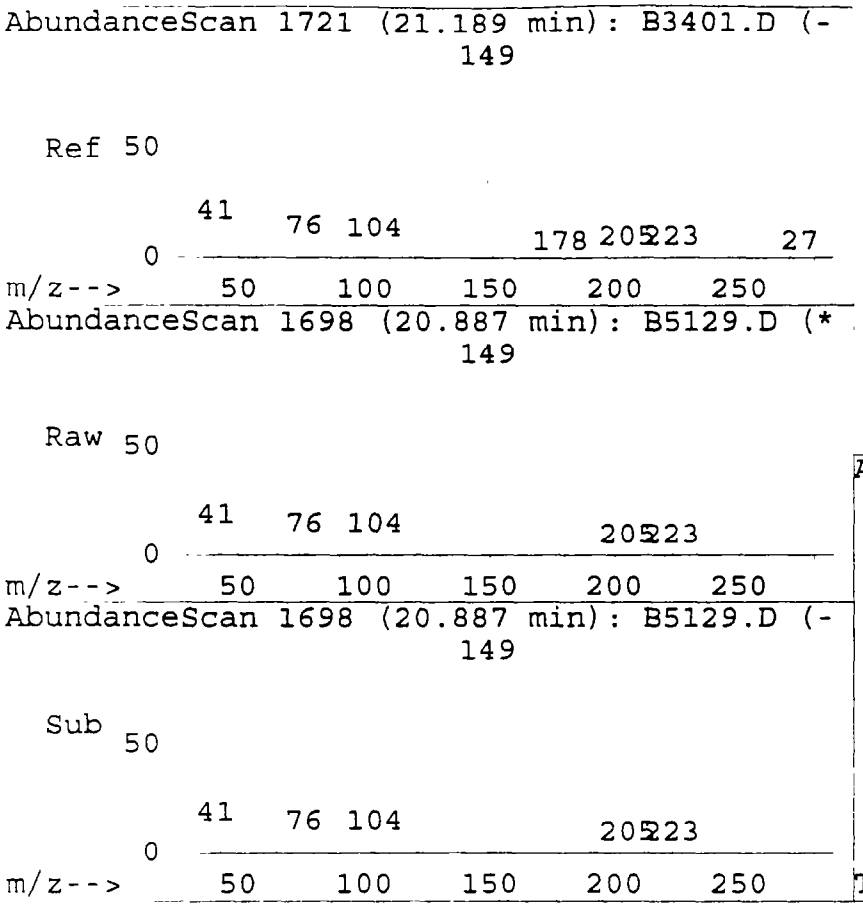
Data File : D:\HPCHEM\1\DATA\B10728\B5129.D
Acq Time : 28 Jul 99 3:52 pm
Sample : 12693NJ-78947-QT163
Misc :
Quant Time: Jul 28 18:41 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



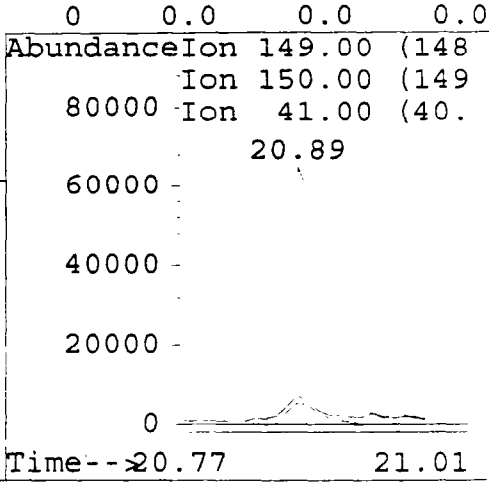
000132



#67
Di-n-butylphthalate
Concen: 2.07 ng
RT: 20.89 min Scan# 1698
Delta R.T. -0.15 min
Lab File: B5129.D
Acq: 28 Jul 99 3:52 pm

Tgt Ion:149 Resp: 149965

Ion	Ratio	Lower	Upper
149	100		
150	8.2	4.4	13.3
41	11.1	5.1	15.3
0	0.0	0.0	0.0



000133

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5130.D
Acq Time : 28 Jul 99 4:44 pm
Sample : 12693NJ-78948-QT163
Misc :
Quant Time: Jul 28 18:41 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.56	152	548075	40.00 ng	-0.11
21) Naphthalene-d8	10.65	136	1787262	40.00 ng	-0.12
36) Acenaphthene-d10	15.12	164	960156	40.00 ng	-0.13
57) Phenanthrene-d10	18.88	188	1541100	40.00 ng	-0.13
69) Chrysene-d12	25.78	240	1206284	40.00 ng	-0.13
80) Perylene-d12	29.23	264	1032172	40.00 ng	-0.11

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	5.00	112	4376002	237.18 ng	
6) 2-Chlorophenol-d4	7.20	132	4707882	257.48 ng	
7) Phenol-d5	7.24	99	5496136	237.65 ng	
13) 1,2-Dichlorobenzene-d4	7.98	152	1595219	126.09 ng	
22) Nitrobenzene-d5	9.03	82	2659627	126.67 ng	
40) 2-Fluorobiphenyl	13.54	172	4336418	124.53 ng	
55) 2,4,6-Tribromophenol	17.26	330	2092836	288.24 ng	
72) Terphenyl-d14	23.23	244	4553823	124.62 ng	

Target Compounds Qvalue

000134

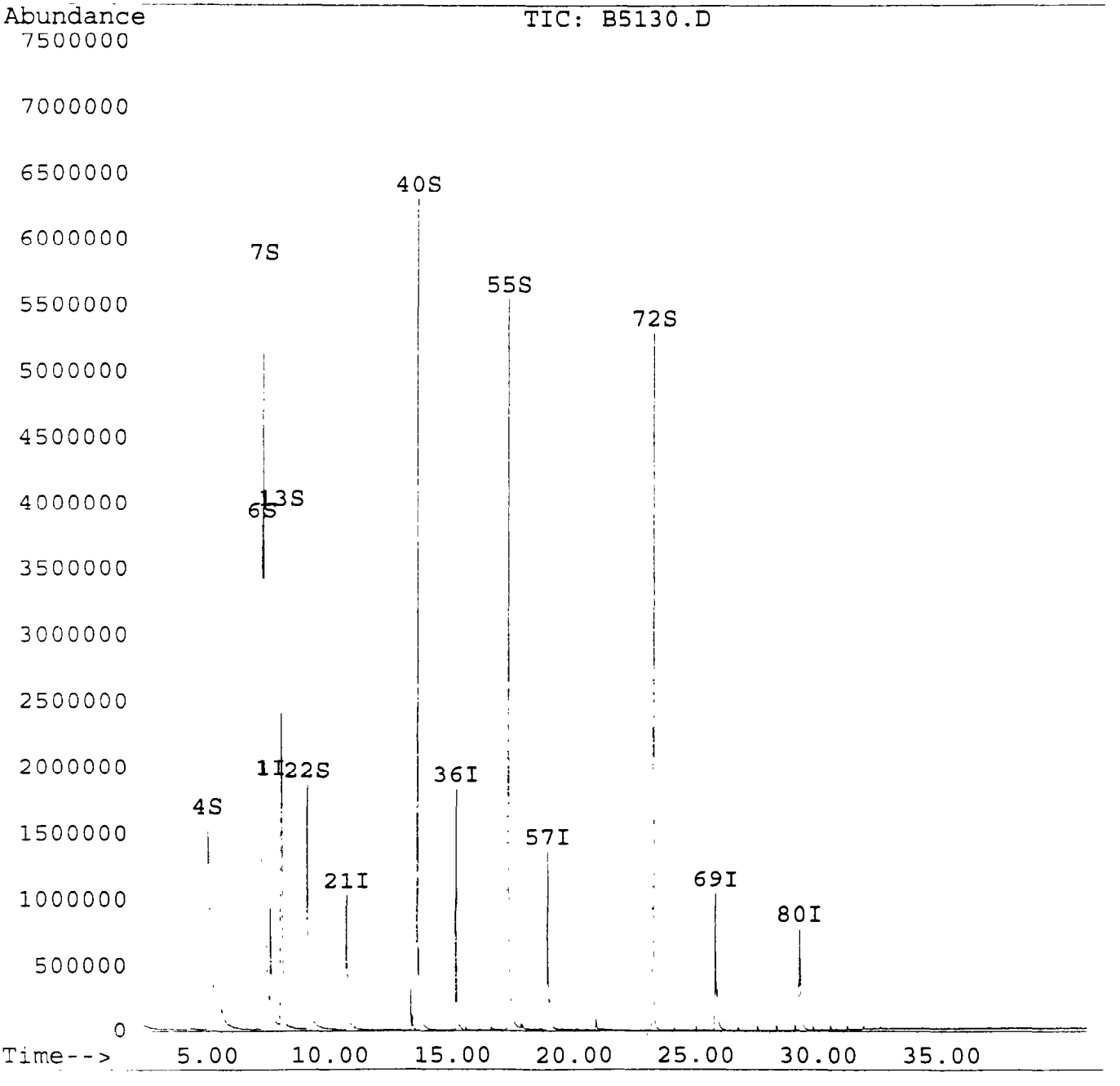
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5130.D
Acq Time : 28 Jul 99 4:44 pm
Sample : 12693NJ-78948-QT163
Misc :
Quant Time: Jul 28 18:41 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000135

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5131.D
Acq Time : 28 Jul 99 5:35 pm
Sample : 12693NJ-78949-QT163
Misc :
Quant Time: Jul 28 18:42 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	494249	40.00 ng	-0.12
21) Naphthalene-d8	10.65	136	1579890	40.00 ng	-0.12
36) Acenaphthene-d10	15.12	164	866270	40.00 ng	-0.13
57) Phenanthrene-d10	18.89	188	1390718	40.00 ng	-0.13
69) Chrysene-d12	25.78	240	1029317	40.00 ng	-0.13
80) Perylene-d12	29.23	264	918392	40.00 ng	-0.11

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	5.00	112	4808099	288.98 ng	
6) 2-Chlorophenol-d4	7.21	132	5131533	311.21 ng	
7) Phenol-d5	7.24	99	5956090	285.58 ng	
13) 1,2-Dichlorobenzene-d4	7.98	152	1719142	150.69 ng	
22) Nitrobenzene-d5	9.03	82	2922720	157.47 ng	
40) 2-Fluorobiphenyl	13.54	172	4411435	140.42 ng	
55) 2,4,6-Tribromophenol	17.26	330	2052394	313.31 ng	
72) Terphenyl-d14	23.24	244	4304295	138.04 ng	

Target Compounds Qvalue

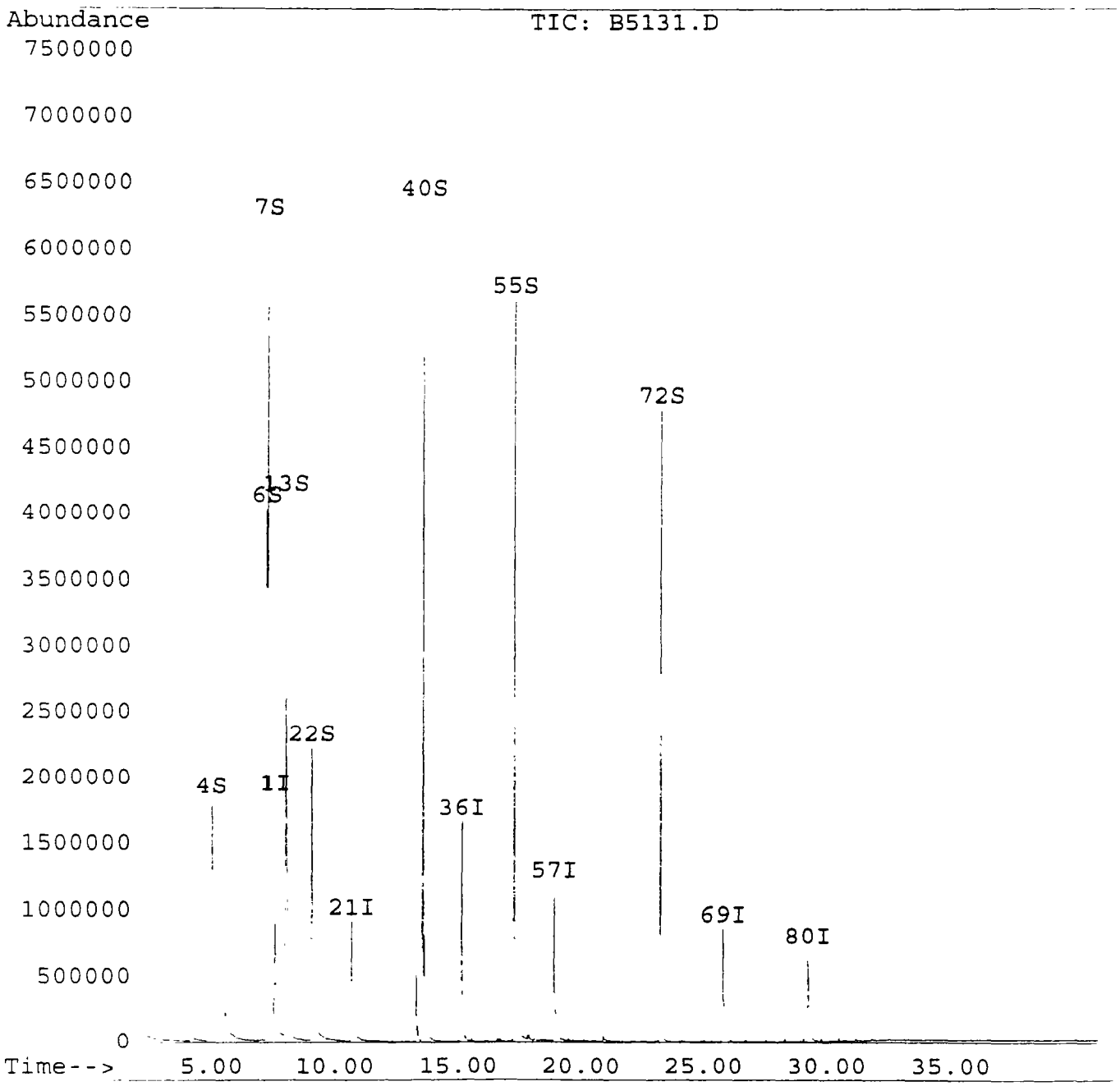
(#) = qualifier out of range (m) = manual integration
B5131.D B10717C.M Wed Jul 28 18:42:44 1999 BNA Page 1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5131.D
Acq Time : 28 Jul 99 5:35 pm
Sample : 12693NJ-78949-QT163
Misc :
Quant Time: Jul 28 18:42 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000137

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5125.D
Acq Time : 28 Jul 99 12:17 pm
Sample : BLANK
Misc :
Quant Time: Jul 28 16:25 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	527479	40.00 ng	-0.12
21) Naphthalene-d8	10.64	136	1587434	40.00 ng	-0.13
36) Acenaphthene-d10	15.12	164	915219	40.00 ng	-0.13
57) Phenanthrene-d10	18.87	188	1491952	40.00 ng	-0.15
69) Chrysene-d12	25.76	240	1174180	40.00 ng	-0.15
80) Perylene-d12	29.21	264	1059192	40.00 ng	-0.13

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	5.00	112	5783220	325.69 ng	
6) 2-Chlorophenol-d4	7.20	132	5719497	325.02 ng	
7) Phenol-d5	7.25	99	6631065	297.92 ng	
13) 1,2-Dichlorobenzene-d4	7.97	152	2082063	171.00 ng	
22) Nitrobenzene-d5	9.02	82	3504026	187.89 ng	
40) 2-Fluorobiphenyl	13.54	172	5090376	153.36 ng	
55) 2,4,6-Tribromophenol	17.26	330	2430887	351.24 ng	
72) Terphenyl-d14	23.23	244	5368802	150.93 ng	

Target Compounds Qvalue

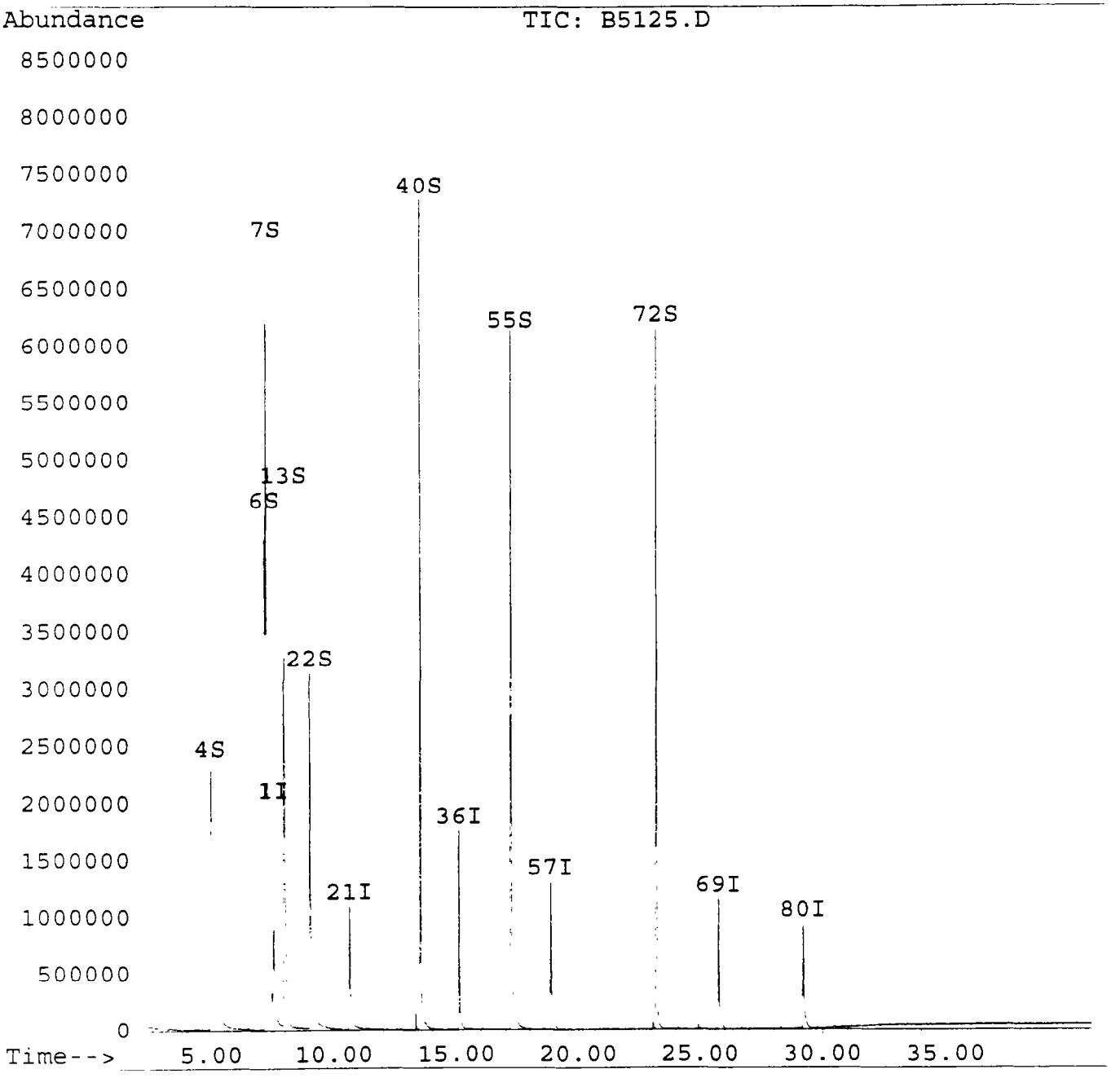
(#) = qualifier out of range (m) = manual integration
B5125.D B10717C.M Wed Jul 28 19:13:52 1999 BNA Page 1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5125.D
Acq Time : 28 Jul 99 12:17 pm
Sample : BLANK
Misc :
Quant Time: Jul 28 16:25 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000139

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5126.D
Acq Time : 28 Jul 99 1:08 pm
Sample : E.BLANK
Misc :
Quant Time: Jul 28 16:29 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	7.55	152	583094	40.00 ng	-0.12
21) Naphthalene-d8	10.64	136	1844056	40.00 ng	-0.13
36) Acenaphthene-d10	15.12	164	991390	40.00 ng	-0.13
57) Phenanthrene-d10	18.88	188	1628970	40.00 ng	-0.14
69) Chrysene-d12	25.76	240	1451750	40.00 ng	-0.15
80) Perylene-d12	29.22	264	1232846	40.00 ng	-0.12

System Monitoring Compounds					%Recovery
4) 2-Fluorophenol	5.01	112	5725992	291.71 ng	
6) 2-Chlorophenol-d4	7.20	132	5761793	296.19 ng	
7) Phenol-d5	7.25	99	6768490	275.09 ng	
13) 1,2-Dichlorobenzene-d4	7.97	152	2173580	161.49 ng	
22) Nitrobenzene-d5	9.02	82	3552048	163.96 ng	
40) 2-Fluorobiphenyl	13.54	172	5502910	153.05 ng	
55) 2,4,6-Tribromophenol	17.26	330	2410736	321.56 ng	
72) Terphenyl-d14	23.23	244	6058314	137.75 ng	

Target Compounds Qvalue

000140

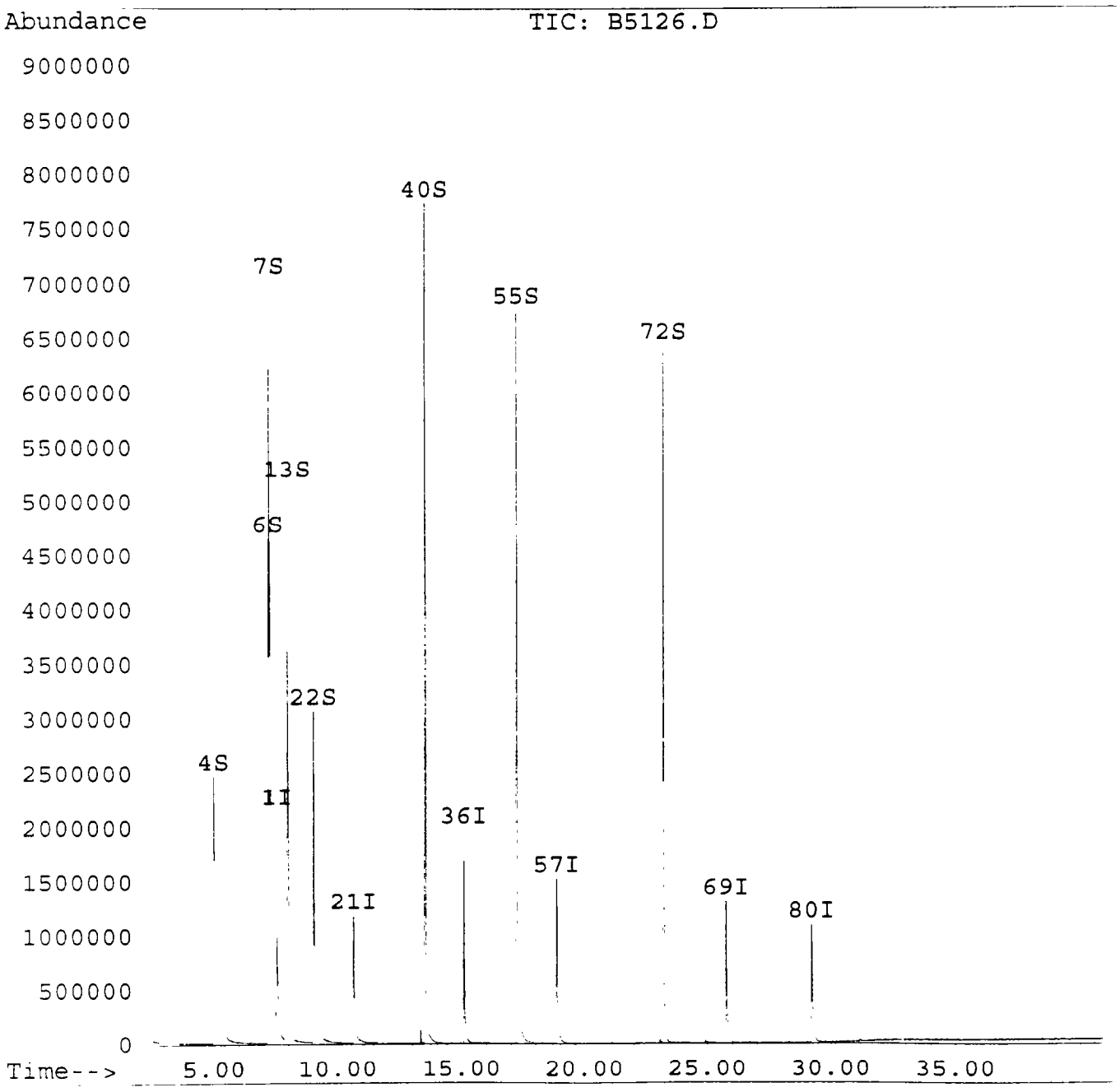
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\B10728\B5126.D
Acq Time : 28 Jul 99 1:08 pm
Sample : E.BLANK
Misc :
Quant Time: Jul 28 16:29 1999

Operator: Bob
Inst : BNA-RTE
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\B10717C.M
Title : CLP BNA Calibration
Last Update : Mon Jul 26 17:30:00 1999
Response via : Multiple Level Calibration



000141

III

PESTICIDES/ PCBS DATA

A.

ANALYTICAL RESULTS SUMMARY

ul0

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78945

Sample wt/vol: 30.3 (g/ml) G Lab File ID: _____

% Moisture: 4 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	69	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	24	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78946

Sample wt/vol: 30.2 (g/ml) G Lab File ID: _____

% Moisture: 9 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	36	U
11104-28-2------	Aroclor-1221	73	U
11141-16-5------	Aroclor-1232	36	U
53469-21-9------	Aroclor-1242	36	U
12672-29-6------	Aroclor-1248	36	U
11097-69-1------	Aroclor-1254	36	U
11096-82-5------	Aroclor-1260	36	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78947

Sample wt/vol: 30.3 (g/ml) G Lab File ID: _____

% Moisture: 8 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U

FORM I PEST SW846

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

› Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78948

Sample wt/vol: 30.4 (g/ml) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	71	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	35	U
12672-29-6------	Aroclor-1248	35	U
11097-69-1------	Aroclor-1254	35	U
11096-82-5------	Aroclor-1260	35	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: 78949

Sample wt/vol: 30.5 (g/ml) G Lab File ID: _____

% Moisture: 7 decanted: (Y/N) N Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	71	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	35	U
12672-29-6------	Aroclor-1248	35	U
11097-69-1------	Aroclor-1254	35	U
11096-82-5------	Aroclor-1260	35	U

B.

METHOD BLANK RESULTS SUMMARY

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK01

b Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Lab Sample ID: MBLK12693 Lab File ID: _____

Matrix: (soil/water) SOIL Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 07/24/99

Date analyzed: (1): 07/27/99 Date analyzed: (1): 07/27/99

Time analyzed: (1): 1635 Time analyzed: (1): 1635

Instrument ID (1): CS01 Instrument ID (2): CS01

GC Column(1): RTX5 ID: 0.53 (mm) GC Column(2): RTX1701 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	SPWC-01	78945	07/27/99	07/27/99
02	SPWC-02	78946	07/27/99	07/27/99
03	SPWC-03	78947	07/27/99	07/27/99
04	SPWC-04	78948	07/27/99	07/27/99
05	SPWC-05	78949	07/27/99	07/27/99
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

000150

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK01

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) WATER Lab Sample ID: 046F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/27/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK02

› Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) WATER Lab Sample ID: 058F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/27/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
12674-11-2------	Aroclor-1016	1.0	U
11104-28-2------	Aroclor-1221	2.0	U
11141-16-5------	Aroclor-1232	1.0	U
53469-21-9------	Aroclor-1242	1.0	U
12672-29-6------	Aroclor-1248	1.0	U
11097-69-1------	Aroclor-1254	1.0	U
11096-82-5------	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK03

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) WATER Lab Sample ID: 070F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/27/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
12674-11-2------	Aroclor-1016	1.0	U
11104-28-2------	Aroclor-1221	2.0	U
11141-16-5------	Aroclor-1232	1.0	U
53469-21-9------	Aroclor-1242	1.0	U
12672-29-6------	Aroclor-1248	1.0	U
11097-69-1------	Aroclor-1254	1.0	U
11096-82-5------	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

Matrix: (soil/water) SOIL Lab Sample ID: MBLK12693

Sample wt/vol: 30.0 (g/ml) G Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/24/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2------	Aroclor-1016	33	U
11104-28-2------	Aroclor-1221	67	U
11141-16-5------	Aroclor-1232	33	U
53469-21-9------	Aroclor-1242	33	U
12672-29-6------	Aroclor-1248	33	U
11097-69-1------	Aroclor-1254	33	U
11096-82-5------	Aroclor-1260	33	U

C.

CALIBRATION SUMMARY

ethod: C:\HPCHEM\1\METHODS\0716FPCB.MTH

Calibration Table

PK#	RT	Lvl	PPB	Amt/Area	Ref Istd I#	Name
1	6.113	1	4.0	7.3338e-004	1	TCMX
		2	10.0	6.5726e-004		
		3	20.0	7.3826e-004		
		4	40.0	7.4019e-004		
		5	80.0	7.6433e-004		
2	7.095	1	100.0	3.2839e-002	1	AR1016A
		2	250.0	2.3876e-002		
		3	500.0	0.02433		
		4	1000.0	2.5163e-002		
		5	2000.0	2.5784e-002		
3	7.305	1	100.0	4.8131e-002	1	AR1016B
		2	250.0	3.6173e-002		
		3	500.0	3.7714e-002		
		4	1000.0	3.7979e-002		
		5	2000.0	3.5726e-002		
4	7.599	1	100.0	2.6152e-002	1	AR1016C
		2	250.0	1.8037e-002		
		3	500.0	1.5923e-002		
		4	1000.0	1.5975e-002		
		5	2000.0	1.5414e-002		
5	7.711	1	100.0	7.8136e-002	1	AR1016D
		2	250.0	4.1239e-002		
		3	500.0	2.8958e-002		
		4	1000.0	2.9137e-002		
		5	2000.0	2.7934e-002		
6	7.793	1	100.0	9.6373e-002	1	AR1016E
		2	250.0	0.10029		
		3	500.0	4.4842e-002		
		4	1000.0	4.2303e-002		
		5	2000.0	3.9746e-002		
7	10.430	1	100.0	3.2753e-002	1	AR1260A
		2	250.0	2.2748e-002		
		3	500.0	2.4781e-002		
		4	1000.0	2.0678e-002		
		5	2000.0	2.1261e-002		
8	10.766	1	100.0	1.1427e-002	1	AR1260B
		2	250.0	8.6275e-003		
		3	500.0	9.4567e-003		
		4	1000.0	7.5823e-003		
		5	2000.0	7.7168e-003		
9	11.197	1	100.0	2.7732e-002	1	AR1260C
		2	250.0	1.8438e-002		
		3	500.0	2.0125e-002		
		4	1000.0	1.9143e-002		
		5	2000.0	0.01884		
10	11.304	1	100.0	3.4881e-002	1	AR1260D
		2	250.0	2.6041e-002		
		3	500.0	2.9329e-002		
		4	1000.0	2.8614e-002		
		5	2000.0	0.02937		
11	11.390	1	100.0	2.4627e-002	1	AR1260E
		2	250.0	1.8929e-002		
		3	500.0	2.1713e-002		
		4	1000.0	0.02102		
		5	2000.0	2.1467e-002		
12	13.886	1	4.0	6.6881e-004	1	DCBP

2	10.0	5.2524e-004
3	20.0	5.3706e-004
4	40.0	5.3551e-004
5	80.0	5.3657e-004

Method: C:\HPCHEM\1\METHODS\0716RPCB.MTH

Calibration Table

Pk#	RT	Lvl	PPB	Amt/Area	Ref Istd I#	Name
1	6.347	1	4.0	8.1734e-004	1	TCMX
		2	10.0	7.0836e-004		
		3	20.0	9.878e-004		
		4	40.0	8.6551e-004		
		5	80.0	8.9996e-004		
2	7.526	1	100.0	3.7253e-002	1	AR1016A
		2	250.0	0.03098		
		3	500.0	2.9512e-002		
		4	1000.0	2.9929e-002		
		5	2000.0	0.03038		
3	8.091	1	100.0	3.3763e-002	1	AR1016B
		2	250.0	1.8607e-002		
		3	500.0	1.5971e-002		
		4	1000.0	1.5403e-002		
		5	2000.0	1.5283e-002		
4	8.413	1	100.0	3.7092e-002	1	AR1016C
		2	250.0	2.7583e-002		
		3	500.0	1.6371e-002		
		4	1000.0	1.6504e-002		
		5	2000.0	0.01712		
5	8.665	1	100.0	4.6139e-002	1	AR1016D
		2	250.0	3.0236e-002		
		3	500.0	3.2682e-002		
		4	1000.0	3.2031e-002		
		5	2000.0	3.1183e-002		
6	8.769	1	100.0	4.5574e-002	1	AR1016E
		2	250.0	2.9798e-002		
		3	500.0	3.2959e-002		
		4	1000.0	2.9599e-002		
		5	2000.0	2.9539e-002		
7	10.939	1	100.0	2.4427e-002	1	AR1260A
		2	250.0	1.6924e-002		
		3	500.0	1.7709e-002		
		4	1000.0	1.7362e-002		
		5	2000.0	0.01758		
8	11.907	1	100.0	4.6513e-002	1	AR1260B
		2	250.0	3.2564e-002		
		3	500.0	3.3626e-002		
		4	1000.0	3.2887e-002		
		5	2000.0	2.8578e-002		
9	12.004	1	100.0	1.0894e-002	1	AR1260C
		2	250.0	8.221e-003		
		3	500.0	8.7637e-003		
		4	1000.0	8.8547e-003		
		5	2000.0	8.369e-003		
10	12.767	1	100.0	4.9234e-002	1	AR1260D
		2	250.0	3.6517e-002		
		3	500.0	0.04646		
		4	1000.0	3.6743e-002		
		5	2000.0	4.1746e-002		
11	13.368	1	100.0	3.6045e-002	1	AR1260E
		2	250.0	2.4706e-002		
		3	500.0	2.6843e-002		
		4	1000.0	2.2154e-002		
		5	2000.0	2.1636e-002		
12	14.570	1	4.0	6.1709e-004	1	DCBP

2	10.0	4.6215e-004
3	20.0	4.9583e-004
4	40.0	4.9798e-004
5	80.0	5.127e-004

Method: C:\HPCHEM\1\METHODS\0716FP21.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.109	1	20.0	6.2085e-004	1	TCMX (Surr)
2	6.409	1	500.0	9.8236e-002	1	AR1221 A
3	6.536	1	500.0	0.18554	1	AR1221 B
4	6.607	1	500.0	4.5956e-002	1	AR1221 C
5	13.875	1	20.0	4.8085e-004	1	DCB (Surr)

!ethod: C:\HPCHEM\1\METHODS\0716RP21.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
.	6.339	1	20.0	3.3765e-004	1	TCMX (Surr)
2	6.859	1	500.0	4.9016e-002	1	AR1221 A
3	7.041	1	500.0	0.19147	1	AR1221 B
4	7.118	1	500.0	3.1934e-002	1	AR1221 C
5	14.558	1	20.0	5.0412e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716FP32.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.110	1	20.0	6.9613e-004	1	TCMX (Surr)
2	7.092	1	500.0	0.05862	1	AR1232 A
3	7.302	1	500.0	9.7304e-002	1	AR1232 B
4	7.597	1	500.0	4.3276e-002	1	AR1232 C
5	7.708	1	500.0	7.8182e-002	1	AR1232 D
6	7.791	1	500.0	0.10519	1	AR1232 E
7	13.877	1	20.0	4.8585e-004	1	DCB (Surr)

:ethod: C:\HPCHEM\1\METHODS\0716RP32.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.341	1	20.0	3.7541e-004	1	TCMX (Surr)
2	7.124	1	500.0	8.1651e-002	1	AR1232 A
3	7.525	1	500.0	7.7028e-002	1	AR1232 B
4	8.086	1	500.0	5.7406e-002	1	AR1232 C
5	8.664	1	500.0	8.5329e-002	1	AR1232 D
6	8.767	1	500.0	8.5993e-002	1	AR1232 E
7	14.561	1	20.0	4.5622e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716FP42.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.112	1	20.0	7.0773e-004	1	TCMX (Surr)
2	7.598	1	500.0	1.9856e-002	1	AR1242 A
3	7.709	1	500.0	3.5704e-002	1	AR1242 B
4	7.792	1	500.0	5.4892e-002	1	AR1242 C
5	8.187	1	500.0	3.2792e-002	1	AR1242 D
6	8.314	1	500.0	3.8395e-002	1	AR1242 E
7	13.882	1	20.0	4.7177e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716RP42.MTH

Calibration Table

PK#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.345	1	20.0	2.1194e-004	1	TCMX (Surr)
2	8.410	1	500.0	0.01798	1	AR1242 A
3	8.663	1	500.0	3.7525e-002	1	AR1242 B
4	8.766	1	500.0	3.4936e-002	1	AR1242 C
5	9.115	1	500.0	0.01985	1	AR1242 D
6	9.342	1	500.0	2.8722e-002	1	AR1242 E
7	14.566	1	20.0	4.3366e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716FP48.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.113	1	20.0	7.0743e-004	1	TCMX (Surr)
2	7.963	1	500.0	3.9795e-002	1	AR1248 A
3	8.010	1	500.0	4.4659e-002	1	AR1248 B
4	8.043	1	500.0	3.6995e-002	1	AR1248 C
5	8.188	1	500.0	1.9692e-002	1	AR1248 D
6	8.315	1	500.0	2.2855e-002	1	AR1248 E
7	13.886	1	20.0	5.3568e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716RP48.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.347	1	20.0	2.0652e-004	1	TCMX (Surr)
2	8.411	1	500.0	1.3186e-002	1	AR1248 A
3	8.765	1	500.0	2.0168e-002	1	AR1248 B
4	8.932	1	500.0	0.11381	1	AR1248 C
5	9.246	1	500.0	3.1585e-002	1	AR1248 D
6	9.517	1	500.0	5.1597e-002	1	AR1248 E
7	15.000	1	20.0	5.0583e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716FP54.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.113	1	20.0	1.2673e-003	1	TCMX (Surr)
2	8.635	1	500.0	1.7527e-002	1	AR1254 A
3	8.859	1	500.0	1.7115e-002	1	AR1254 B
4	9.137	1	500.0	1.9325e-002	1	AR1254 C
5	9.237	1	500.0	1.1109e-002	1	AR1254 D
6	9.481	1	500.0	1.2458e-002	1	AR1254 E
7	13.886	1	20.0	5.0102e-004	1	DCB (Surr)

Method: C:\HPCHEM\1\METHODS\0716RP54.MTH

Calibration Table

Pk#	RT	Lvl	ppb	Amt/Area	Ref Istd I#	Name
1	6.348	1	20.0	2.6402e-004	1	TCMX (Surr)
2	9.055	1	500.0	1.6209e-002	1	AR1254 A
3	9.245	1	500.0	1.5537e-002	1	AR1254 B
4	9.600	1	500.0	1.5491e-002	1	AR1254 C
5	9.707	1	500.0	8.7787e-003	1	AR1254 D
6	9.846	1	500.0	1.5039e-002	1	AR1254 E
7	14.570	1	20.0	4.5161e-004	1	DCB (Surr)

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 Date Analysed: 7/27/99

Lab Sample ID (PEM) 047F0201 Time analysed: 14:33

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	571	500	14.20
PCB 1260	535	500	7.00

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 Date Analysed: 7/27/99

Lab Sample ID (PEM) 047R0201 Time analysed: 14:33

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	621	500	24.20
PCB 1260	551	500	10.20

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 Date Analysed: 7/27/99

Lab Sample ID (PEM) 059F0201 Time analysed: 19:26

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	613	500	22.60
PCB 1260	593	500	18.60

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP | Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 | Date Analysed: 7/27/99

Lab Sample ID (PEM) 059R0201 | Time analysed: 19:26

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	642	500	28.40
PCB 1260	645	500	29.00

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP | Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 | Date Analysed: 7/28/99

Lab Sample ID (PEM) 071F0201 | Time analysed: 0:18

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	426	500	14.80
PCB 1260	550	500	10.00

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP | Contract: FOSTER WHEELER

Lab Code: CHEM

EPA Sample No. (PEM): AR1660 | Date Analysed: 7/28/99

Lab Sample ID (PEM) 071R0201 | Time analysed: 0:18

PCB COMPOUND	AMOUNT (ng)	NOM AMOUNT (ng)	% RPD
PCB 1016	617	500	23.40
PCB 1260	535	500	7.00

QC LIMITS:

RPD for PCB'S must be less than or equal to 30.0%

D.

SURROGATE COMPOUND RECOVERY RESULTS SUMMARY

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

GC Column(1): RTX1701 ID: 0.53 (mm) GC Column(2): RTX5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCBP 1 %REC #	DCBP 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLK01	115	124	92	90			0
02	PIBLK02	120	120	105	98			0
03	PIBLK03	147	137	90	82			0
04								
05								
06								
07								
08								
09								
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27								
28								
29								
30								

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCBP = Decachlorobiphenyl	(60-150)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.
D Surrogate diluted out

000177

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

. ɔ Code: CHEM Case No.: SAS No.: SDG No.: 12693P

GC Column(1): RTX1701 ID: 0.53 (mm) GC Column(2): RTX5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCBP 1 %REC #	DCBP 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLK01	110	110	101	97			0
02	SPWC-01	109	138	93	89			0
03	SPWC-02	105	148	86	81			0
04	SPWC-03	116	147	89	85			0
05	SPWC-04	108	146	88	83			0
06	SPWC-05	138	147	90	83			0
07								
08								
09								
10								
11								
12								
13								
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25								
26								
27								
28								
29								
30								

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCBP = Decachlorobiphenyl	(60-150)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.
D Surrogate diluted out

000178

E.

MS/ MSD RESULTS SUMMARY

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

L Code: CHEM Case No.: SAS No.: SDG No.: 12610P

Matrix Spike - EPA SAMPLE NO.: 0509-MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
AROCLOR-1260	166	0.000	197	118	52-150

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	MSD % RPD #	QC LIMITS RPD	QC LIMITS REC.
AROCLOR-1260	166	196	118	0	20	52-150

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits.

RPD: 0 out of 1 outside limits
S e Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III PEST

CHEMTECH CONSULTING GROUP

RETENTION TIMES

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/16/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 6.339 DCB: 14.561

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	AR1660101	AR16601	07/16/99	1051	6.347	14.570
02	AR1660102	AR16601	07/16/99	1115	6.345	14.564
03	AR1660103	AR16601	07/16/99	1139	6.341	14.559
04	AR1660104	AR16601	07/16/99	1204	6.335	14.557
05	AR1660105	AR16601	07/16/99	1228	6.329	14.556
06	AR1221101	AR12211	07/16/99	1252	6.339	14.558
07	AR1232101	AR12321	07/16/99	1317	6.341	14.561
08	AR1242101	AR12421	07/16/99	1341	6.345	14.566
09	AR1248101	AR12481	07/16/99	1405	6.347	14.570
10	AR1254101	AR12541	07/16/99	1430	6.348	14.570
11	PIBLK01	I.BLANK	07/16/99	1454	6.346	14.568
12	PIBLK02	I.BLANK	07/27/99	1409	6.322	14.571
13	AR166006	AR16601	07/27/99	1433	6.322	14.568
14	PBLK01	MBLK12693	07/27/99	1635	6.324	14.564
15	SPWC-01	78945	07/27/99	1724	6.321	14.562
16	SPWC-02	78946	07/27/99	1748	6.323	14.565
17	SPWC-03	78947	07/27/99	1813	6.320	14.563
18	SPWC-04	78948	07/27/99	1837	6.324	14.567
19	PIBLK03	I.BLANK	07/27/99	1902	6.326	14.566
20	AR166007	AR16601	07/27/99	1926	6.326	14.567
21	SPWC-05	78949	07/27/99	1950	6.322	14.565
22	PIBLK04	I.BLANK	07/27/99	2354	6.333	14.577
23	AR166008	AR16601	07/28/99	0018	6.334	14.577
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
TCX = Tetrachloro-m-xylene (± 0.20 MINUTES)
DCB = Decachlorobiphenyl (± 0.15 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693P

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/16/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 6.111 DCB: 13.878

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	AR1660101	AR16601	07/16/99	1051	6.113	13.886
02	AR1660102	AR16601	07/16/99	1115	6.112	13.881
03	AR1660103	AR16601	07/16/99	1139	6.110	13.876
04	AR1660104	AR16601	07/16/99	1204	6.109	13.874
05	AR1660105	AR16601	07/16/99	1228	6.109	13.873
06	AR1221101	AR12211	07/16/99	1252	6.109	13.875
07	AR1232101	AR12321	07/16/99	1317	6.110	13.877
08	AR1242101	AR12421	07/16/99	1341	6.112	13.882
09	AR1248101	AR12481	07/16/99	1405	6.113	13.886
10	AR1254101	AR12541	07/16/99	1430	6.113	13.886
11	PIBLK01	I.BLANK	07/16/99	1454	6.112	13.881
12	PIBLK02	I.BLANK	07/27/99	1409	6.112	13.886
13	AR166006	AR16601	07/27/99	1433	6.112	13.885
14	PBLK01	MBLK12693	07/27/99	1635	6.111	13.882
15	SPWC-01	78945	07/27/99	1724	6.111	13.879
16	SPWC-02	78946	07/27/99	1748	6.111	13.880
17	SPWC-03	78947	07/27/99	1813	6.110	13.878
18	SPWC-04	78948	07/27/99	1837	6.112	13.884
19	PIBLK03	I.BLANK	07/27/99	1902	6.111	13.884
20	AR166007	AR16601	07/27/99	1926	6.111	13.882
21	SPWC-05	78949	07/27/99	1950	6.111	13.881
22	PIBLK04	I.BLANK	07/27/99	2354	6.114	13.891
23	AR166008	AR16601	07/28/99	0018	6.114	13.890
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
TCX = Tetrachloro-m-xylene (± 0.20 MINUTES)
DCB = Decachlorobiphenyl (± 0.15 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

H.

CHROMATOGRAMS

DEMETER 1.00af

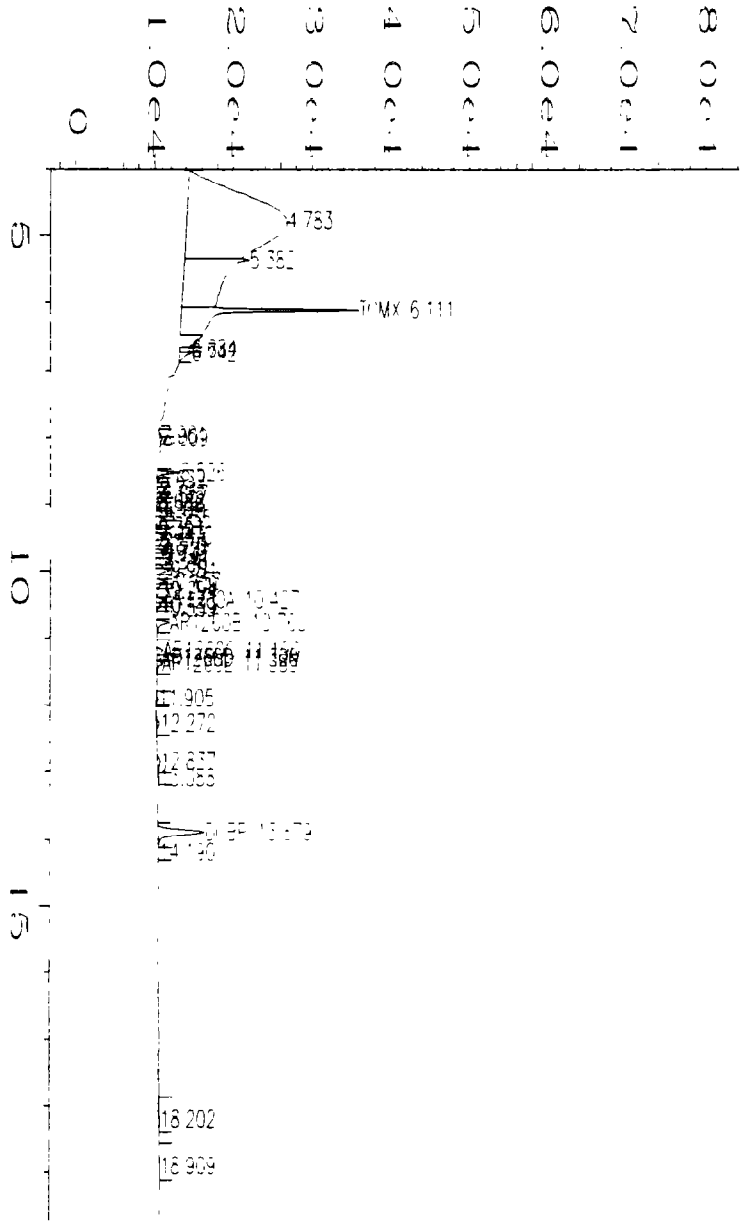
File ID: 054F0201 Sample: 78945 Code: S
Data file: C:\990727AP\054F0201.TXT
[illegible]ution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 17:24
[illegible] ID: C99716PC. Crunched on 07/28/99 at 12:56 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

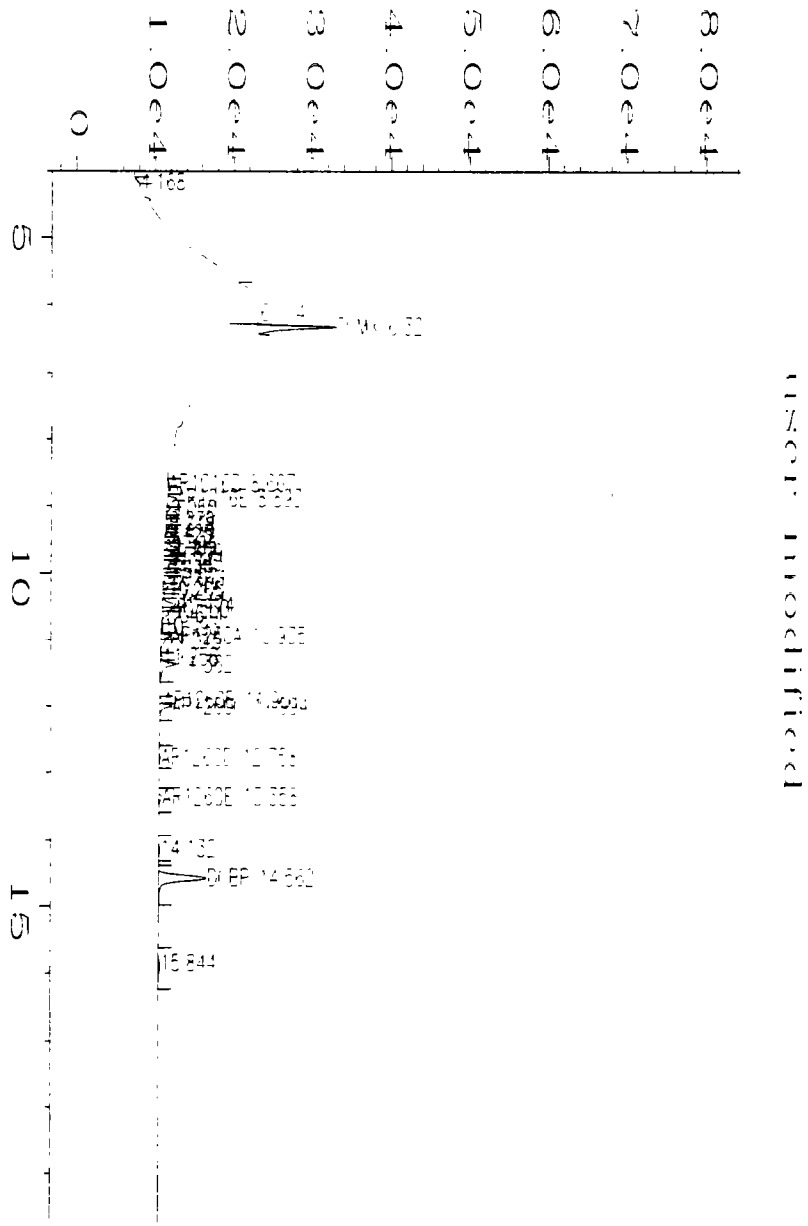
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.111	38028	CAL	1383	27.503
AROCLOR-1260A	10.427	1611	CAL	197	8.184
AROCLOR-1260B	10.760	5408	PRV	543	9.962
AROCLOR-1260C	11.190	2833	CAL	232	12.190
AROCLOR-1260D	11.300	1745	PRV	149	11.720
AROCLOR-1260E	11.385	2017	PRV	225	8.972
DCBP	13.879	32218	CAL	1812	17.782

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.321	35028	CAL	1186	29.525
AROCLOR-1260A	10.935	4128	CAL	228	18.116
AROCLOR-1260B	11.901	1797	CAL	140	12.825
AROCLOR-1260C	11.994	6814	USR	478	14.241
CLOR-1260D	12.758	1000	CAL	98	10.234
AROCLOR-1260E	13.358	2215	CAL	188	11.795
DCBP	14.562	38280	CAL	1969	19.445



Data File Name	: C:\HPCHEM\1\DATA\990727AP\054F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 54
Sample Name	: 78945-12693 NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
quired on	: 27 Jul 99 05:24 PM	Instrument Method	: RUNPCB.MTH
port Created on	: 28 Jul 99 01:04 PM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\054R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 54
Sample Name	: 78945-12693 NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 27 Jul 99 05:24 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 01:08 PM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 055F0201 Sample: 78946 Code: S
Data file: C:\990727AP\055F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 17:48
Cal ID: C99716PC. Crunched on 07/28/99 at 11:06 by DM
Protocol: SW846 Analyte table: PCB

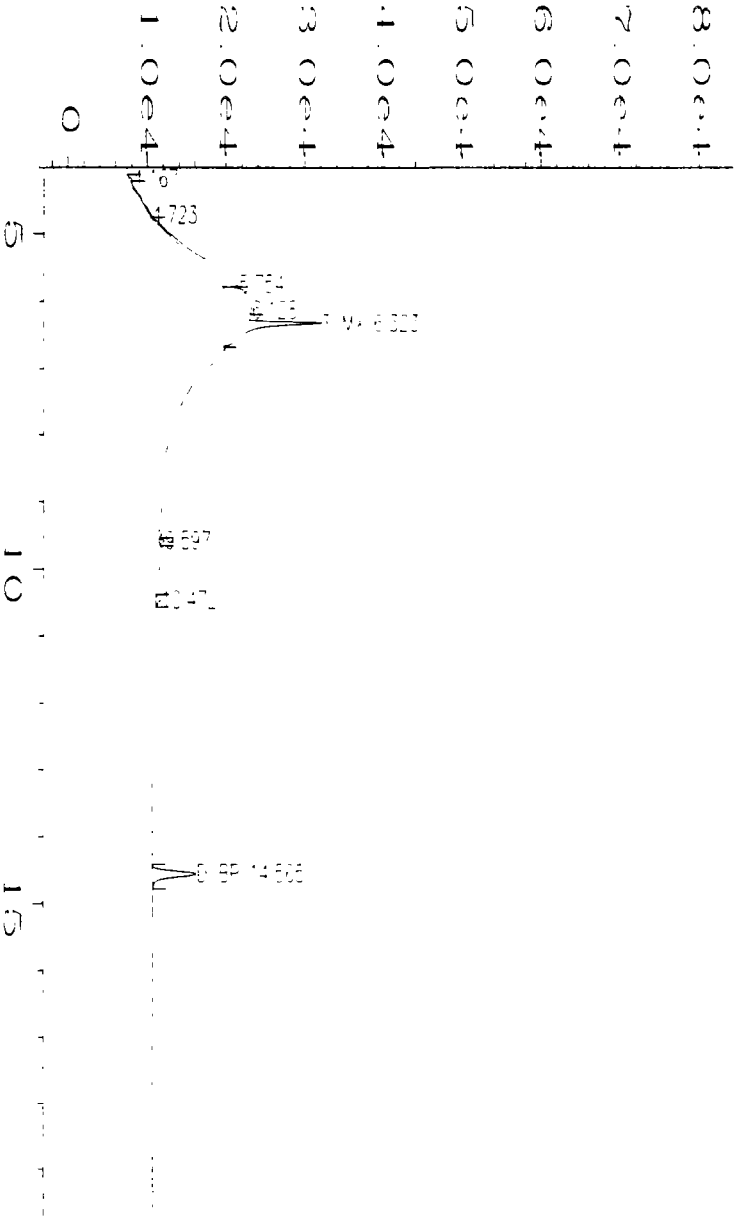
Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.111	40835	CAL	1383	29.533
DCBP	13.880	29355	CAL	1812	16.202

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.323	24947	CAL	1186	21.028
DCBP	14.565	33777	CAL	1969	17.158

Data File Name	: C:\HPCHEM\1\DATA\990727AP\055F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 55
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 05:48 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 11:56 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\055R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 55
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 05:48 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 11:55 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

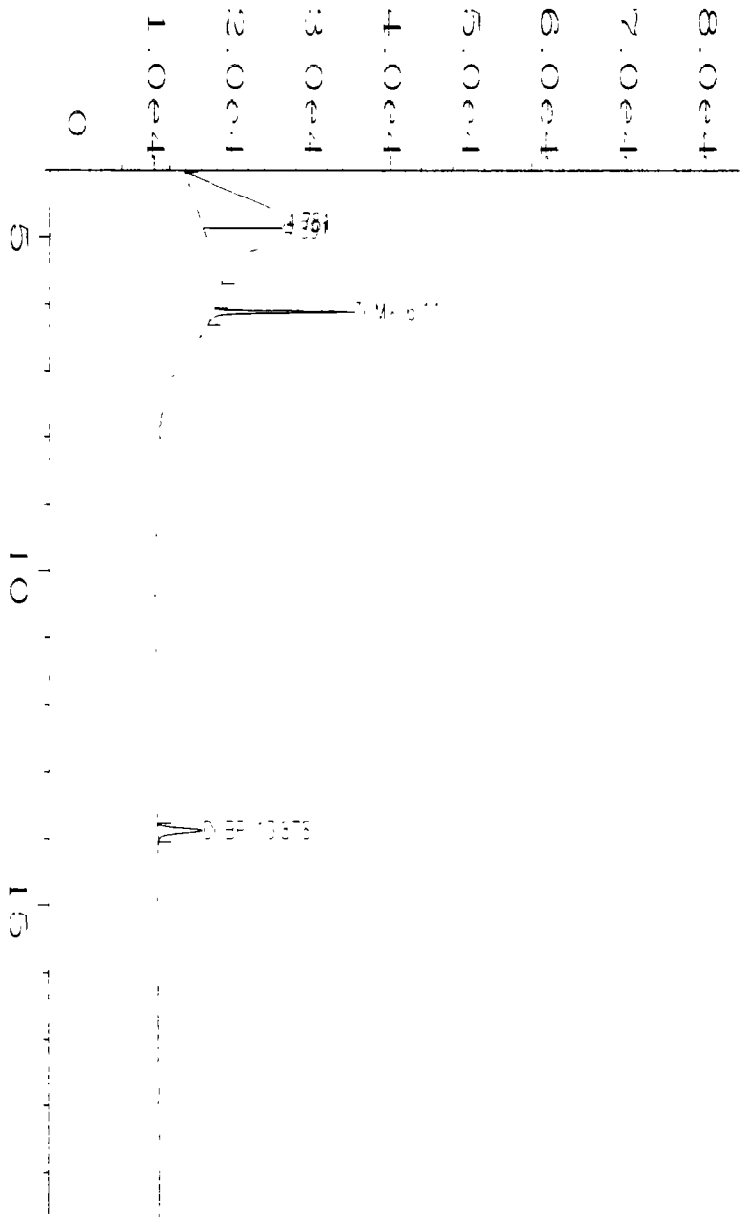
File ID: 056F0201 Sample: 78947 Code: S
Data file: C:\990727AP\056F0201.TXT
' ution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 18:13
R .1 ID: C99716PC. Crunched on 07/28/99 at 11:06 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

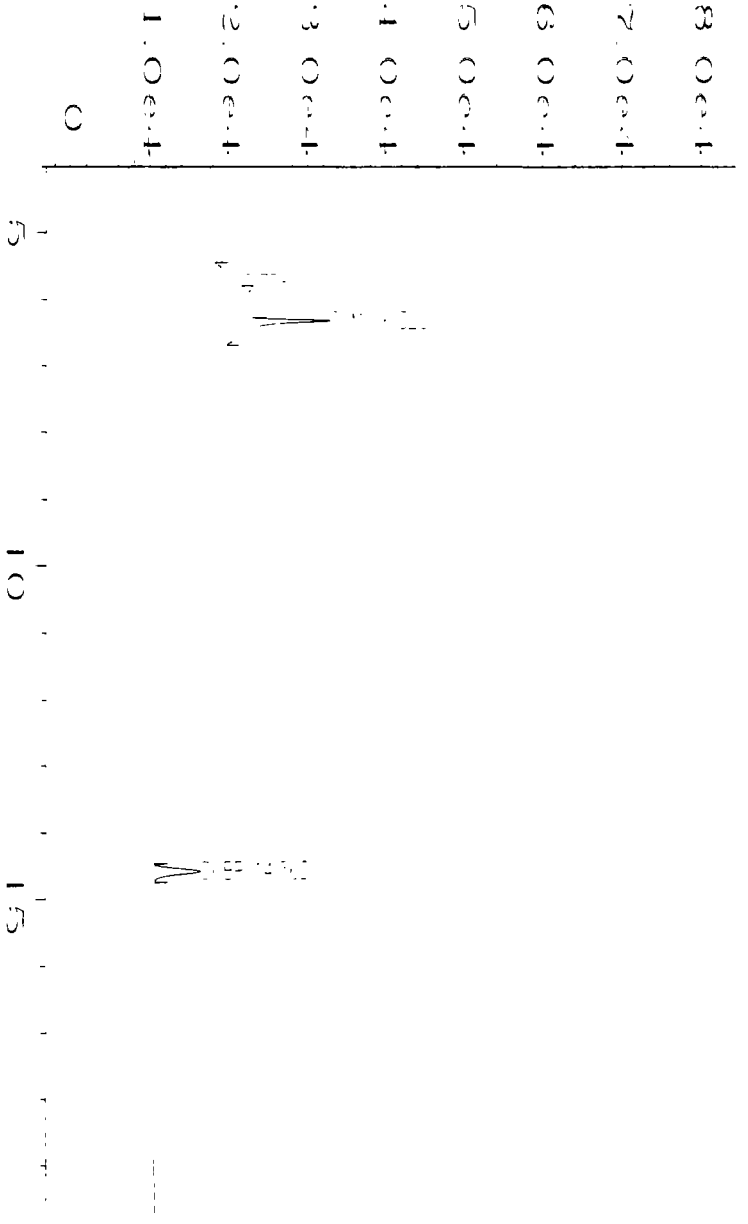
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.110	40671	CAL	1383	29.414
DCBP	13.878	30813	CAL	1812	17.007

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.320	27623	CAL	1186	23.283
DCBP	14.563	35172	CAL	1969	17.866



Data File Name	: C:\HPCHEM\1\DATA\990727AP\056F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 56
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 06:13 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 11:56 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\056R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 56
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 27 Jul 99 06:13 PM	Instrument Method	: RUNPCB.MTH
port Created on	: 28 Jul 99 08:27 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

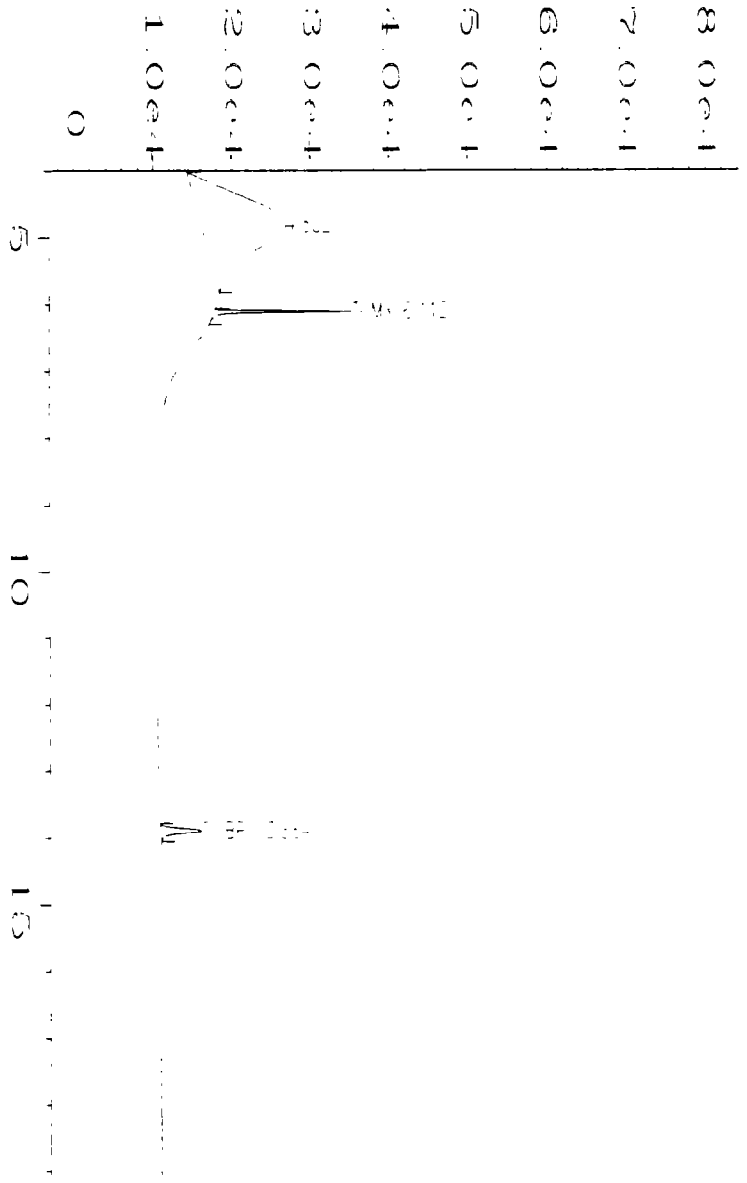
File ID: 057F0201 Sample: 78948 Code: S
Data file: C:\990727AP\057F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 18:37
Cal ID: C99716PC. Crunched on 07/28/99 at 11:06 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

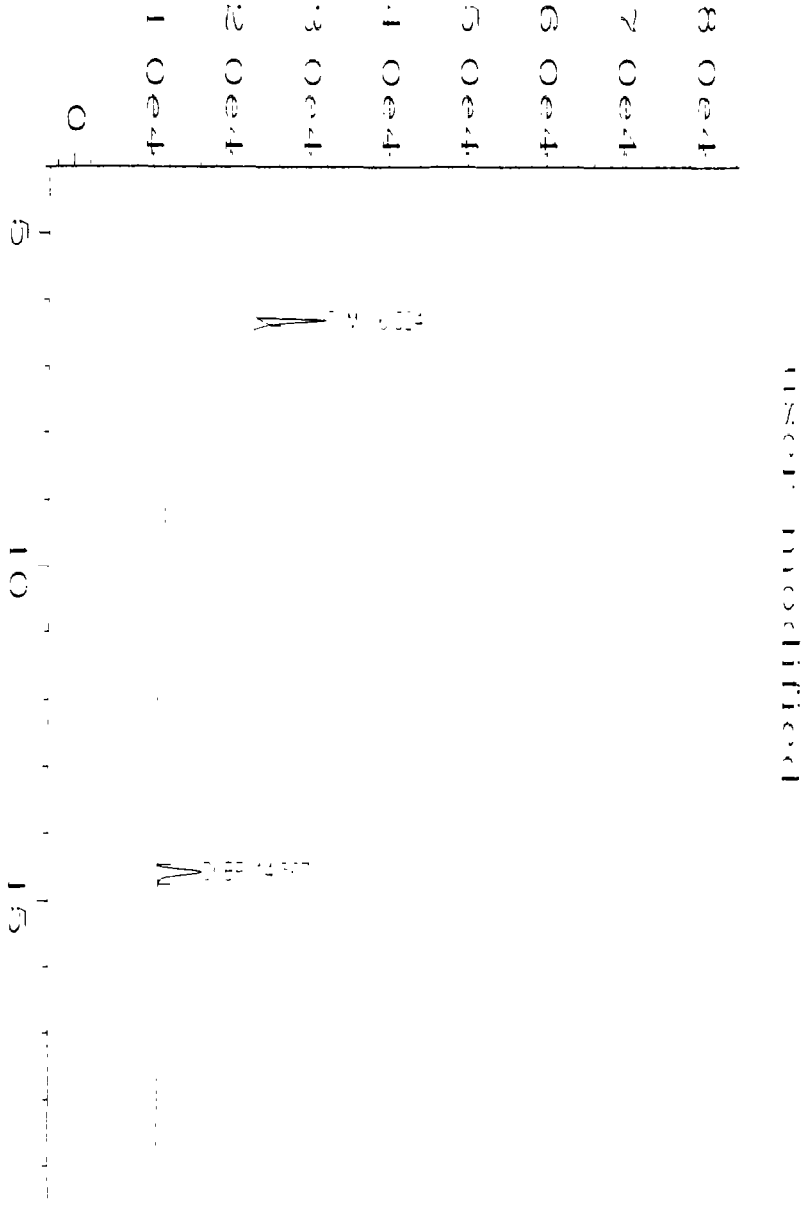
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.112	40278	CAL	1383	29.130
DCBP	13.884	29949	CAL	1812	16.530

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.324	25664	CAL	1186	21.632
DCBP	14.567	34598	CAL	1969	17.575



Data File Name	: C:\HPCHEM\1\DATA\990727AP\057F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 57
Sample Name	: 78948	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
quired on	: 27 Jul 99 06:37 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 09:13 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\057R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 57
Sample Name	: 78948	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 06:37 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 08:28 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

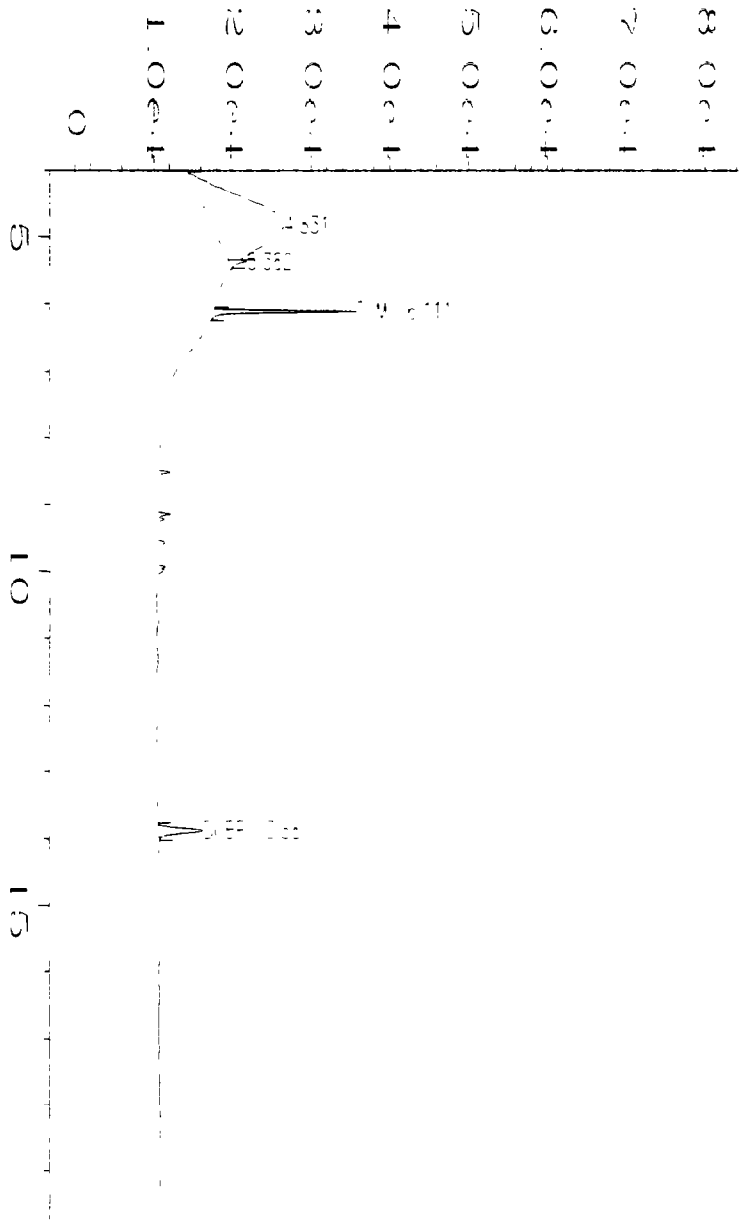
File ID: 060F0201 Sample: 78949 Code: S
Data file: C:\990727AP\060F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 19:50
Cal ID: C99716PC. Crunched on 07/28/99 at 11:09 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

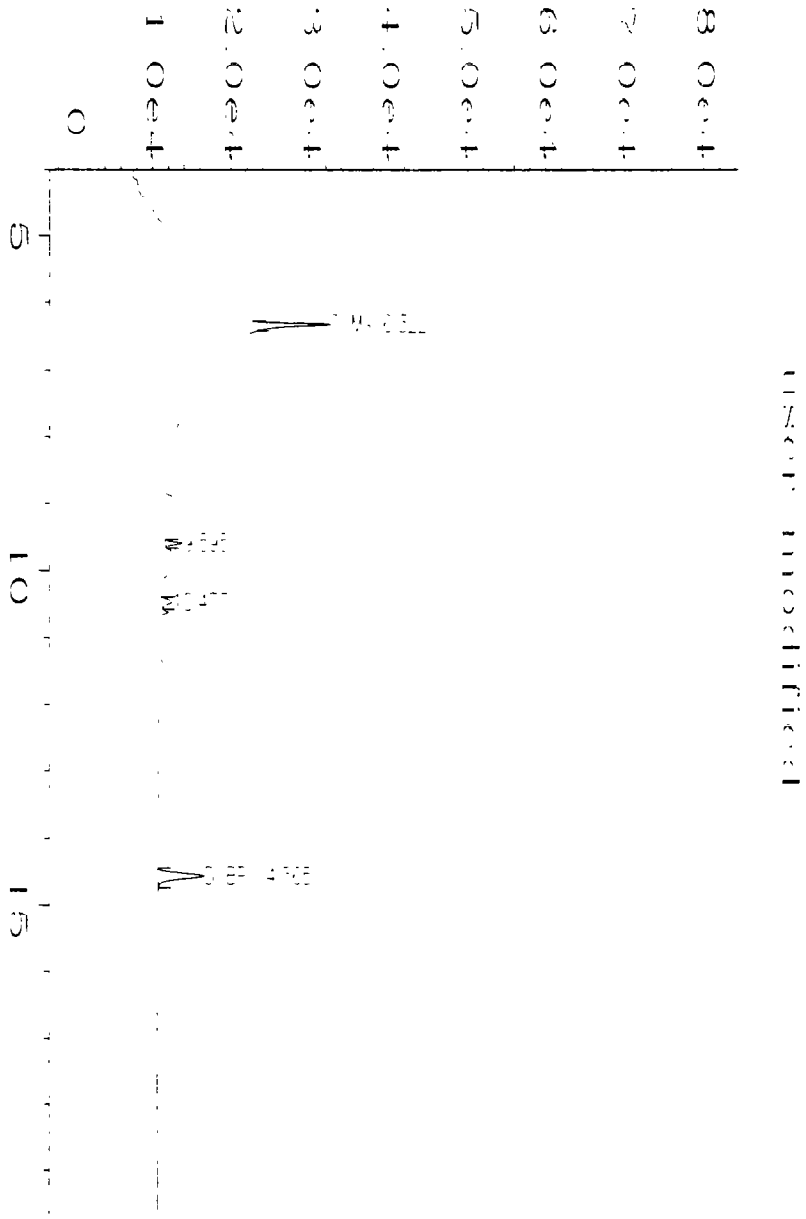
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.111	40525	CAL	1383	29.308
DCBP	13.881	30120	CAL	1812	16.624

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.322	32730	CAL	1186	27.588
DCBP	14.565	35413	CAL	1969	17.989



Data File Name	: C:\HPCHEM\1\DATA\990727AP\060F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 60
Sample Name	: 78949	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 07:50 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 09:14 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name : C:\HPCHEM\1\DATA\990727AP\060R0201.D
Operator : DP COL: F:RTX-5 R:RTX-1701
Instrument : INSTRUMEN
Sample Name : 78949
Run Time Bar Code:
Acquired on : 27 Jul 99 07:50 PM
Report Created on: 28 Jul 99 08:30 AM
Last Recalib on : 16 JUL 99 03:17 PM
Multiplier : 1

Page Number : 1
Vial Number : 60
Injection Number : 1
Sequence Line : 2
Instrument Method: RUNPCB.MTH
Analysis Method : 0716RPCB.MTH
Sample Amount : 0
ISTD Amount :

DEMETER 1.00af

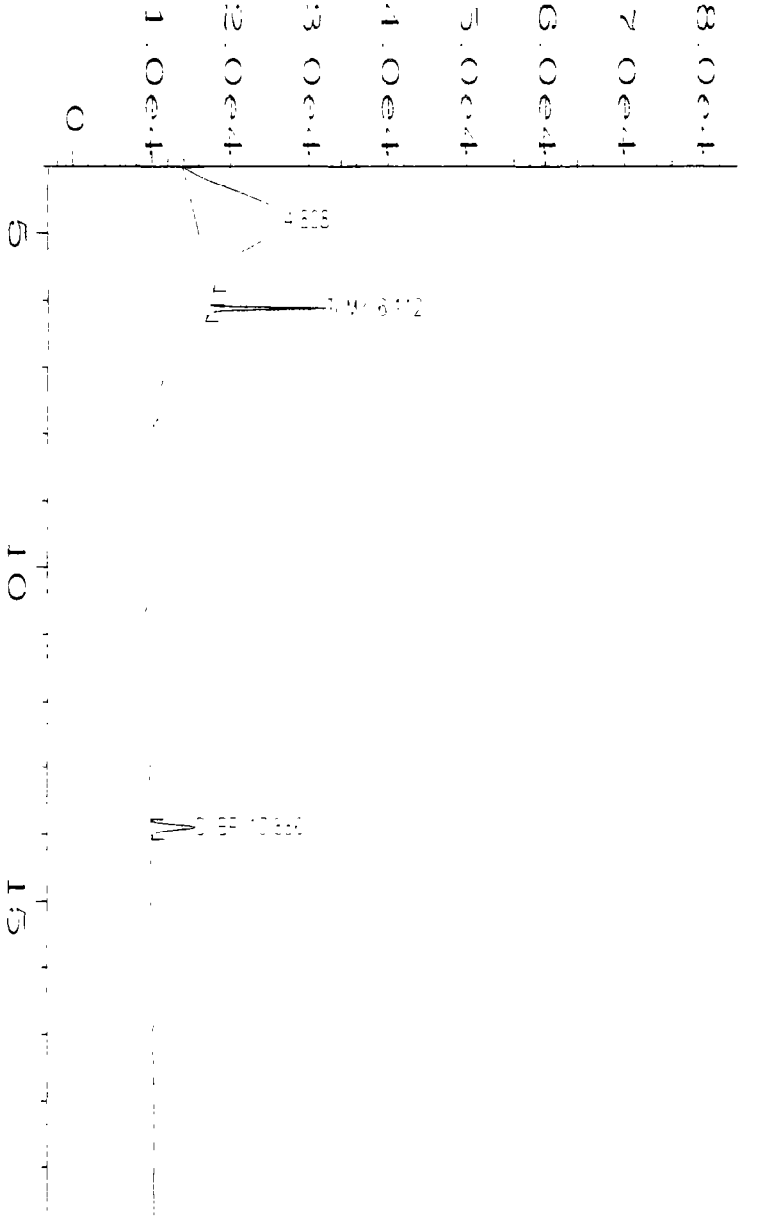
File ID: 046F0201 Sample: I.BLANK Code: PIBLK
Data file: C:\990727AP\046F0201.TXT
lution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 14:09
.n ID: C99716PC. Crunched on 07/28/99 at 11:06 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

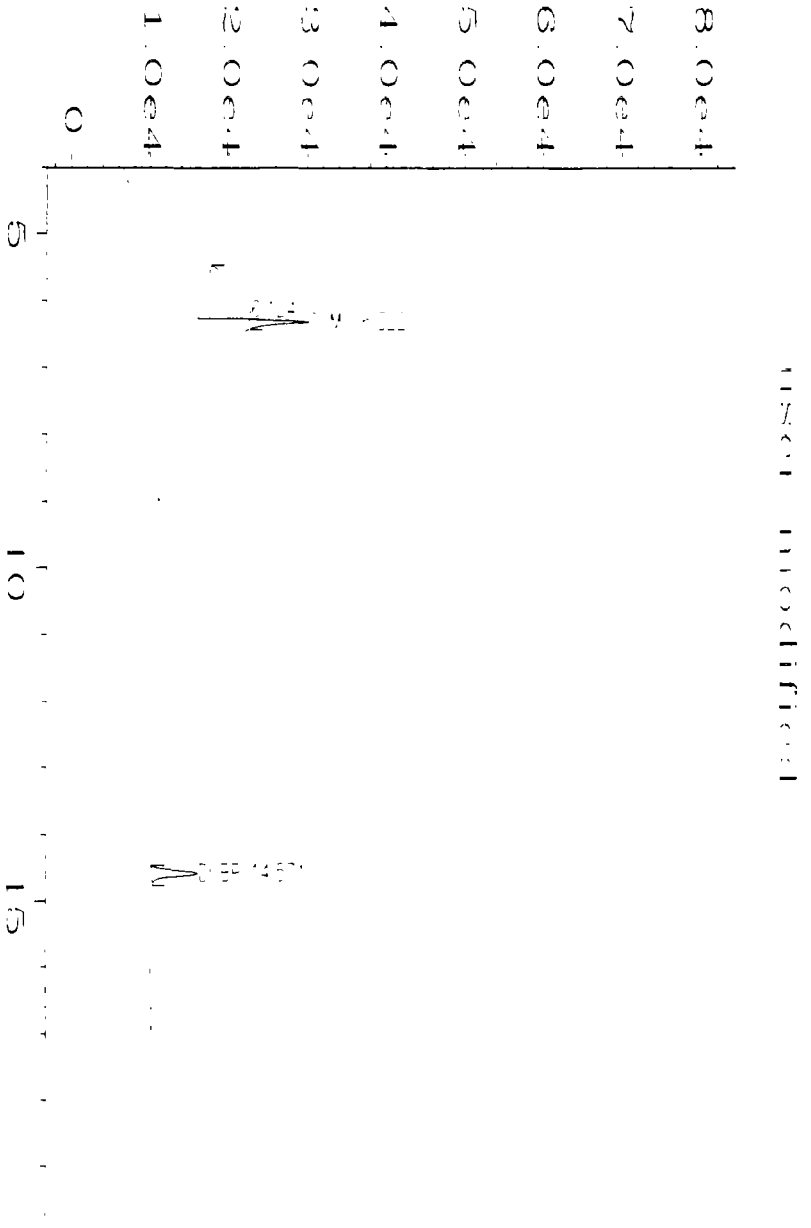
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.112	34292	CAL	1383	24.801
DCBP	13.886	32451	CAL	1812	17.911

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.322	27318	CAL	1186	23.026
DCBP	14.571	36189	CAL	1969	18.383



Data File Name	: C:\HPCHEM\1\DATA\990727AP\046F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 46
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 02:09 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 27 Jul 99 04:44 PM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\046R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 46
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 02:09 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 08:18 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

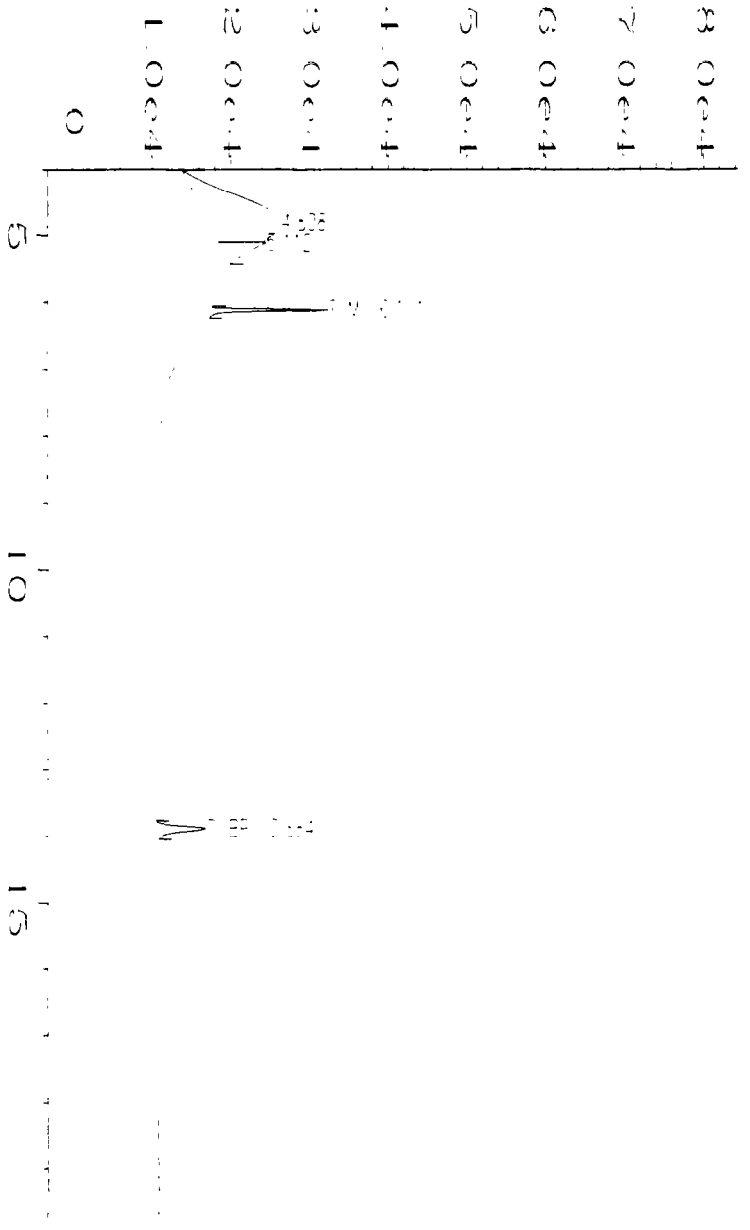
File ID: 058F0201 Sample: I.BLANK Code: PIBLK
Data file: C:\990727AP\058F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 19:02
. ID: C99716PC. Crunched on 07/28/99 at 11:07 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

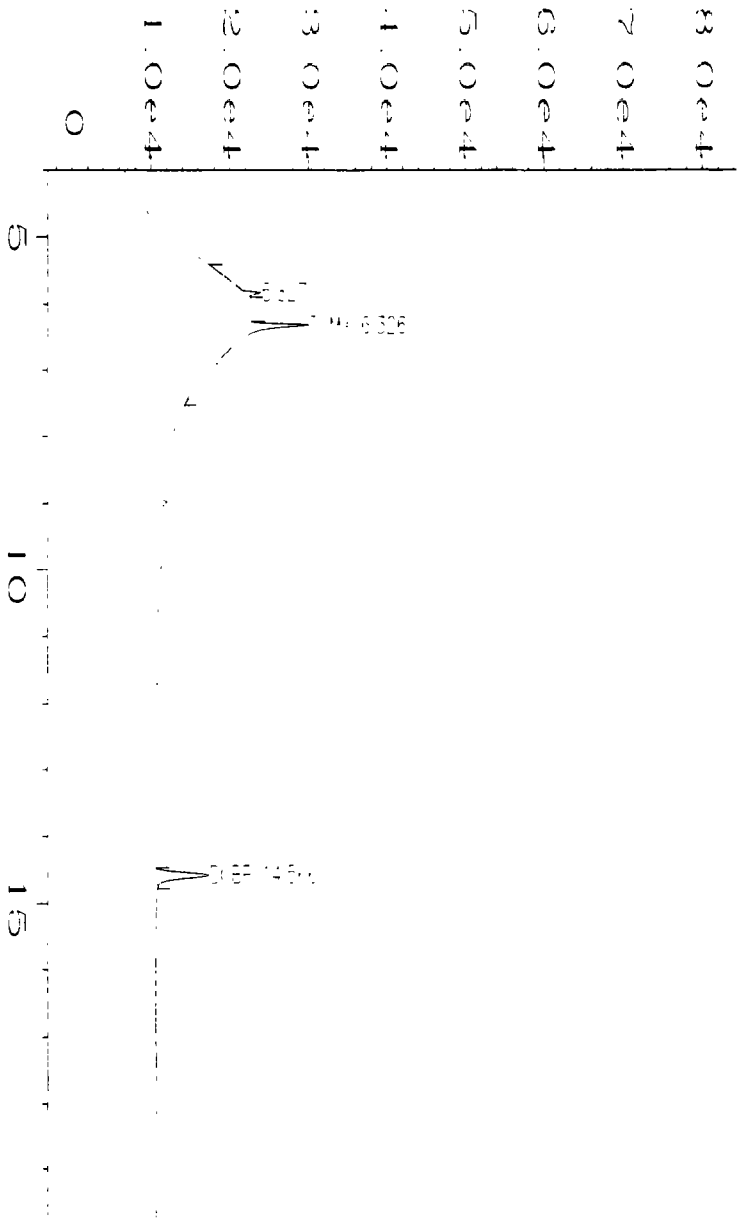
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.111	33277	CAL	1383	24.067
DCBP	13.884	35494	CAL	1812	19.590

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.326	28520	CAL	1186	24.039
DCBP	14.566	41402	CAL	1969	21.031



Data File Name	: C:\HPCHEM\1\DATA\990727AP\058F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 58
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 07:02 PM	Instrument Method	: RUNPCB.MTH
Report Created on	: 28 Jul 99 09:13 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:



Data File Name	: C:\HPCHEM\1\DATA\990727AP\058R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 58
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 27 Jul 99 07:02 PM	Instrument Method	: RUNPCB.MTH
port Created on	: 28 Jul 99 08:28 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

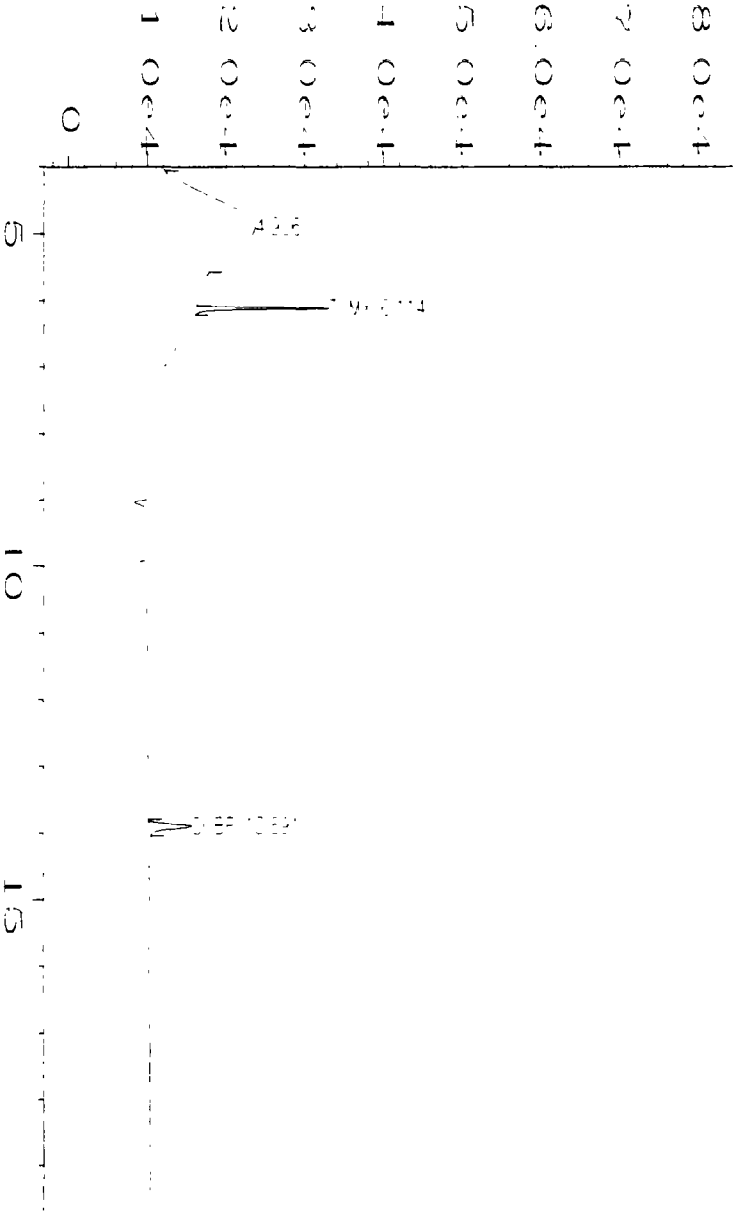
File ID: 070F0201 Sample: I.BLANK Code: PIBLK
Data file: C:\990727AP\070F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 23:54
Cal ID: C99716PC. Crunched on 07/28/99 at 11:10 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

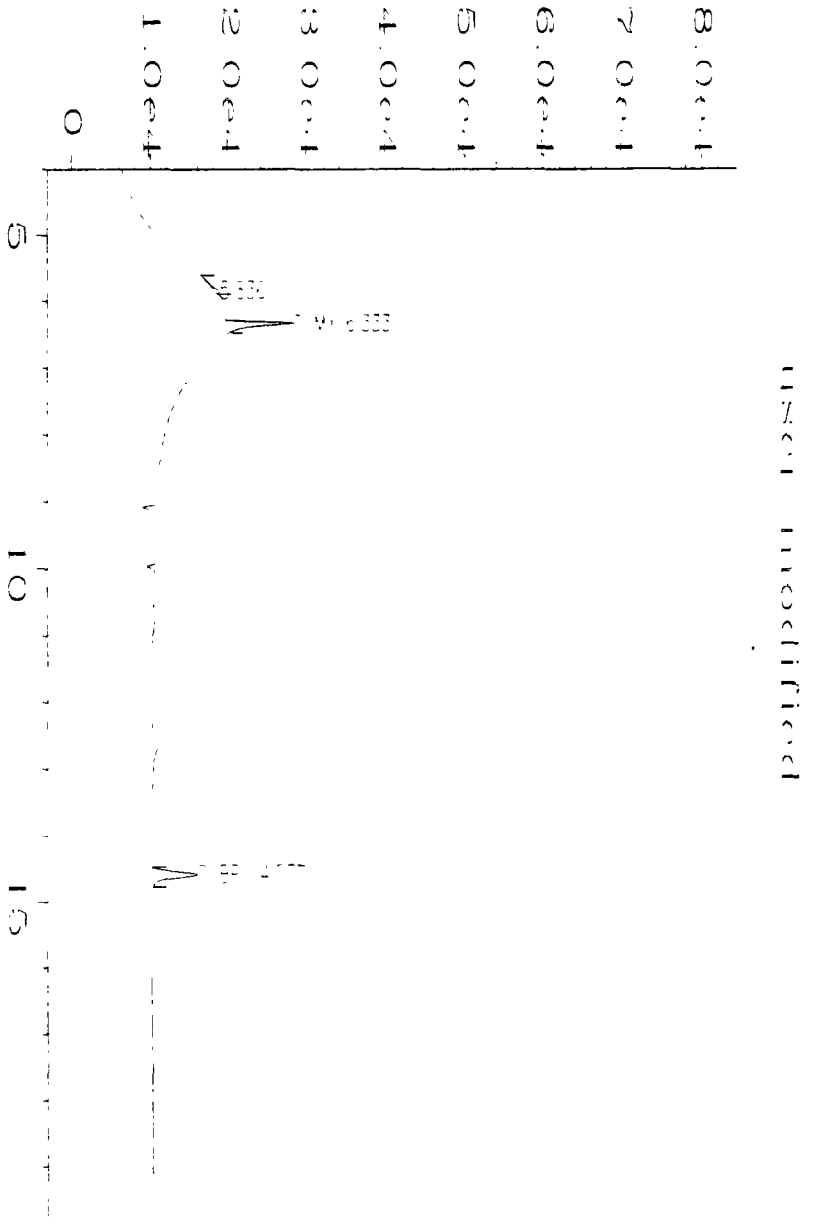
Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.114	37807	CAL	1383	27.343
DCBP	13.891	29744	CAL	1812	16.417

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.333	34839	CAL	1186	29.366
DCBP	14.577	35483	CAL	1969	18.024



Data File Name	: C:\HPCHEM\1\DATA\990727AP\070F0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 70
Sample Name	: I. BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 27 Jul 99 11:54 PM	Instrument Method	: RUNPCB.MTH
port Created on	: 28 Jul 99 09:18 AM	Analysis Method	: 0716FPCB.MTH
Last Recalib on	: 16 JUL 99 01:35 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	



Data File Name	: C:\HPCHEM\1\DATA\990727AP\070R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 70
Sample Name	: I. BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 11:54 PM	Instrument Method:	RUNPCB.MTH
Report Created on:	28 Jul 99 08:47 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

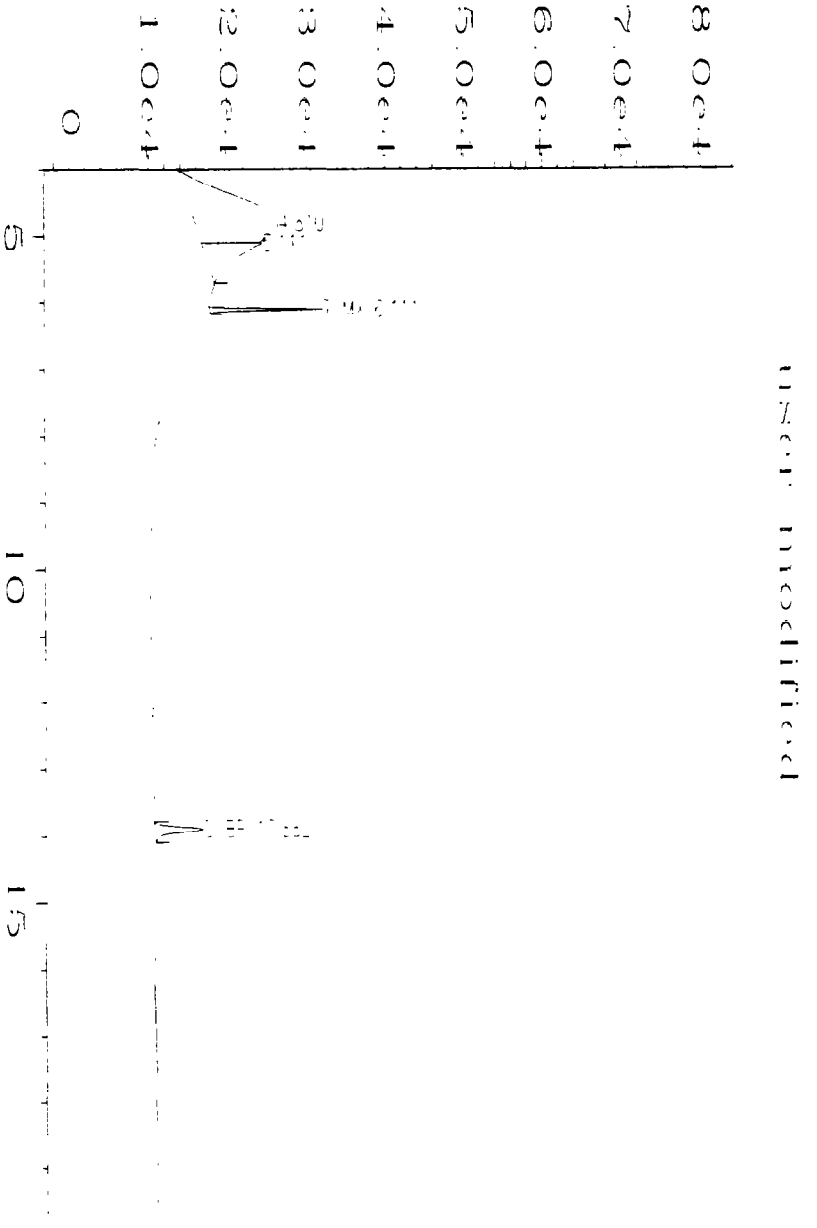
File ID: 052F0201 Sample: MBLK12693 Code: PBLK
Data file: C:\990727AP\052F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 16:35
Run ID: C99716PC. Crunched on 07/28/99 at 11:06 by DM
Protocol: SW846 Analyte table: PCB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.111	30456	CAL	1383	22.026
DCBP	13.882	35140	CAL	1812	19.395

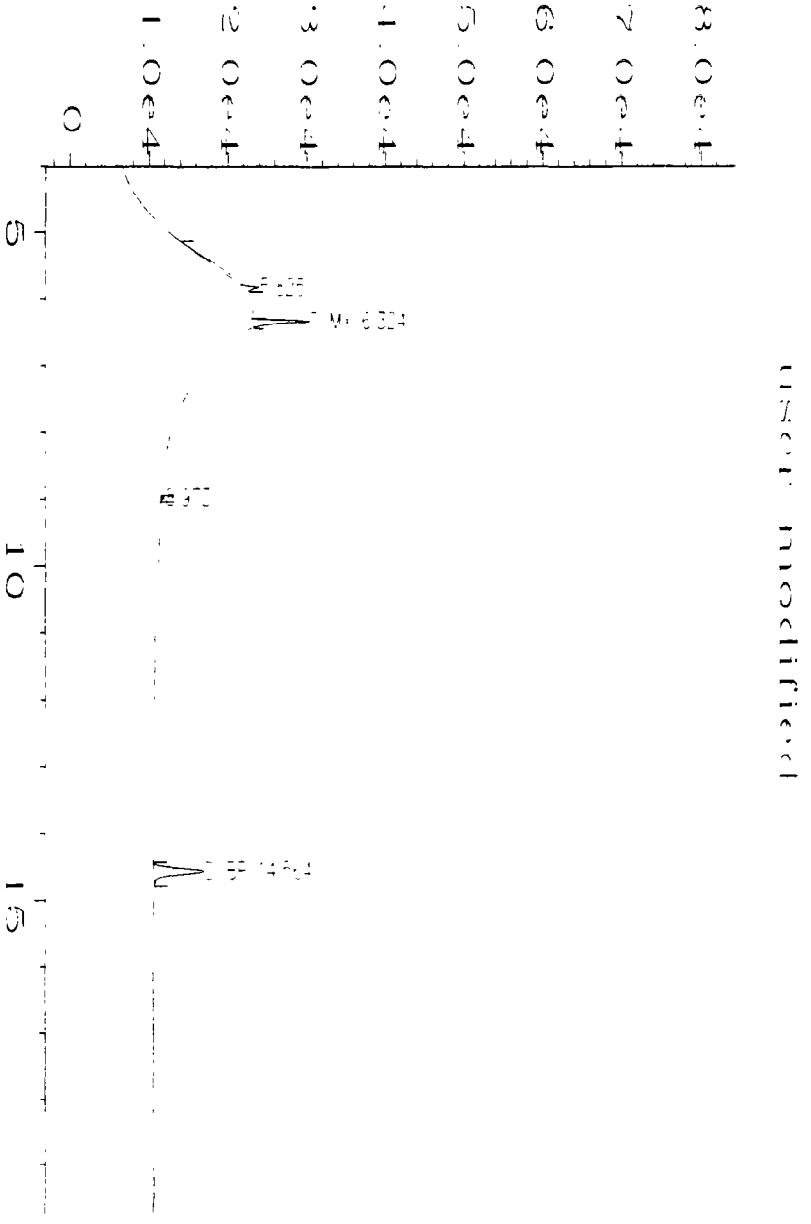
Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.324	26144	CAL	1186	22.037
DCBP	14.564	39787	CAL	1969	20.211



Data File Name : C:\HPCHEM\1\DATA\990727AP\052F0201.D
Operator : DP COL: F:RTX-5 R:RTX-1701
Instrument : INSTRUMEN
Sample Name : BLK
Run Time Bar Code:
quired on : 27 Jul 99 04:35 PM
port Created on: 28 Jul 99 09:10 AM
Last Recalib on : 16 JUL 99 01:35 PM
Multiplier : 1

Page Number : 1
Vial Number : 52
Injection Number : 1
Sequence Line : 2
Instrument Method: RUNPCB.MTH
Analysis Method : 0716FPCB.MTH
Sample Amount : 0
ISTD Amount :



Data File Name	: C:\HPCHEM\1\DATA\990727AP\052R0201.D		
Operator	: DP COL: F:RTX-5 R:RTX-1701	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 52
Sample Name	: BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 27 Jul 99 04:35 PM	Instrument Method	: RUNPCB.MTH
ort Created on	: 28 Jul 99 11:54 AM	Analysis Method	: 0716RPCB.MTH
Last Recalib on	: 16 JUL 99 03:17 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

III

PESTICIDES/ PCBS DATA

A.

ANALYTICAL RESULTS SUMMARY

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78945P

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

000214

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

J Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78946P

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78947P

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

000216

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78948P

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

000217

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 78949P

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

B.

METHOD BLANK RESULTS SUMMARY

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK01

I Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Lab Sample ID: MBLK12693 Lab File ID: _____

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 07/26/99

Date analyzed: (1): 07/29/99 Date analyzed: (1): 07/29/99

Time analyzed: (1): 1848 Time analyzed: (1): 1848

Instrument ID (1): CS01 Instrument ID (2): CS01

GC Column(1): RTX5 ID: 0.53 (mm) GC Column(2): RTX1701 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	SPWC-01	78945P	07/29/99	07/29/99
02	SPWC-02	78946P	07/29/99	07/29/99
03	SPWC-03	78947P	07/29/99	07/29/99
04	SPWC-04	78948P	07/30/99	07/30/99
05	SPWC-05	78949P	07/30/99	07/30/99
06	EXTBLANK	EXBLK12693	07/29/99	07/29/99
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

000220

FORM IV PEST

SW846

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK01

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 017F0101

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/27/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-20-8	Endrin	0.10	U
72-43-5	Methoxychlor	0.50	U
5103-71-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK03

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 001F0301

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/29/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-20-8	Endrin	0.10	U
72-43-5	Methoxychlor	0.50	U
5103-71-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK04

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: 011F0301

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/30/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/30/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
72-20-8	Endrin	0.10	U
72-43-5	Methoxychlor	0.50	U
5103-71-9	Chlordane	1.0	U
8001-35-2	Toxaphene	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

I Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) SOIL Lab Sample ID: MBLK12693

Sample wt/vol: 50.0 (g/ml) G Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXTBLANK

Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Matrix: (soil/water) WATER Lab Sample ID: EXBLK12693

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
58-89-9	gamma-BHC (Lindane)	1.0	U
76-44-8	Heptachlor	1.0	U
1024-57-3	Heptachlor epoxide	1.0	U
72-20-8	Endrin	2.0	U
72-43-5	Methoxychlor	10	U
5103-71-9	Chlordane	20	U
8001-35-2	Toxaphene	100	U

C.

CALIBRATION SUMMARY

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Level (x low): 2nd: 4.0 mid: 10.0 4th: 16.0 high: 20.0

GC Column: RTX5 ID: 0.53 (mm) Date(s) Analyzed: 07/26/99

COMPOUND	RT OF STANDARDS LOW	2	MID	4	HIGH	MEAN RT	RT WINDOW FROM	TO
gamma-BHC (Lindane)	9.625	9.628	9.630	9.627	9.626	9.627	9.577	9.677
Heptachlor	13.17	13.18	13.18	13.18	13.18	13.18	13.13	13.23
Heptachlor epoxide	17.32	17.32	17.33	17.32	17.32	17.32	17.25	17.39
Endrin	22.27	22.28	22.28	22.28	22.27	22.27	22.20	22.34
Methoxychlor	36.88	36.83	36.84	36.84	36.84	36.85	36.78	36.92
Tetrachloro-m-xylene	6.439	6.441	6.441	6.440	6.439	6.440	6.390	6.490
Decachlorobiphenyl	47.57	47.57	47.58	47.57	47.57	47.57	47.47	47.67

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ±0.07 minutes for all other compounds, except ±0.10 minutes for Decachlorobiphenyl.

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Level (x low): 2nd: 4.0 mid: 10.0 4th: 16.0 high: 20.0

GC Column: RTX1701 ID: 0.53 (mm) Date(s) Analyzed: 07/26/99

COMPOUND	RT OF STANDARDS LOW	2	MID	4	HIGH	MEAN RT	RT WINDOW FROM	TO
gamma-BHC (Lindane)	8.720	8.723	8.723	8.721	8.720	8.721	8.671	8.771
Heptachlor	10.46	10.47	10.47	10.47	10.47	10.47	10.42	10.52
Heptachlor epoxide	15.13	15.13	15.14	15.13	15.13	15.13	15.06	15.20
Endrin	20.55	20.55	20.55	20.55	20.55	20.55	20.48	20.62
Methoxychlor	36.41	36.42	36.40	36.39	36.38	36.40	36.33	36.47
Tetrachloro-m-xylene	4.477	4.479	4.480	4.477	4.477	4.478	4.428	4.528
Decachlorobiphenyl	45.00	45.00	45.00	45.00	45.00	45.00	44.90	45.10

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ±0.07 minutes for all other compounds, except ±0.10 minutes for Decachlorobiphenyl.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Level (x low): 2nd: 4.0 mid: 10.0 4th: 16.0 high: 20.0

GC Column: RTX5 ID: 0.53 (mm) Date(s) Analyzed: 07/26/99

COMPOUND	CALIBRATION FACTORS LOW	2	MID	4	HIGH	MEAN	%
gamma-BHC (Lindane)	3338200	3296750	3548440	3529288	3620600	3466656	[illegible]
Heptachlor	3345000	3088900	3165120	3068712	3130030	3159552	[illegible]
Heptachlor epoxide	3035000	2953800	3044220	2989850	3031280	3010830	[illegible]
Endrin	3159200	2743050	2851620	2809975	2816270	2876023	[illegible]
Methoxychlor	1761000	1250300	1254300	1201062	1230870	1339506	[illegible]
Tetrachloro-m-xylene	3050000	2940800	2989660	2864175	2884060	2945739	[illegible]
Decachlorobiphenyl	4275600	4103100	4100140	3837188	3941040	4051414	[illegible]

1* Surrogate calibration factors are measured from Standard Mix A analyses.

D must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Level (x low): 2nd: 4.0 mid: 10.0 4th: 16.0 high: 20.0

GC Column: RTX1701 ID: 0.53 (mm) Date(s) Analyzed: 07/26/99

COMPOUND	CALIBRATION FACTORS LOW	2	MID	4	HIGH	MEAN	%
gamma-BHC (Lindane)	1863200	1948700	2302700	2428712	2537500	2216162	13.4
Heptachlor	2152000	2163800	2327740	2365300	2399970	2281762	5.1
Heptachlor epoxide	2096800	2084700	2241160	2279812	2356440	2211782	5.3
Endrin	1975000	1717500	1933360	1949150	2064370	1927876	6.6
Methoxychlor	1050400	991700	1161560	1114562	1189560	1101556	7.3
Tetrachloro-m-xylene	2025400	2005650	2094420	2045000	2042020	2042498	1.6
Decachlorobiphenyl	3622800	3758450	3594560	3404512	3331380	3542340	4.9

1* Surrogate calibration factors are measured from Standard Mix A analyses.

D must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Date(s) Analyzed: 07/26/99

GC Column: RTX5 ID: 0.53 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.5	*1	22.294	22.224	22.364	41618
		*2	23.490	23.420	23.560	36342
		*3	23.932	23.862	24.002	29366
		4	26.782	26.712	26.852	29358
		5	27.465	27.395	27.535	51728
Chloradane	0.1	*1	12.160	12.090	12.230	547260
		*2	13.175	13.105	13.245	1106070
		*3	16.895	16.825	16.965	610820
		4	19.588	19.518	19.658	1537530
		5	19.884	19.814	19.954	1009600
		*1				
		*2				
		*3				
		4				
		5				
		*1				
		*2				
		*3				
		4				
		5				
		*1				
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		*1				
		*2				
		*3				
		4				
		5				

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

Instrument ID: CS01 Date(s) Analyzed: 07/26/99

GC Column: RTX1701 ID: 0.53 (mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.5	*1	21.667	21.597	21.737	62434
		*2	22.414	22.344	22.484	56930
		*3	23.763	23.693	23.833	27270
		4	24.734	24.664	24.804	34722
		5	26.414	26.344	26.484	31070
Chloradane	0.1	*1	9.674	9.604	9.744	453850
		*2	10.466	10.396	10.536	753020
		*3	16.251	16.181	16.321	1506030
		4	16.667	16.597	16.737	929230
		5	17.154	17.084	17.224	1528210
		*1				
		*2				
		*3				
		4				
		5				
		*1				
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		4				
		5				
		*1				
		*2				
		*3				
		4				
		5				

* Denotes required peaks

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/26/99

EPA Sample No.(PIBLK): PIBLK03 Date Analyzed : 07/29/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 1704

EPA Sample No.(PEM): PEM04 Date Analyzed : 07/29/99

Lab Sample ID (PEM): MIX50 Time Analyzed : 1756

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
gamma-BHC (Lindane)	9.631	9.427	9.827	0.053	0.050	6.0
Endrin	22.281	22.074	22.474	0.060	0.050	20.0
Methoxychlor	36.848	36.653	37.053	0.467	0.500	6.6
Heptachlor Epox.	17.327	16.923	17.723	0.054	0.050	8.0
Heptachlor	13.181	12.977	13.377	0.056	0.050	12.0

4,4'-DDT % breakdown (1): Endrin % breakdown (1): 0.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/26/99

EPA Sample No.(PIBLK): PIBLK04 Date Analyzed : 07/30/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0147

EPA Sample No.(PEM): PEM05 Date Analyzed : 07/30/99

Lab Sample ID (PEM): MIX50 Time Analyzed : 0238

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
gamma-BHC (Lindane)	8.741	8.521	8.921	0.048	0.050	4.0
Endrin	20.573	20.348	20.748	0.057	0.050	14.0
Methoxychlor	36.449	36.195	36.595	0.449	0.500	10.2
Heptachlor Epox.	15.155	14.733	15.533	0.049	0.050	2.0
Heptachlor	10.486	10.265	10.665	0.060	0.050	20.0

4,4'-DDT % breakdown (1): Endrin % breakdown (1): 0.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/26/99

EPA Sample No.(PIBLK): PIBLK04 Date Analyzed : 07/30/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0147

EPA Sample No.(PEM): PEM05 Date Analyzed : 07/30/99

Lab Sample ID (PEM): MIX50 Time Analyzed : 0238

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
gamma-BHC (Lindane)	9.651	9.427	9.827	0.052	0.050	4.0
Endrin	22.309	22.074	22.474	0.053	0.050	6.0
Methoxychlor	36.930	36.653	37.053	0.437	0.500	12.6
Heptachlor Epox.	17.349	16.923	17.723	0.045	0.050	10.0
Heptachlor	13.203	12.977	13.377	0.045	0.050	10.0

4,4'-DDT % breakdown (1): Endrin % breakdown (1): 0.0

QC LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

4,4'-DDT breakdown must be less than or equal to 20.0%

Endrin breakdown must be less than or equal to 20.0%

D.

SURROGATE COMPOUND RECOVERY RESULTS SUMMARY

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column(1): RTX1701 ID: 0.53 (mm) GC Column(2): RTX5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCBP 1 %REC #	DCBP 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLK01	94	98	89	94			0
02	PIBLK03	132	136	131	136			0
03	PBLK01	119	116	79	83			0
04	EXTBLANK	122	120	81	85			0
05	SPWC-01	116	111	77	79			0
06	SPWC-002	117	125	79	77			0
07	SPWC-03	115	107	76	75			0
08	SPWC-04	119	126	82	78			0
09	SPWC-05	116	106	80	77			0
10	PIBLK04	97	88	95	150			0
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCBP = Decachlorobiphenyl	(60-150)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.
D Surrogate diluted out

000239

E.

MS/ MSD RESULTS SUMMARY

CHEMTECH CONSULTING GROUP

RETENTION TIMES

PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/26/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 4.478 DCBP: 45.001

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCBP RT #
01	RESC01	RESCHK	07/26/99	1314	4.479	45.001
02	PIBLK01	I.BLANK	07/26/99	1406	4.477	44.999
03	PEM01	PEM	07/26/99	1459	4.478	45.000
04	INDAH01	STD100	07/26/99	1551	4.477	45.001
05	INDAL01	STD5A	07/26/99	1643	4.477	44.998
06	INDA401	STD80	07/26/99	1735	4.477	45.001
07	INDA201	STD20	07/26/99	1828	4.479	45.000
08	INDAM01	STD50	07/26/99	1920	4.480	45.003
09	TCHLOR01	COL1	07/26/99	2012	4.480	45.002
10	TOXAPH01	TOXAPHENE	07/26/99	2105	4.481	45.003
11	AR1221101	AR12211	07/26/99	2157	4.480	45.003
12	AR1232101	AR12321	07/26/99	2249	4.481	45.004
13	AR1242101	AR12421	07/26/99	2341	4.480	45.004
14	AR1248101	AR12481	07/27/99	0034	4.481	45.004
15	AR1254101	AR12541	07/27/99	0126	4.482	45.006
16	AR1660101	AR16601	07/27/99	0218	4.483	45.005
17	PIBLK02	I.BLANK	07/27/99	0310	4.481	45.005
18	PEM02	PEM	07/27/99	0403	4.481	45.006
19	PEM03	STD50	07/27/99	0455	4.482	45.006
20	PIBLK03	I.BLANK	07/29/99	1704	4.486	45.012
21	PEM04	MIX50	07/29/99	1756	4.480	45.004
22	PBLK01	MBLK12693	07/29/99	1848	4.480	45.004
23	EXTBLANK	EXBLK12693	07/29/99	2033	4.481	45.003
24	SPWC-01	78945P	07/29/99	2125	4.481	45.004
25	SPWC-002	78946P	07/29/99	2218	4.481	45.004
26	SPWC-03	78947P	07/29/99	2310	4.482	45.004
27	SPWC-04	78948P	07/30/99	0002	4.482	45.006
28	SPWC-05	78949P	07/30/99	0054	4.483	45.009
29	PIBLK04	I.BLANK	07/30/99	0147	4.484	45.009
30	PEM05	MIX50	07/30/99	0238	4.491	45.020
31						
32						

	QC LIMITS
TCX = Tetrachloro-m-xylene	(± 0.20 MINUTES)
DCBP = Decachlorobiphenyl	(± 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

000243

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GRUP. Contract:

Code: CHEM Case No.: SAS No.: SDG No.: 12693TP

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/26/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 6.440 DCBP: 47.574

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCBP RT #
01	RESC01	RESCHK	07/26/99	1314	6.441	47.574
02	PIBLK01	I.BLANK	07/26/99	1406	6.439	47.573
03	PEM01	PEM	07/26/99	1459	6.439	47.573
04	INDAH01	STD100	07/26/99	1551	6.439	47.573
05	INDAL01	STD5A	07/26/99	1643	6.439	47.573
06	INDA401	STD80	07/26/99	1735	6.440	47.574
07	INDA201	STD20	07/26/99	1828	6.441	47.573
08	INDAM01	STD50	07/26/99	1920	6.441	47.577
09	TCHLOR01	COL1	07/26/99	2012	6.442	47.577
10	TOXAPH01	TOXAPHENE	07/26/99	2105	6.442	47.578
11	AR1221101	AR12211	07/26/99	2157	6.441	47.577
12	AR1232101	AR12321	07/26/99	2249	6.443	47.576
13	AR1242101	AR12421	07/26/99	2341	6.443	47.579
14	AR1248101	AR12481	07/27/99	0034	6.444	47.580
15	AR1254101	AR12541	07/27/99	0126	6.443	47.582
16	AR1660101	AR16601	07/27/99	0218	6.445	47.582
17	PIBLK02	I.BLANK	07/27/99	0310	6.443	47.586
18	PEM02	PEM	07/27/99	0403	6.444	47.585
19	PEM03	STD50	07/27/99	0455	6.444	47.581
20	PIBLK03	I.BLANK	07/29/99	1704	6.455	47.592
21	PEM04	MIX50	07/29/99	1756	6.442	47.579
22	PBLK01	MBLK12693	07/29/99	1848	6.441	47.579
23	EXTBLANK	EXBLK12693	07/29/99	2033	6.442	47.581
24	SPWC-01	78945P	07/29/99	2125	6.442	47.579
25	SPWC-002	78946P	07/29/99	2218	6.442	47.583
26	SPWC-03	78947P	07/29/99	2310	6.442	47.581
27	SPWC-04	78948P	07/30/99	0002	6.443	47.581
28	SPWC-05	78949P	07/30/99	0054	6.445	47.581
29	PIBLK04	I.BLANK	07/30/99	0147	6.445	47.582
30	PEM05	MIX50	07/30/99	0238	6.460	47.602
31						
32						

QC LIMITS
TCX = Tetrachloro-m-xylene (± 0.20 MINUTES)
DCBP = Decachlorobiphenyl (± 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

H.

CHROMATOGRAMS

DEMETER 1.00af

File ID: 006F0301 Sample: 78945P Code: S
Data file: C:\990729CP\006F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 21:25
Run ID: C99726CP. Crunched on 08/02/99 at 07:20 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.442	66097	CAL	2990	22.109
DCBP	47.579	64966	CAL	4100	15.845

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.481	48728	CAL	2094	23.266
DCBP	45.004	55449	CAL	3595	15.426

Data File Name	: C:\HPCHEM\1\DATA\990729CP\006F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 6
Sample Name	: 78945-12693NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 09:25 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:07 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990729CP\006R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 6
Sample Name	: 78945-12693NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 09:25 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:03 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

File ID: 007F0301 Sample: 78946P Code: S
Data file: C:\990729CP\007F0301.TXT
' ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 22:18
ı. ı ID: C99726CP. Crunched on 08/02/99 at 07:20 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.442	74719	CAL	2990	24.992
DCBP	47.583	63209	CAL	4100	15.416

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.481	48893	CAL	2094	23.344
DCBP	45.004	57049	CAL	3595	15.871

Data File Name	: C:\HPCHEM\1\DATA\990729CP\007F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 7
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 10:18 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:08 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990729CP\007R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 7
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 10:18 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:03 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 008F0301 Sample: 78947P Code: S
Data file: C:\990729CP\008F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 23:10
Run ID: C99726CP. Crunched on 08/02/99 at 07:20 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.442	64150	CAL	2990	21.457
DCBP	47.581	61538	CAL	4100	15.009

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.482	48091	CAL	2094	22.961
DCBP	45.004	54514	CAL	3595	15.166

Data File Name	: C:\HPCHEM\1\DATA\990729CP\008F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 8
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 11:10 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:09 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990729CP\008R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 8
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
uired on	: 29 Jul 99 11:10 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:03 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

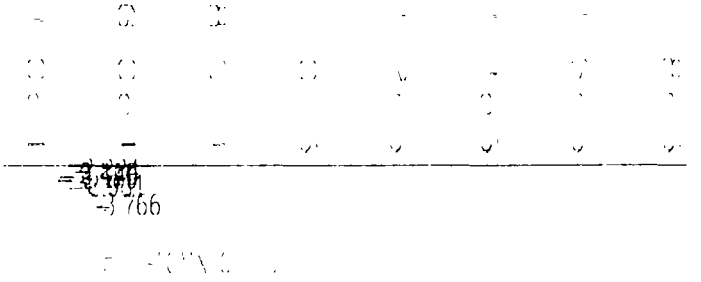
File ID: 009F0301 Sample: 78948P Code: S
Data file: C:\990729CP\009F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/30/99 Time: 00:02
Run ID: C99726CP. Crunched on 08/02/99 at 07:21 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.443	75501	CAL	2990	25.254
DCBP	47.581	64296	CAL	4100	15.681

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.482	50048	CAL	2094	23.896
DCBP	45.006	59185	CAL	3595	16.465



Data File Name	: C:\HPCHEM\1\DATA\990729CP\009F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 9
Sample Name	: 78948	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 30 Jul 99 00:02 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:10 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990729CP\009R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 9
Sample Name	: 78948	Injection Number	: 1
Time Bar Code	:	Sequence Line	: 3
Acquired on	: 30 Jul 99 00:02 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:04 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

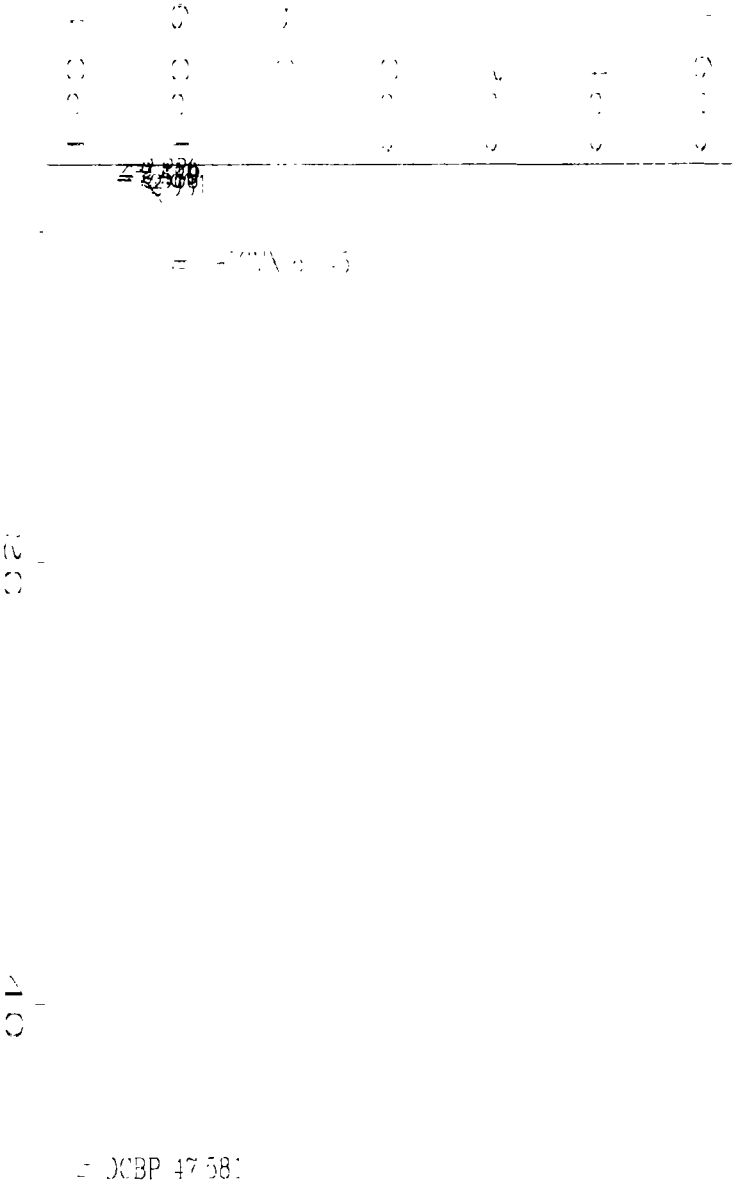
File ID: 010F0301 Sample: 78949P Code: S
Data file: C:\990729CP\010F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/30/99 Time: 00:54
Run ID: C99726CP. Crunched on 08/02/99 at 07:21 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.445	63645	CAL	2990	21.288
DCBP	47.581	62952	CAL	4100	15.354

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.483	48604	CAL	2094	23.206
DCBP	45.009	57233	CAL	3595	15.922



Data File Name	: C:\HPCHEM\1\DATA\990729CP\010F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 10
Sample Name	: 78949	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 30 Jul 99 00:54 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:11 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990729CP\010R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 10
Sample Name	: 78949	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
uired on	: 30 Jul 99 00:54 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:04 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 017F0101 Sample: I.BLANK Code: PIBLK
Data file: C:\990726CP\017F0101.TXT
D'''ution: 1.00 ul inj: 1 Run date: 07/27/99 Time: 03:10
R ID: C99726CP. Crunched on 07/27/99 at 16:28 by DM
Protocol: SW846 Analyte table: PESIT

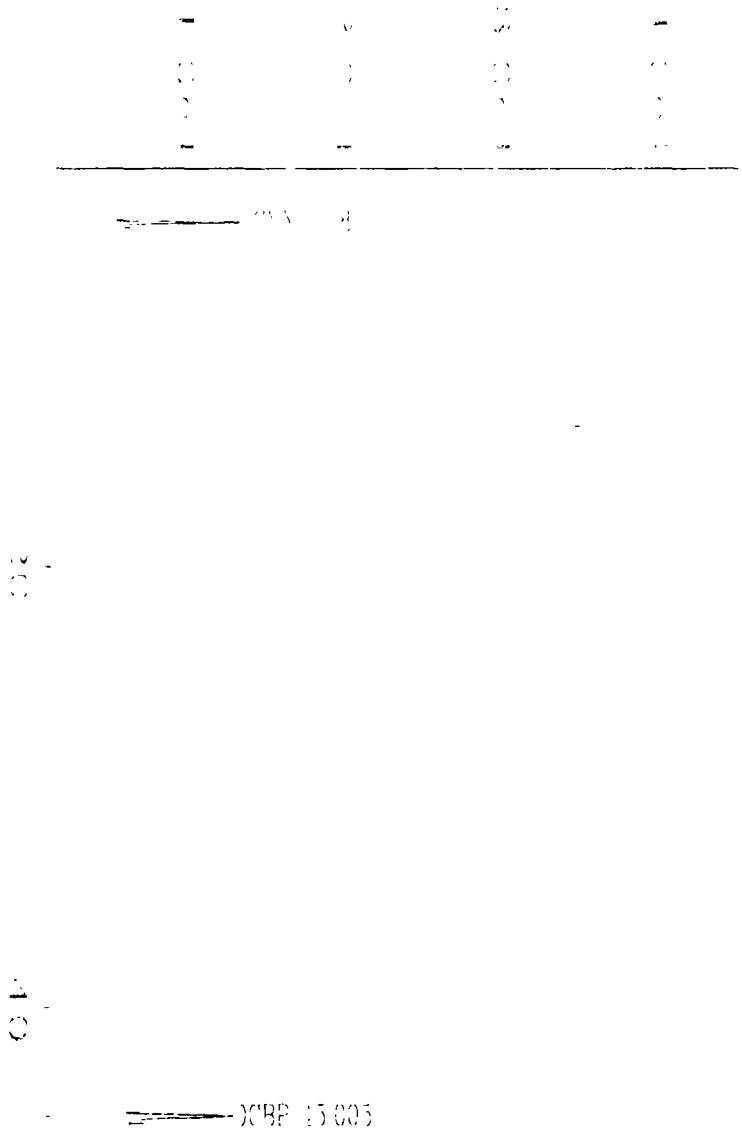
Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.443	58732	CAL	2946	19.938
DCBP	47.586	77478	CAL	4051	19.124

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.481	39513	CAL	2042	19.345
DCBP	45.005	63773	CAL	3542	18.003

Data File Name	: C:\HPCHEM\1\DATA\990726CP\017F0101.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 17
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
ured on	: 27 Jul 99 03:10 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 27 Jul 99 09:43 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 Jul 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	



Data File Name	: C:\HPCHEM\1\DATA\990726CP\017R0101.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 17
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 27 Jul 99 03:10 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 27 Jul 99 08:26 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 Jul 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

File ID: 001F0301 Sample: I.BLANK Code: PIBLK
Data file: C:\990729CP\001F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 17:04
Run ID: C99726CP. Crunched on 07/30/99 at 09:57 by DM
P ocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.455	81040	CAL	2990	27.107
DCBP	47.592	111485	CAL	4100	27.191

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.486	55325	CAL	2094	26.415
DCBP	45.012	94178	CAL	3595	26.200

Data File Name	: C:\HPCHEM\1\DATA\990729CP\001F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 1
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 05:04 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:05 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990729CP\001R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 1
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 05:04 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:02 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

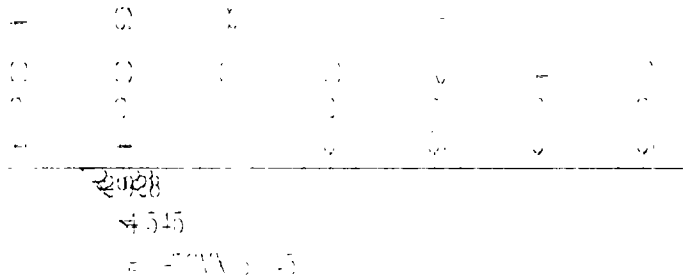
File ID: 011F0301 Sample: I.BLANK Code: PIBLK
Data file: C:\990729CP\011F0301.TXT
D tion: 1.00 ul inj: 1 Run date: 07/30/99 Time: 01:47
Run ID: C99726CP. Crunched on 07/30/99 at 10:09 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.445	52336	CAL	2990	17.506
DCBP	47.582	122875	CAL	4100	29.968

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.484	40485	CAL	2094	19.330
DCBP	45.009	68383	CAL	3595	19.024



Data File Name	: C:\HPCHEM\1\DATA\990729CP\011F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 11
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
uired on	: 30 Jul 99 01:47 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:11 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXTBLANK

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: EXBLK12693

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

CHEMTECH CONSULTING GROUP

HERBICIDES

METHOD BLANK RESULTS SUMMARY

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLK01

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Lab Sample ID: MBLK12693 Lab File ID: _____

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 07/26/99

Date analyzed: (1): 07/29/99 Date analyzed: (1): 07/29/99

Time analyzed: (1): 0507 Time analyzed: (1): 0507

Instrument ID (1): CS01 Instrument ID (2): CS01

GC Column(1): RTX5 ID: 0.53 (mm) GC Column(2): RTX1701 ID: 0.53 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	SPWC-01	78945	07/29/99	07/29/99
02	SPWC-02	78946	07/29/99	07/29/99
03	SPWC-03	78947	07/29/99	07/29/99
04	SPWC-04	78948	07/29/99	07/29/99
05	SPWC-05	78949	07/29/99	07/29/99
06	EXTBLANK	EXBLK12693	07/29/99	07/29/99
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

000285

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK01

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 078F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/29/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	0.25	U
93-72-1	SILVEX	0.25	U
93-76-5	2,4,5-T	0.25	U

000286

FORM I PEST SW846

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK02

Job Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 078F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/29/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	0.25	U
93-72-1	SILVEX	0.25	U
93-76-5	2,4,5-T	0.25	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK03

b Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 090F0201

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) Date Extracted: 07/29/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	0.25	U
93-72-1	SILVEX	0.25	U
93-76-5	2,4,5-T	0.25	U

000288

FORM I PEST SW846

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: MBLK12693

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

CHEMTECH CONSULTING GROUP

HERBICIDES

CALIBRATION SUMMARY

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Instrument ID: CS01 Level (x low): 2nd: 5.0 mid: 10.0 4th: 20.0 high: 40.0

GC Column: RTX5 ID: 0.53 (mm) Date(s) Analyzed: 07/29/99

COMPOUND	RT OF STANDARDS LOW	2	MID	4	HIGH	MEAN RT	RT WINDOW FROM	TO
2,4-D	6.545	6.518	6.508	6.499	6.492	6.512	6.462	6.562
SILVEX	7.841	7.836	7.833	7.832	7.830	7.834	7.784	7.884
2,4,5-T	8.128	8.112	8.106	8.100	8.096	8.108	8.058	8.158
2,4,DCPA	5.017	5.011	5.007	5.005	5.002	5.008	4.958	5.058

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ±0.07 minutes for all other compounds, except ±0.10 minutes for Decachlorobiphenyl.

000291

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Instrument ID: CS01 Level (x low): 2nd: 5.0 mid: 10.0 4th: 20.0 high: 40.0

GC Column: RTX1701 ID: 0.53 (mm) Date(s) Analyzed: 07/29/99

COMPOUND	RT OF STANDARDS LOW	2	MID	4	HIGH	MEAN RT	RT WINDOW FROM	TO
2,4-D	6.127	6.073	6.053	6.036	6.022	6.062	6.012	6.112
SILVEX	6.999	6.986	6.980	6.975	6.969	6.982	6.932	7.032
2,4,5-T	7.651	7.611	7.597	7.585	7.574	7.604	7.554	7.654
2,4,DCPA	4.397	4.381	4.374	4.367	4.360	4.376	4.326	4.426

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are ± 0.05 minutes for all compounds that elute before Heptachlor epoxide, ±0.07 minutes for all other compounds, except ±0.10 minutes for Decachlorobiphenyl.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Instrument ID: CS01 Level (x low): 2nd: 5.0 mid: 10.0 4th: 20.0 high: 40.0

GC Column: RTX5 ID: 0.53 (mm) Date(s) Analyzed: 07/29/99

COMPOUND	CALIBRATION FACTORS LOW	2	MID	4	HIGH	MEAN	%
2,4-D	515460	474400	446194	402649	351386	438018	[illegible]
SILVEX	2107080	2145436	1940128	1723179	1564648	1896094	[illegible]
2,4,5-T	2188640	2327180	2149108	1811352	1617258	2018708	[illegible]
2,4,DCPA	405740	360632	327160	296027	259800	329872	[illegible]

1* Surrogate calibration factors are measured from Standard Mix A analyses.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 0% but less than or equal to 30.0%.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

) Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Instrument ID: CS01 Level (x low): 2nd: 5.0 mid: 10.0 4th: 20.0 high: 40.0

GC Column: RTX1701 ID: 0.53 (mm) Date(s) Analyzed: 07/29/99

COMPOUND	CALIBRATION FACTORS LOW	2	MID	4	HIGH	MEAN	%
2,4-D	399480	367460	317818	301809	273232	331960	13
SILVEX	2198620	1732164	1646388	1494705	1398568	1694089	15
2,4,5-T	1851060	1892672	1770216	1540879	1423267	1695619	12
2,4,DCPA	251880	256204	238072	209906	190220	229256	12

1* Surrogate calibration factors are measured from Standard Mix A analyses.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 0% but less than or equal to 30.0%.

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

EPA Sample No.(PIBLK): PIBLK02 Date Analyzed : 07/29/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0427

EPA Sample No.(PEM): PEM01 Date Analyzed : 07/29/99

Lab Sample ID (PEM): HERB500 Time Analyzed : 0453

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
2,4-D	6.051	5.962	6.162	0.460	0.500	8.0
SILVEX	6.982	6.882	7.082	0.478	0.500	4.4
2,4,5-T	7.598	7.504	7.704	0.501	0.500	0.2
2,4,DCPA	4.373	4.276	4.476	0.499	0.500	0.2

% breakdown (1):

LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

EPA Sample No.(PIBLK): PIBLK02 Date Analyzed : 07/29/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0427

EPA Sample No.(PEM): PEM01 Date Analyzed : 07/29/99

Lab Sample ID (PEM): HERB500 Time Analyzed : 0453

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
2,4-D	6.511	6.412	6.612	0.466	0.500	6.8
SILVEX	7.838	7.734	7.934	0.481	0.500	3.8
2,4,5-T	8.110	8.008	8.208	0.490	0.500	2.0
2,4,DCPA	5.012	4.908	5.108	0.467	0.500	6.6

% breakdown (1):

LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

000296

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

EPA Sample No.(PIBLK): PIBLK03 Date Analyzed : 07/29/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0724

EPA Sample No.(PEM): PEM02 Date Analyzed : 07/29/99

Lab Sample ID (PEM): HERB500 Time Analyzed : 0738

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
2,4-D	6.052	5.962	6.162	0.470	0.500	6.0
SILVEX	6.979	6.882	7.082	0.480	0.500	4.0
2,4,5-T	7.596	7.504	7.704	0.516	0.500	3.2
2,4,DCPA	4.373	4.276	4.476	0.513	0.500	2.6

% breakdown (1):

LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

EPA Sample No.(PIBLK): PIBLK03 Date Analyzed : 07/29/99

Lab Sample ID (PIBLK): I.BLANK Time Analyzed : 0724

EPA Sample No.(PEM): PEM02 Date Analyzed : 07/29/99

Lab Sample ID (PEM): HERB500 Time Analyzed : 0738

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	RPD
2,4-D	6.507	6.412	6.612	0.506	0.500	1.2
SILVEX	7.833	7.734	7.934	0.509	0.500	1.8
2,4,5-T	8.105	8.008	8.208	0.532	0.500	6.4
2,4,DCPA	5.007	4.908	5.108	0.494	0.500	1.2

% breakdown (1):

LIMITS:

RPD of amounts in PEM must be less than or equal to 20.0%

CHEMTECH CONSULTING GROUP

HERBICIDES

SURROGATE RECOVERY

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column(1): RTX1701 ID: 0.53 (mm) GC Column(2): RTX5 ID: 0.53 (mm)

	EPA SAMPLE NO.	2,4,D1 %REC #	2,4,D2 %REC #	OTHER (1)	OTHER (2)	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLK01	90	87					0
02	PBLK01	97	92					0
03	EXTBLANK	113	105					0
04	SPWC-01	102	96					0
05	SPWC-02	108	100					0
06	SPWC-03	108	102					0
07	SPWC-04	109	102					0
08	SPWC-05	116	108					0
09	PIBLK03	89	87					0
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

2,4,DCPA = 2,4,DCPA

ADVISORY
QC LIMITS
(60-150)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.
D Surrogate diluted out

000300

CHEMTECH CONSULTING GROUP

HERBICIDES

MS/ MSD RESULTS SUMMARY

3E

WATER HERBICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECH CONSULTING GROUP ContraFt: 68D20041

Code: CHEM Case No.: SAS No.: SDG No.: 12625TH

Matrix Spike - EPA SAMPLE NO.: BLANKSPIKE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	SPIKE CONCENTRATION (ug/L)	SPIKE % REC #	QC LIMITS REC.
2,4-D	100	0.000	98	98	60-120
SILVEX	100	0.000	82	82	60-120
2,4,5-T	100	0.000	82	82	60-120

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits.

RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 3 outside limits

COMMENTS:

CHEMTECH CONSULTING GROUP

HERBICIDES

RETENTION TIMES

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

L Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX1701 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
2,4,DCPA: 4.376 : _____

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	2,4,DCPA RT	#	RT	#
01	PIBLK01	I.BLANK	07/29/99	0305	4.373			
02	INDAH01	HERB2000	07/29/99	0318	4.360			
03	INDA201	HERB250	07/29/99	0332	4.381			
04	INDAM01	HERB500	07/29/99	0346	4.374			
05	INDA401	HERB1000	07/29/99	0359	4.367			
06	INDAL01	HERB50	07/29/99	0413	4.397			
07	PIBLK02	I.BLANK	07/29/99	0427	4.376			
08	PEM01	HERB500	07/29/99	0453	4.373			
09	PBLK01	MBLK12693	07/29/99	0507	4.374			
10	EXTBLANK	EXBLK12693	07/29/99	0535	4.371			
11	SPWC-01	78945	07/29/99	0548	4.372			
12	SPWC-02	78946	07/29/99	0602	4.370			
13	SPWC-03	78947	07/29/99	0616	4.370			
14	SPWC-04	78948	07/29/99	0629	4.370			
15	SPWC-05	78949	07/29/99	0643	4.369			
16	PIBLK03	I.BLANK	07/29/99	0724	4.375			
17	PEM02	HERB500	07/29/99	0738	4.373			
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

2,4,DCPA = 2,4,DCPA QC LIMITS (± 0.30 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

000304

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

GC Column: RTX5 ID: 0.53 (mm) Init. Calib. Date(s): 07/29/99

Instrument ID: CS01

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
2,4,DCPA: 5.008 : _____

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	2,4,DCPA RT #	RT #
01	PIBLK01	I.BLANK	07/29/99	0305	5.007	
02	INDAH01	HERB2000	07/29/99	0318	5.002	
03	INDA201	HERB250	07/29/99	0332	5.011	
04	INDAM01	HERB500	07/29/99	0346	5.007	
05	INDA401	HERB1000	07/29/99	0359	5.005	
06	INDAL01	HERB50	07/29/99	0413	5.017	
07	PIBLK02	I.BLANK	07/29/99	0427	5.008	
08	PEM01	HERB500	07/29/99	0453	5.012	
09	PBLK01	MBLK12693	07/29/99	0507	5.008	
10	EXTBLANK	EXBLK12693	07/29/99	0535	5.007	
11	SPWC-01	78945	07/29/99	0548	5.007	
12	SPWC-02	78946	07/29/99	0602	5.006	
13	SPWC-03	78947	07/29/99	0616	5.006	
14	SPWC-04	78948	07/29/99	0629	5.006	
15	SPWC-05	78949	07/29/99	0643	5.006	
16	PIBLK03	I.BLANK	07/29/99	0724	5.007	
17	PEM02	HERB500	07/29/99	0738	5.007	
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
2,4,DCPA = 2,4,DCPA (± 0.30 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

000305

CHEMTECH CONSULTING GROUP

HERBICIDES

CHROMATOGRAMS

DEMETER 1.00af

File ID: 083F0201 Sample: 78945 Code: S
Data file: C:\990726CP\083F0201.TXT
ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 05:48
Run ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.007	158409	CAL	330	480.214

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.372	116428	CAL	229	507.850

Data File Name	: C:\HPCHEM\1\DATA\990726CP\083F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 83
Sample Name	: 78945-12693NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 05:48 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 06:18 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\083R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 83
Sample Name	: 78945-12693NJ	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 05:48 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:25 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

File ID: 084F0201 Sample: 78946 Code: S
Data file: C:\990726CP\084F0201.TXT
` `ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 06:02
. .: ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.006	164933	CAL	330	499.991

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.370	123375	CAL	229	538.153

Data File Name	: C:\HPCHEM\1\DATA\990726CP\084F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 84
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 29 Jul 99 06:02 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 06:18 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\084R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 84
Sample Name	: 78946	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 06:02 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:27 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

File ID: 085F0201 Sample: 78947 Code: S
Data file: C:\990726CP\085F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 06:16
Cal ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.006	168915	CAL	330	512.063

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.370	123443	CAL	229	538.449

Data File Name	: C:\HPCHEM\1\DATA\990726CP\085F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 85
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 06:16 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 07:33 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990726CP\085R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 85
Sample Name	: 78947	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 29 Jul 99 06:16 AM	Instrument Method	: RUNHERB.MTH
port Created on	: 29 Jul 99 01:27 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 086F0201 Sample: 78948 Code: S
Data file: C:\990726CP\086F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 06:29
ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.006	168769	CAL	330	511.620

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.370	125496	CAL	229	547.404

Data File Name	: C:\HPCHEM\1\DATA\990726CP\086F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 86
Sample Name	: 78948	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 06:29 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 07:33 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\086R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 86
Sample Name	: 78948	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
uired on	: 29 Jul 99 06:29 AM	Instrument Method	: RUNHERB.MTH
port Created on	: 29 Jul 99 01:31 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 087F0201 Sample: 78949 Code: S
Data file: C:\990726CP\087F0201.TXT
ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 06:43
Run ID: C990726H. Crunched on 07/29/99 at 15:17 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.006	178902	CAL	330	542.338

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.369	132643	CAL	229	578.579

Data File Name	: C:\HPCHEM\1\DATA\990726CP\087F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 87
Sample Name	: 78949	Injection Number	: 1
Bar Code Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 06:43 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 07:33 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\087R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 87
Sample Name	: 78949	Injection Number	: 1
Bar Code Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 06:43 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:31 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

File ID: 082F0201 Sample: EXBLK12693 Code: S
Data file: C:\990726CP\082F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 05:35
Run ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.007	172589	CAL	330	523.200

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.371	129895	CAL	229	566.592

Data File Name	: C:\HPCHEM\1\DATA\990726CP\082F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 82
Sample Name	: EXT.BLK	Injection Number	: 1
Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 05:35 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 06:18 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990726CP\082R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 82
Sample Name	: EXT.BLK	Injection Number	: 1
Time Bar Code	:	Sequence Line	: 2
Acquired on	: 29 Jul 99 05:35 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:24 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 078F0201 Sample: I.BLANK Code: PIBLK
Data file: C:\990726CP\078F0201.TXT
ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 04:27
Run ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.008	144205	CAL	330	437.155

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.376	103668	CAL	229	452.192

Data File Name	: C:\HPCHEM\1\DATA\990726CP\078F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 78
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 04:27 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 06:16 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\078R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 78
Sample Name	: I.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 04:27 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:18 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

DEMETER 1.00af

File ID: 090F0201 Sample: I.BLANK Code: PIBLK
Data file: C:\990726CP\090F0201.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 07:24
Run ID: C990726H. Crunched on 07/29/99 at 15:17 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	5.007	144229	CAL	330	437.227

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
2,4,DCPA	4.375	102456	CAL	229	446.906

Data File Name	: C:\HPCHEM\1\DATA\990726CP\090F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 90
Sample Name	: I.BLK	Injection Number	: 1
Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 07:24 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:06 PM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\090R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 90
Sample Name	: I.BLK	Injection Number	: 1
Bar Code Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 07:24 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:32 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

Data File Name	: C:\HPCHEM\1\DATA\990729CP\011R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 11
Sample Name	: I.BLK	Injection Number	: 1
Time Bar Code	:	Sequence Line	: 3
Acquired on	: 30 Jul 99 01:47 AM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:05 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

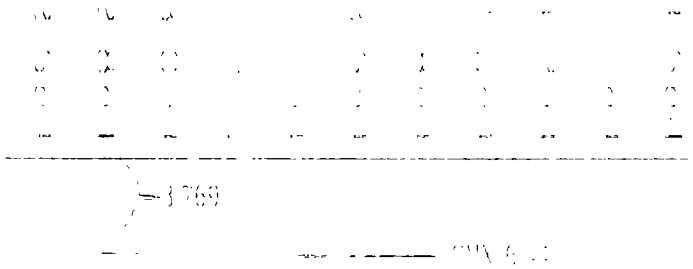
File ID: 003F0301 Sample: MBLK12693 Code: PBLK
Data file: C:\990729CP\003F0301.TXT
Dilution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 18:48
Run ID: C99726CP. Crunched on 08/02/99 at 07:19 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.441	69171	CAL	2990	23.137
DCBP	47.579	67725	CAL	4100	16.518

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.480	49908	CAL	2094	23.829
DCBP	45.004	56542	CAL	3595	15.730



Data File Name	: C:\HPCHEM\1\DATA\990729CP\003F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 3
Sample Name	: MBLK	Injection Number	: 1
Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 06:48 PM	Instrument Method:	RUNPEST.MTH
Report Created on:	30 Jul 99 09:06 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990729CP\003R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 3
Sample Name	: MBLK	Injection Number	: 1
R Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 06:48 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:02 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	:

DEMETER 1.00af

File ID: 005F0301 Sample: EXBLK12693 Code: S
Data file: C:\990729CP\005F0301.TXT
ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 20:33
ID: C99726CP. Crunched on 08/02/99 at 07:20 by DM
Protocol: SW846 Analyte table: TPEST

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	6.442	71620	CAL	2990	23.956
DCBP	47.581	69795	CAL	4100	17.023

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
TCX	4.481	51015	CAL	2094	24.358
DCBP	45.003	58433	CAL	3595	16.256

Data File Name	: C:\HPCHEM\1\DATA\990729CP\005F0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 5
Sample Name	: EXT.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 08:33 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:07 AM	Analysis Method	: 0726F80.MTH
Last Recalib on	: 27 JUL 99 09:18 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990729CP\005R0301.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 5
Sample Name	: EXT.BLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Jul 99 08:33 PM	Instrument Method	: RUNPEST.MTH
Report Created on	: 30 Jul 99 09:03 AM	Analysis Method	: 0726R80.MTH
Last Recalib on	: 27 JUL 99 08:08 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

CHEMTECH CONSULTING GROUP

HERBICIDES DATA

CHEMTECH CONSULTING GROUP

HERBICIDES

ANALYTICAL RESULTS SUMMARY

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-01

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78945

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-02

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78946

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-03

) Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78947

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

000280

FORM I PEST SW846

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-04

Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78948

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SPWC-05

ɔ Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693H

Matrix: (soil/water) WATER Lab Sample ID: 78949

Sample wt/vol: 50 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 07/23/99

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 07/26/99

Concentrated Extract Volume: 10000 (uL) Date analyzed: 07/29/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
94-75-7	2,4-D	5.0	U
93-72-1	SILVEX	5.0	U
93-76-5	2,4,5-T	5.0	U

DEMETER 1.00af

File ID: 080F0201 Sample: MBLK12693 Code: PBLK
Data file: C:\990726CP\080F0201.TXT
ution: 1.00 ul inj: 1 Run date: 07/29/99 Time: 05:07
Run ID: C990726H. Crunched on 07/29/99 at 15:16 by DM
Protocol: SW846 Analyte table: HERB

Column: RTX5

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
,4,DCPA	5.008	151544	CAL	330	459.403

Column: RTX1701

Compound	R.T. min	Peak Ht	ID	Resp fact area/pg	Calc val pg inj
,4,DCPA	4.374	110870	CAL	229	483.607

Data File Name	: C:\HPCHEM\1\DATA\990726CP\080F0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 80
Sample Name	: MBLK	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Jul 99 05:07 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 06:17 AM	Analysis Method	: 0729HF.MTH
Last Recalib on	: 29 Jul 99 06:12 AM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

Data File Name	: C:\HPCHEM\1\DATA\990726CP\080R0201.D		
Operator	: DP CAL: F:RTX5, R:RTX35	Page Number	: 1
Instrument	: INSTRUMEN	Vial Number	: 80
Sample Name	: MBLK	Injection Number	: 1
F Time Bar Code	:	Sequence Line	: 2
Acquired on	: 29 Jul 99 05:07 AM	Instrument Method	: RUNHERB.MTH
Report Created on	: 29 Jul 99 01:19 PM	Analysis Method	: 0729HR.MTH
Last Recalib on	: 29 Jul 99 01:14 PM	Sample Amount	: 0
Multiplier	: 1	ISTD Amount	

IV.

METALS DATA

A.

ANALYTICAL RESULTS SUMMARY

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-01

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78945TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	600			P
7440-43-9	Cadmium	2.2	B		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	4.8	B		P
7440-50-8	Copper	5.2	B		P
7440-66-6	Zinc	30.2			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000336

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-02

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78946TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	264			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.7	B		P
7440-50-8	Copper	5.7	B		P
7440-66-6	Zinc	11.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-03

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78947TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	458			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	4.3	B		P
7440-50-8	Copper	4.3	B		P
7440-66-6	Zinc	6.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000338

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-04

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78948TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	242			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.5	B		P
7440-50-8	Copper	5.3	B		P
7440-66-6	Zinc	11.1	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000339

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

SPWC-05

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Matrix (soil/water): SOIL Lab Sample ID: 78949TS

Level (low/med): LOW Date Received: 07/23/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0	U		P
7439-92-1	Lead	3.0	U		P
7440-39-3	Barium	361			P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	1.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	2.2	B		P
7440-50-8	Copper	5.9	B		P
7440-66-6	Zinc	9.8	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000310

B.

BLANK RESULTS SUMMARY

ANALYSIS REPORT

3

BLANKS

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic	6.0	U	6.0	U	6.0	U	6.0	U	6.000	U	P
Lead	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Barium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	CV
Selenium	5.0	U	5.0	U	5.0	U	5.0	U	5.000	U	P
Silver	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Chromium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Nickel	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Copper	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Zinc	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P

ANALYSIS REPORT

3

BLANKS

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic											NR
Lead											NR
Barium											NR
Cadmium											NR
Mercury			0.2	U	0.2	U	0.2	U			CV
Selenium											NR
Silver											NR
Chromium											NR
Nickel											NR
Copper											NR
Zinc											NR

ANALYSIS REPORT

3

BLANKS

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic											NR
Lead											NR
Barium											NR
Cadmium											NR
Mercury			0.2	U							CV
Selenium											NR
Silver											NR
Chromium											NR
kel											NR
Copper											NR
Zinc											NR

000311

ANALYSIS REPORT
1

CLIENT SAMPLE #

INORGANIC ANALYSIS DATA SHEET

FLUID#1

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): SOIL Lab Sample ID: .BLK.200S

Level (low/med): LOW Date Received: 01/18/99

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.0	U		P
7439-92-1	Lead	1.0	U		P
7440-39-3	Barium	1.0	U		P
7440-43-9	Cadmium	1.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	4.0	U		P
7440-22-4	Silver	2.0	U		P
7440-47-3	Chromium	1.0	U		P
7440-02-0	Nickel	7.8	B		P
7440-50-8	Copper	1.0	U		P
7440-66-6	Zinc	34.6			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TCLP EXTRACT

000345

C.

CALIBRATION SUMMARY

ANALYSIS REPORT

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Initial Calibration Source: EPA-LV

Continuing Calibration Source: EPA-LV

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Arsenic	50.9	53.08	104.3	2500.0	2672.17	106.9	2639.71	105.6	P
Lead	4938.0	5141.30	104.1	2500.0	2534.02	101.4	2557.26	102.3	P
Barium	2009.0	1940.32	96.6	2500.0	2371.40	94.9	2359.24	94.4	P
Cadmium	510.0	506.04	99.2	2500.0	2477.10	99.1	2446.31	97.9	P
Mercury	4.1	4.18	102.0	5.0	5.27	105.4	4.94	98.8	CV
lenium	50.7	50.06	98.7	2500.0	2536.58	101.5	2565.60	102.6	P
iver	487.0	476.31	97.8	1500.0	1407.72	93.8	1382.44	92.2	P
Chromium	471.0	466.04	98.9	2500.0	2386.36	95.5	2341.02	93.6	P
Nickel	497.0	491.26	98.8	2500.0	2452.42	98.1	2420.44	96.8	P
Copper	497.0	485.43	97.7	2500.0	2384.07	95.4	2374.88	95.0	P
Zinc	3012.0	3035.77	100.8	2500.0	2504.19	100.2	2428.86	97.2	P

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

ANALYSIS REPORT

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Initial Calibration Source: EPA-LV

Continuing Calibration Source: EPA-LV

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Arsenic				2500.0	2687.62	107.5			P
Lead				2500.0	2529.70	101.2			P
Barium				2500.0	2384.74	95.4			P
Cadmium				2500.0	2496.98	99.9			P
Mercury				5.0	5.16	103.2	4.84	96.8	CV
Selenium				2500.0	2581.51	103.3			P
Silver				1500.0	1402.23	93.5			P
Chromium				2500.0	2376.25	95.0			P
Nickel				2500.0	2462.40	98.5			P
Copper				2500.0	2410.64	96.4			P
Zinc				2500.0	2470.77	98.8			P

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

000348

ANALYSIS REPORT

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Initial Calibration Source: EPA-LV

Continuing Calibration Source: EPA-LV

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Arsenic									NR
Lead									NR
Barium									NR
Cadmium									NR
Mercury				5.0	5.27	105.4	5.16	103.2	CV
Selenium									NR
Silver									NR
Chromium									NR
Nickel									NR
Copper									NR
Zinc									NR

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

000319

ANALYSIS REPORT

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Initial Calibration Source: EPA-LV

Continuing Calibration Source: EPA-LV

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Arsenic									NR
Lead									NR
Barium									NR
Cadmium									NR
Mercury				5.0	4.94	98.8			CV
[illegible]enium									NR
[illegible]ver									NR
Chromium									NR
Nickel									NR
Copper									NR
Zinc									NR

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

000350

ANALYSIS REPORT

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

AA CRDL Standard Source: INOR-VEN

ICP CRDL Standard Source: INOR-VEN

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
					Initial		Final	
	True	Found	%R	True	Found	%R	Found	%R
Arsenic				20.0	23.64	118.2	22.45	112.2
Lead				6.0	5.56	92.7	6.52	108.7
Barium								
Cadmium				10.0	11.32	113.2	11.42	114.2
Mercury	0.2	0.26	130.0					
Selenium				10.0	9.60	96.0	10.35	103.5
Silver				20.0	21.30	106.5	21.67	108.4
Chromium				20.0	21.96	109.8	22.32	111.6
Nickel				80.0	90.78	113.5	94.25	117.8
Copper				50.0	58.81	117.6	60.92	121.8
Zinc				40.0	43.11	107.8	44.57	111.4

000351

D.

ICP
ICS RESULTS SUMMARY

ANALYSIS REPORT

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

ICP ID Number: P0 ICS Source: EPA-LV

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Arsenic	0	97	-1	99.2	102.3	-1	95.8	98.8
Lead	0	47	-2	43.5	92.6	-2	45.0	95.7
Barium	0	467	0	453.5	97.1	0	460.2	98.5
Cadmium	0	871	4	874.1	100.4	4	903.3	103.7
Mercury								
Selenium	0	42	2	46.2	110.0	-1	48.1	114.5
Silver	0	207	0	198.0	95.7	0	201.7	97.4
Chromium	38	456	35	439.0	96.3	37	451.8	99.1
Nickel	0	857	-1	855.8	99.9	0	875.1	102.1
Copper	28	507	25	535.1	105.5	27	547.4	108.0
[illegible]c	33	1008	31	896.2	88.9	37	910.8	90.4

000353

E.

SPIKED SAMPLE RESULTS SUMMARY

ANALYSIS REPORT

5A

SPIKE SAMPLE RECOVERY

CLIENT SAMPLE #

SB-3C/2-8MS

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	2234.7100		4.0000	U	2000.00	111.7		P
Lead	75-125	394.9200		5.4200		500.00	77.9		P
Barium	75-125	2104.1900		292.4200		2000.00	90.6		P
Cadmium	75-125	67.1000		19.4400		50.00	95.3		P
Mercury	75-125	0.9060		0.2000	U	1.00	90.6		CV
Selenium	75-125	2398.8500		6.0900		2000.00	119.6		P
Silver	75-125	49.0300		2.0000	U	50.00	98.1		P
Chromium	75-125	174.0800		1.0000	U	200.00	87.0		P
Nickel	75-125	429.3400		9.9200	B	500.00	83.9		P
Copper	75-125	226.1200		3.4200	B	250.00	89.1		P
Zinc	75-125	492.0300		30.8200		500.00	92.2		P

Comments:

TCLP EXTRACT

000355

ANALYSIS REPORT

5A

SPIKE SAMPLE RECOVERY

CLIENT SAMPLE #

SB-3C/2-8MSD

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	2238.0800		4.0000	U	2000.00	111.9		P
Lead	75-125	420.4600		5.4200		500.00	83.0		P
Barium	75-125	2116.4000		292.4200		2000.00	91.2		P
Cadmium	75-125	66.7600		19.4400		50.00	94.6		P
Mercury	75-125	1.0130		0.2000	U	1.00	101.3		CV
Selenium	75-125	2414.6800		6.0900		2000.00	120.4		P
Silver	75-125	50.0200		2.0000	U	50.00	100.0		P
Chromium	75-125	175.4000		1.0000	U	200.00	87.7		P
Nickel	75-125	430.9100		9.9200	B	500.00	84.2		P
Copper	75-125	238.3600		3.4200	B	250.00	94.0		P
Zinc	75-125	492.5400		30.8200		500.00	92.3		P

Comments:

TCLP EXTRACT

000356

F.

DUPLICATE SAMPLE RESULTS SUMMARY

ANALYSIS REPORT

6

DUPLICATES

CLIENT SAMPLE #

SB-3C/2-8D

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Arsenic		4.0000	U	4.0000	U			P
Lead	3.0	5.4200		5.7800		6.4		P
Barium	200.0	292.4200		293.4700		0.4		P
Cadmium	5.0	19.4400		21.5500		10.3		P
Mercury		0.2000	U	0.2000	U			CV
Selenium	5.0	6.0900		5.8700		3.7		P
Silver		2.0000	U	2.0000	U			P
Chromium		1.0000	U	1.0000	U			P
Nickel		9.9200	B	10.6600	B	7.2		P
Copper		3.4200	B	3.8700	B	12.3		P
Zinc	20.0	30.8200		33.1700		7.3		P

ANALYSIS REPORT

6

DUPLICATES

CLIENT SAMPLE #

SB-3C/2-8MSD

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Arsenic		2234.7100		2238.0800		0.2		P
Lead		394.9200		420.4600		6.3		P
Barium		2104.1900		2116.4000		0.6		P
Cadmium		67.1000		66.7600		0.5		P
Mercury	0.2	0.9060		1.0130		11.2		CV
Selenium		2398.8500		2414.6800		0.7		P
Silver	10.0	49.0300		50.0200		2.0		P
Chromium		174.0800		175.4000		0.8		P
Nickel		429.3400		430.9100		0.4		P
Copper		226.1200		238.3600		5.3		P
Zinc		492.0300		492.5400		0.1		P

G.

LABORATORY CONTROL SAMPLE RESULTS SUMMARY

ANALYSIS REPORT

7
LABORATORY CONTROL SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 12693T

Solid LCS Source:

Aqueous LCS Source: EPA-LV

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Arsenic	50.9	53.95	106.0						
Lead	2518.4	2627.37	104.3						
Barium	1004.5	1002.99	99.8						
Cadmium	304.8	309.38	101.5						
Mercury									
Selenium	50.7	48.38	95.4						
Silver	295.0	288.11	97.7						
Chromium	235.5	238.25	101.2						
Nickel	248.5	249.02	100.2						
Copper	248.5	247.18	99.5						
c	1506.0	1556.88	103.4						

000361

H.

SERIAL DILUTION RESULTS SUMMARY

ANALYSIS REPORT

9

ICP SERIAL DILUTIONS

CLIENT SAMPLE #

SB-3C/2-8L

Lab Name: CHEMTECH CONSULTING GROUP Contract:

Lab Code: CHEM Case No.: SAS No.: SDG No.: 10439T

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	4.00	U	20.00	U			P
Lead	5.42		9.80	B	80.8		P
Barium	292.42		307.55	B	5.2		P
Cadmium	19.44		19.20	B	1.2		P
Mercury							NR
Selenium	6.09		20.00	U	100.0		P
Silver	2.00	U	10.00	U			P
Chromium	1.00	U	5.00	U			P
Nickel	9.92	B	10.65	B	7.4		P
Copper	3.42	B	7.80	B	128.1		P
Zinc	30.82		49.90	B	61.9		P

000363

GENERAL CHEMISTRY DATA

GENERAL CHEMISTRY

TEST RESULTS

GENERAL CHEMISTRY

QC RESULTS

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78945
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-01
TIME SAMPLED- 1411 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	327	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.95	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3470	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	95.50	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000366

110 Route 4
Englewood, New Jersey 07631
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515 Route 9
Barnegat, New Jersey 08005
Phone (609) 698-0199 Fax (609) 698-0910

NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78946
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-02
TIME SAMPLED- 1430 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	1170	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.70	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3490	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	91.13	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000367

110 Route 4
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NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No. 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78947
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-03
TIME SAMPLED- 1440 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	367	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	6.20	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3320	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	91.54	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000368

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NYSDOH Certification No. 10624
NJDEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78948
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-04
TIME SAMPLED- 1500 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	360	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	5.85	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3310	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	93.12	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000369

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NJDEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: JIM IREY

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78949
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-05
TIME SAMPLED- 1510 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- SO

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
IGNITIBILITY	1010	07/27/99		HCP	>100	Degree C
OIL & GREASE	413.1	07/27/99		HNP	543	mg/Kg
CORROSIVITY	Y9045	07/26/99		HSP	5.90	pH Unit
SULFIDE-REACTIVITY	9030	07/27/99		PPS	< 53.0	mg/kg
CYANIDE-REACTIVITY	9010	07/27/99		PPS	<1.05	mg/Kg
TOTAL VOLATILE SOLIDS	160.4	07/27/99		HCP	3680	mg/kg
SOLIDS, PERCENT	160.3	07/23/99		BP	92.90	%
PAINT FILTER TEST	9095	07/27/99		HCP	<1.0	mL/kg

LABORATORY DIRECTOR _____

000370

110 Route 4
Englewood, New Jersey 07631
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515 Route 9
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NJDEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78950
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-01
TIME SAMPLED- 1411 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	23.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.170	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	97.0	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	85.0	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

000371

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Englewood, New Jersey 07631
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NYSDOH Certification No 10624
N. DEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78951
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-02
TIME SAMPLED- 1430 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	26.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.362	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	330	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	129	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

000372

110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax (201) 567-1333

515 Route 9
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NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78952
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-03
TIME SAMPLED- 1440 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	21.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.346	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	109	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	146	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

000373

110 Route 4
Englewood, New Jersey 07631
Phone (201) 567-6868 Fax (201) 567-1333

515 Route 9
Barnegat, New Jersey 08005
Phone (609) 698-0199 Fax (609) 698-0910

NYSDOH Certification No 10624
NJDEP Certification No 02548

NJDEP Certification No. 15004

CHEMTECH

LABORATORY REPORT

REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78953
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-04
TIME SAMPLED- 1500 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	24.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.522	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	105	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	126	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

000371

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REPORT OF ANALYSES

FOSTER WHEELER ENVIRONMENTAL
ONE OXFORD VALLEY
SUITE 200
LANGHORNE, PA 19047-
Attn: MEG WATSON

DATE: 07/29/99

PROJECT # 12693 NJ

SAMPLE NUMBER- 78954
DATE SAMPLED- 07/22/99
DATE RECEIVED- 07/23/99
DELIVERED BY- CHEM

SAMPLE ID- SPWC-05
TIME SAMPLED- 1510 SAMPLER- CLIENT
TIME RECEIVED- 1000
RECEIVED BY- AD SAMPLE MATRIX- LE

Page 1 of 1

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
CHEMICAL OXYGEN DEMAND	HAC-3000	07/28/99		HSP	28.0	mg/L
NITROGEN, AMMONIA	EPA 350.1	07/27/99		ST	0.378	mg/L
OIL & GREASE	EPA 413.1	07/27/99		HNP	160	mg/L
SOLIDS, TOTAL	EPA 160.3	07/27/99		HSP	151	mg/L

COMMENTS: LEACHATE MATRIX

LABORATORY DIRECTOR _____

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LABORATORY REPORT

FOR FOSTER WHEELER ENVIRONMENTAL 07/29/99

SAMPLE Nos 78945, 78946, 78947, 78948, 78949,

		Precision Data				Accuracy Data	Reference Sample Data			
	LAB ID	Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
FILTER TEST	78949	<1 0	<1 0	0 00	0 00	------	BLANK1	1000	1000	100 00
						------	BLANK2	1000	1000	100 00

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CHEMTECH LABORATORY REPORT

[illegible] FOR FOSTER WHEELER ENVIRONMENTAL 07/29/99

[illegible] SAMPLE Nos: 78945, 78946, 78947, 78948, 78949,

		Precision Data				Accuracy Data	Reference Sample Data			
	LAB ID	Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
[illegible]	79209	>100 C	>100 C	0 00	0 00	------	P-XYLENE1	27 5	25 1	91 27
	-------	--------	--------	--------	--------	------	P-XYLENE2	27 5	25.3	92 00
[illegible]	78971	3.2	3.4	0 200	6 06	------	BLANK1	<0.5	<0 50	100 00
	79214	-----	--------	--------	---------	106 66	STDQC1	5.0	4 70	94 00
[illegible]							BLANK2	<0 5	<0 5	100 00
[illegible]							STDQC2	5 0	5 10	102.00
[illegible]										
[illegible]	78947	6 20	6 25	0 050	0.80	------	STDPH4.00	4 00	4 00	100 00
	-------	--------	--------	--------	--------	------	TDPH7.00	7 00	7.05	100 71
	-------	--------	--------	--------	--------	------	STDPH10 00	10 0	10.0	100 00
	-------	--------	--------	--------	--------	------	STDPH7.00	7 00	7.05	100 71
[illegible]	78945	<53 0	<53.0	0.00	0.00	------	BLANK1	<1 0	<1.0	100 00
	-------	--------	--------	--------	--------	------	BLANK2	<1.0	<1.0	100.00
	-------	--------	--------	--------	--------	------	STD1	10.0	9.70	97 00
[illegible]	-------	--------	--------	--------	--------	------	STD2	10 0	9 80	98.00
[illegible]										
[illegible]	78945	<1 05	<1.05	0 00	0 00	------	BLANK1	<0.021	<0.021	100.00
	-------	--------	--------	--------	--------	------	BLANK2	<0.021	<0.021	100.00
	-------	--------	--------	--------	--------	------	STD1	0.5000	0.4886	97.72
[illegible]	-------	--------	--------	--------	--------	------	STD2	0 5000	0 5103	100.00
[illegible]										
[illegible]	78949	3680	3560	120	3.31	------	BLANK	<10.0	<10.0	[illegible]

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LABORATORY REPORT

[illegible] FOR FOSTER WHEELER ENVIRONMENTAL 07/29/99

[illegible] SAMPLE Nos 78950, 78951, 78952, 78953, 78954,

		Precision Data				Accuracy Data	Reference Sample Data			
	LAB ID	Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
[illegible] OXYGEN	78952	21.0	22.0	1 0	4 65	104 00	BLANK	<5.00	<5 00	100 00
[illegible]	-------	--------	--------	--------	--------	------	STD	100 0	109.0	109 00
[illegible] NITROGEN, AMMONIA	78857	<0 1	<0.1	0 00	0 00	105 00	QC	1.55	1 588	102 45
[illegible]							CCV1	0 50	0.506	101.20
							CCB1	<0.1	<0.10	100.00
							M-BLK.	<0.1	<0 10	100.00
							CCV2	0 50	0 514	102.80
							CCB2	<0.1	<0.10	100 00
[illegible] GREASE	78971	3.2	3 4	0 20	6 06	------	BLANK1	<0 5	<0 50	100 00
[illegible]	79214	--------	--------	--------	--------	106 66	STDQC1	5 00	4.700	94 00
	-------	--------	--------	--------	--------	------	BLANK2	<0 5	<0 50	100 00
	-------	--------	--------	--------	--------	------	STDQC2	5 00	5.100	102.00
[illegible] TOTAL	78952	146	149	3.0	2 03	102 00	BLANK1	<1 0	<1.0	100 00
[illegible]	-------	--------	--------	--------	--------	------	STD	125	129	103.20
[illegible]	-------	--------	--------	--------	--------	------	BLANK2	<1.0	<1.0	100.00

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