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**Results of NAPL Sampling
and Analytical Program (May, 1987)
Necco Park
Niagara Falls, New York
December 7, 1987**

300759

Woodward-Clyde Consultants



Consulting Engineers, Geologists and Environmental Scientists
5120 Butler Pike, Plymouth Meeting, Pennsylvania 19462

5120 Butler Pike
Plymouth Meeting
Pennsylvania 19462
215-825-3000
Telex 846-343

Woodward-Clyde Consultants

December 7, 1987
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E.I. du Pont de Nemours and Company
26th Street and Buffalo Avenue
Niagara Falls, New York 14302

Attention: Mr. Bev Adams
Manager, Environmental Affairs

Re: Results of NAPL Sampling and
Analytical Program May 1987

Dear Bev:

Enclosed is Woodward-Clyde Consultants' (WCC) report regarding the results of analyses of NAPL samples collected in May 1987 from eight monitoring wells at Necco Park. WCC appreciates the opportunity to work with Du Pont on the Necco Park Project.

Very truly yours,

WOODWARD-CLYDE CONSULTANTS

Rebecca Young
Rebecca H. Young
Senior Staff Geologist

Kelly R. McIntosh
Kelly R. McIntosh
Project Scientist

KRM/RHY/vbg/WM-5J

Enclosure



**RESULTS OF NAPL SAMPLING AND
ANALYTICAL PROGRAM MAY 1987
NECCO PARK**

Prepared for:

E.I. DU PONT DE NEMOURS AND COMPANY

Niagara Falls, New York

Prepared by:

WOODWARD-CLYDE CONSULTANTS

Plymouth Meeting, Pennsylvania

December 1987

300761

EXECUTIVE SUMMARY

In May 1987, non-aqueous phase liquid (NAPL) samples were obtained from eight Necco Park monitoring wells and analyzed according to protocols developed by Woodward-Clyde Consultants (WCC). Results indicate that the NAPL is composed primarily of hexachlorobutadiene (47 to 85 percent), hexachloroethane (4.4 to 13.6 percent) and hexachlorobenzene (1.9 to 2.8 percent). In addition, carbon tetrachloride, chloroform, tetrachloroethylene, 1,1,2,2-tetrachloroethane and trichloroethylene were detected in at least one sample at substantial levels (greater than 1 percent). WCC recommends that these eight compounds be used as NAPL indicator chemicals.

The analytical results account for approximately 75 percent or more of the total NAPL mass in every sample. WCC concludes that this mass balance is well within the error bounds of currently accepted analytical procedures and represents the state-of-the-practice mass characterization.

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1.0 INTRODUCTION

During the environmental investigations at Necco Park, non-aqueous phase liquid (NAPL) has been observed in pre-evaluation bottom samples from several monitoring wells. In accordance with the Necco Park Consent Decree, NAPL samples were collected from eight monitoring wells in November 1985. The samples were analyzed using GC/MS Methods 8240 and 8270. The objective of the NAPL sample analytical program as stated in the Consent Decree is to develop a list of NAPL indicator chemicals and to identify 100 percent of the NAPL constituents, by mass. Due to the complex NAPL matrix and poor recoveries during extraction/analysis, the 100 percent mass balance of the NAPL constituents was not achieved. Summed concentrations of detected chemicals accounted for approximately 27 to 95 percent of the sample mass. The 1985 data are presented and a NAPL indicator chemical list is proposed in WCC's report dated December 31, 1986.

NAPL from the Necco Park monitoring wells was resampled and analyzed in May 1987 with the objective of improving the mass accounting. Sampling and analytical protocols were redeveloped in an effort to improve the quality of results. The present report discusses the 1987 field sampling procedures and the analytical results. Mass balance calculations and a list of proposed indicator chemicals are presented.

2.0 FIELD SAMPLING PROCEDURES

NAPL samples were collected by General Testing Corporation (GTC) of Rochester, New York in accordance with the WCC "NAPL Sampling and Analytical Plan" (April 1987). The plan states that nine wells would be sampled for NAPL characterization. Of the initial nine wells recommended for sampling, only five wells contained a sufficient quantity of NAPL to sample during May 1987. The five NAPL yielding wells were 52, VH-129C, VH-139A, VH-140B, and VH-140C. In an effort to obtain nine samples, the fifteen alternate NAPL-yielding wells were observed and sufficient NAPL was obtained from VH-112F, VH-118B, and VH-129B (Figure 1). Insufficient volume or absence of NAPL in remaining monitoring wells restricted the number of samples to eight.

NAPL samples were collected using a Kemmerer bottom-loading sediment sampler. The sediment sampler was lowered slowly into each well to avoid water entrainment in the NAPL sample. The sample was placed in a glass jar for phase separation observations. Separation of the NAPL samples into discreet layers of individual organic liquids was not observed. One sample (VH-139A) may have exhibited more than one organic phase, but field observations were inconclusive. All other samples appeared to be homogeneous. Once specific gravity and temperature measurements were taken, the NAPL was pipetted into VOA's and analytical bottles. Sample bottles were put on ice in coolers and shipped by overnight express to the analytical laboratory. The Kemmerer sampler was thoroughly steam cleaned between collection points to prevent cross-contamination.

3.0 ANALYTICAL RESULTS

The NAPL samples were analyzed by Environmental Testing and Certification (ETC) in Edison, New Jersey. The following chemical parameters were analyzed using the methods stated:

1. Quantitative GC/MS for Hazardous Substance List (HSL) compounds:
 - a) Volatile compounds: SW846 - 8240
 - b) Extractable compounds: SW846 - 8270
 - c) Pesticides and PCBs: SW846 - 8270
2. Qualitative GC/MS analysis of all organic compounds producing a response greater than the nearest internal standard.
3. Oil and grease analysis for high molecular weight compounds: Standard Method 503.A
4. Water content: Karl Fischer Titration (ASTM)

The following physical properties were measured using the corresponding methodologies:

1. Density: ASTM method
2. Viscosity: ASTM method
3. Total Suspended Solids: Method 160.1
4. Refractive Index: ASTM method

The physical and chemical results for the eight wells sampled are presented in Appendix A.

3.1 QUANTITATIVE RESULTS

The NAPL samples were quantitatively analyzed for the following group of organic compounds; volatiles, base/neutral extractables, acid extractables and pesticides/PCBs. Fifteen organic compounds were quantitatively measured in the NAPL samples. Twelve of those fifteen compounds are included on the Refined Necco Park Aqueous Indicator Parameter List (December 1986). The concentrations of all quantified compounds, when totalled, comprise 68 to 106 percent of the NAPL composition (Table 1).

Relative percentages were calculated for each compound detected in each sample by dividing the concentration by the total chemical concentration (Table 2). Eight compounds; carbon tetrachloride, chloroform, hexachlorobenzene (HCB), hexachlorobutadiene (HCBD), hexachloroethane (HCE), tetrachloroethylene, 1,1,2,2-tetrachloroethane, and trichloroethylene were present in concentrations greater than 1 percent of the total sample concentration in a least one sample. All of these compounds are included on the Refined Necco Park Aqueous Indicator Parameter List. The three compounds that occur in high concentrations (greater than 1 percent) among the semi-volatile compounds include hexachloroethane, hexachlorobenzene and hexachlorobutadiene. This suggests that the NAPL is composed primarily of fully chlorinated organic compounds. This is also reflected among the volatiles where carbon tetrachloride, a fully

chlorinated organic compound, also occurs at percent quantities. Partially chlorinated compounds, 1,1,2,2-tetrachloroethane and 1,1,2-trichloroethane occur at concentrations lower than hexachloroethane.

As specified in the Necco Park Consent Decree, Du Pont is required to analyze one NAPL sample for the metals listed in 40 CFR Part 261 Appendix III. One sample was collected from recovery well 52 during the May 1987 sampling event. The analytical results are presented in Appendix B. Measurable amounts of arsenic (0.36 ppm), calcium (21 ppm), mercury (0.71 ppm), selenium (0.16 ppm) and sodium (82 ppm) were reported. Of these reported concentrations, arsenic, mercury and selenium exceed the Maximum Contaminant Level (MCL) for the National Drinking Water Standard. The MCLs for these three chemicals are: 0.05 ppm for arsenic; 0.002 ppm for mercury; and 0.01 ppm for selenium.

3.2 QUALITATIVE RESULTS

Qualitative analyses were performed by ETC to tentatively identify and estimate the concentrations of other organic compounds present in the NAPL for which appropriate standards were not run (Table 3). Several different isomers of pentachloro 1,3-butadiene and tetrachloro 1,3-butadiene were identified. In addition, several unidentified organic compounds with different retention times were detected in the sample spectra. Since the instrumental response factors for the tentatively identified compounds could not be calculated due to lack of appropriate standards, they were assumed to be similar to those of a standard that has similar retention times. Using this assumption, concentrations for these compounds were estimated. This assumption may, however, be erroneous resulting in large error in the estimated concentrations. The estimated concentrations of all qualitatively detected compounds, when totalled, comprise 5 to 8 percent of the NAPL composition.

3.3 OTHER RESULTS

Percent water content ranged from .04 to 1.96 percent. With the exception of sample VH-129B at 1.96 percent, all water concentrations were below

1 percent. As expected from its water content, sample VH-129B exhibited the lowest density (1.61 g/ml). Densities of other samples ranged from approximately 1.64 to 1.65 g/ml. Sample viscosity measurements ranged from 1.8 to 2.2 cs. The laboratory was not able to quantify total suspended solids.

Oil and grease results ranged from 318 to 1057 g/l. The methods used to measure oil and grease do not distinguish between the semi-volatile compounds reported in the quantitative and qualitative results and the higher molecular weight compounds of interest. The tests were performed in an attempt to correlate deficiencies in the mass balance with oil and grease results. However, high oil and grease results do not appear to correlate with low mass accountability. The oil and grease test is apparently not accurate enough for this type of data interpretation.

4.0 MASS BALANCE CALCULATIONS

Compounds present at detectable concentrations were used to calculate the mass balance for each sample. Analytical and reporting protocols required a procedure to prevent a given compound mass from being included in the NAPL mass balance more than once. For example, a quantitatively measured compound in the semi-volatile fraction, such as hexachlorobutadiene, may also be reported in qualitative results in the volatile fraction. To avoid double-counting compound concentrations, the following guidelines were established:

- o When a quantitatively measured compound was also reported in qualitative results, such as hexachlorobutadiene mentioned above, only the quantitative result was used. It is assumed that the peak for which the qualitative result was estimated represents elevated amounts of the compound present in the sample and is present due to carry over effect.
- o When a qualitatively detected compound is reported in more than one fraction, i.e., volatile and semi-volatile, the concentration in the appropriate fraction was used. For example, pentachloro 1,3-butadiene

was present in both the volatile and base/neutral fractions but its concentration could only be qualitatively estimated in both the cases. Since pentachloro 1,3-butadiene is a semi-volatile compound, the qualitatively estimated concentration in the base/neutral fraction was used.

- o When a qualitatively detected compound was reported more than once in the same fraction, the results were assumed to represent isomers or related compounds and were both included in the mass balance. Compounds reported as unknowns (i.e., those which cannot be accurately identified by GC/MS spectra matching methods) were summed for inclusion in the mass balance.
- o To obtain the percentage of the NAPL mass accounted for in these analyses, the reported chemical concentrations were totalled as described above and converted to percent. To this total, the percent water content determined by Karl Fischer titration was added with the result being the mass balance or accountability of the analyses. This figure is compared to the goal of the analytical program—one hundred percent mass balance. Water content of the NAPL ranged from less than 0.1 percent to approximately 2 percent.

NAPL characterization, based upon these procedures ranged from 75 to 111 percent of the total mass of NAPL. The improved mass balance for the 1987 data can be attributed to improved sample collection and analytical protocols. Comparison of the 1985 data to the 1987 analytical results supports this observation (Figure 2).

5.0 NAPL CHARACTERIZATION

Necco Park NAPL is composed primarily of a few base/neutral extractable compounds. Hexachlorobutadiene is the predominant organic compound making up greater than 50 percent of the NAPL's composition. Hexachloroethane and

hexachlorobenzene are the two other major components comprising 5 to 15, and 2 to 3 percent, respectively, of the NAPL composition.

To evaluate compositional variation in the NAPL, the relative proportions of the three major organic compounds, hexachlorobutadiene, hexachloroethane, and hexachlorobenzene were calculated by normalizing their sum to 100 percent (Table 4). Their relative percentages were plotted on a ternary diagram (Figure 3). The resulting plot indicates the possibility of two NAPL compositions at Necco Park. Samples from wells 52, VH-129B and VH-129C contain more hexachloroethane (approximately 20 percent) and less hexachlorobutadiene (approximately 75 percent) than the other five NAPL samples.

The increased hexachloroethane content may be related to the Necco Park recovery well 52. It is possible that continuous pumping at this location has produced NAPL emulsification in the area immediately adjacent to the pumping well. Since hexachlorobutadiene has a lower specific gravity (1.67), it is more readily removed by pumping than the more dense hexachloroethane (2.09) and hexachlorobenzene (2.04). This could be manifested as a higher relative concentration of hexachloroethane and hexachlorobenzene in NAPL in the immediate vicinity of the recovery well. It is noted that hexachlorobutadiene exhibits the highest "absolute concentration" in all samples. NAPL from wells along the eastern boundary, VH-118B, VH-112F, VH-140B and VH-140C also contain higher proportions of 1,1,2,2-tetrachloroethane and correspondingly low proportions of carbon tetrachloride compared to other wells. NAPL composition could also reflect heterogeneity in the composition the landfilled waste material.

6.0 NAPL DATA QA/QC REVIEW

As part of the NAPL sampling program, a data review of ETC's results was performed by WCC. The results of the data review are presented on the QA/QC Audit Form in Appendix C. The initial analytical reports issued in July 1987 presented results for the Priority Pollutant compounds rather than the Hazardous Substance List (HSL) compounds. The analytical reports were reissued in October 1987 and present data for the requested HSL compounds.

Several different aspects of the NAPL QA/QC program were reviewed; methodologies used, holding times, instrument tuning and calibration, surrogate spike recoveries, matrix spike recoveries, method detection limits, laboratory replicates, trip blanks, laboratory blanks, chain-of-custody forms and the qualitative library search analyses.

The NAPL samples were analyzed using the methods and techniques previously presented in Section 3.0 of this report. Holding times were met for all analyses according to the methodologies stated. QA/QC documentation indicates that the GC/MS instruments used were correctly tuned and calibrated prior to the analysis.

Surrogate spike compounds were analyzed in the volatile, base/neutral, acid and pesticide/PCB fractions. All surrogate spike percent recoveries were within the recommended percent recovery ranges.

Matrix spikes were performed for the volatile fraction only. Recoveries ranged from zero for 2-chloroethylvinyl ether to 123 percent for 1,2-dichloroethane. These variable percent recoveries are due to the complex nature of the matrix.

Method detection limits were also variable due to the complex nature of the matrix. Samples were analyzed using dilution factors of 1:1000 and 1:2000. The method detection limits were adjusted accordingly.

A laboratory replicate of NAPL was run for all organic fractions. Replicate values were manually verified due to the non-homogeneous nature of the sample matrix. Concentration variations were within the same order of magnitude for all compounds detected.

Trip blanks VOA's were included with the sample "shuttles." Trip blanks were analyzed for the volatile compounds. However, the analytical results were not included with the NAPL data. Trip blank data is available upon request from ETC.

Data was provided for one laboratory blank run during the NAPL analysis. Measurable amounts of methylene chloride (9.4 ppb) and acetone (44.2 ppb) were present. Both compounds are common laboratory contaminants. Di-n-butyl phthalate was also present below method detection limits.

Chain-of-custody forms and laboratory chronologies were completed for each sample. It was noted on the chain-of-custody forms that some sample bottles were uncapped upon receipt at Necco Park.

The qualitative library search results were presented for the volatile, base/neutral extractable and acid extractable fraction. A maximum of 20 compounds were identified.

7.0 CONCLUSIONS AND RECOMMENDATIONS

NAPL sampled from Necco Park monitoring wells is composed primarily of hexachlorobutadiene, hexachloroethane, hexachlorobenzene, tetrachloroethylene, and tetrachloroethane compounds. The majority of the compounds are associated with past disposal at Necco Park. HCBd, HCE and HCB exhibited concentrations greater than 1 percent of the total NAPL mass in each sample. Concentrations of these compounds were used to evaluate if compositional variation in NAPL exists at Necco Park. A ternary diagram was used to plot relative percentages of HCBd, HCE, and HCB. The resulting plot indicated that a slight variation in the NAPL's composition in the vicinity of recovery well 52. This variation was represented by increased HCE and decreased HCBd in the NAPL samples. However, the difference in the chemical ratio in some samples does not appear to affect the NAPL's physical properties.

The following compounds were detected at concentrations greater than 1 percent of the NAPL mass in at least one sample:

Carbon tetrachloride
Chloroform
1,1,2,2-Tetrachloroethane
Trichloroethylene
Tetrachloroethylene
Hexachlorobutadiene
Hexachlorobenzene
Hexachloroethane

WCC recommends that these compounds and specific gravity be considered for the NAPL indicator list.

During the first round of sampling, the same eight compounds were recommended as NAPL indicator compounds. They make up over 75 percent of the organic constituents present in the NAPL samples, as indicated in the 1985 and 1987 analytical programs.

The characterization of NAPL using the mass balance calculation technique ranged from good to very good. Although only one well (VH-139A) exceeded the criteria of 90 percent identification, greater than approximately 75 percent of the mass of all samples was chemically accounted for. WCC concludes that this mass balance is well within the error bounds of currently accepted analytical procedures and represents the state-of-the-practice mass characterization.

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Tables

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TABLE 1
NAPL COMPONENT CONCENTRATIONS IN PERCENT
E.I. du PONT de NEMOURS
NECCO PARK
NIAGARA FALLS, NEW YORK

	52	VH-112F	VH-118B	VH-129B	VH-129C	VH-139A	VH-140B	VH-140C
Benzene	.05			.04	.06			
Carbon disulfide				.14				
Carbon tetrachloride	3.79	1.33	1.33	6.15	5.21	4.91	1.15	1.14
Chloroform	.19	.34	.82	.48	.76	.21	.65	.65
1,1-Dichloroethylene				.04				
trans 1,2-Dichloroethylene	.14		.02	.30			.02	.03
Hexachlorobenzene	2.82	2.17	2.31	2.19	2.49	1.93	1.92	1.93
Hexachlorobutadiene	51.00	56.60	50.20	47.00	48.30	85.40	52.90	57.50
Hexachloroethane	13.60	5.73	6.65	12.80	13.60	8.71	4.43	4.64
PCB 1248				.50				
Tetrachloroethylene	3.28	1.21	1.21	2.02	1.38	3.53	1.26	1.31
1,1,2,2-Tetrachloroethane		4.01	4.92	1.10	1.53		4.66	4.44
Trichloroethylene	2.49	.77	.75	5.46	1.53	1.33	.96	.98
1,1,2-Trichloroethane	.12			.38	.28			
Toluene	.13			.11	.11			
Total Quantitative Concentration(%)	77.61	72.17	68.21	78.70	75.25	106.02	67.96	72.62
Total Qualitative Concentration(%)	7.84	7.14	8.08	7.02	8.39	5.09	6.71	7.85
Total Sample Percent	85.45	79.31	76.30	85.72	83.64	111.11	74.67	80.48
Percent Water Content	.13	.27	.15	1.96	.61	.06	.04	.09
Total Mass Balance	85.58	79.58	76.45	87.68	84.25	111.17	74.71	80.57

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TABLE 2
RELATIVE PERCENT OF COMPOUNDS PRESENT IN NAPL
E.I. du PONT de NEMOURS
NECCO PARK
NIAGARA FALLS, NEW YORK

	52	VH-112F	VH-110B	VH-129B	VH-129C	VH-139A	VH-140B	VH-140C
Benzene	.06	0.00	0.00	.04	.08	0.00	0.00	0.00
Carbon disulfide	0.00	0.00	0.00	.16	0.00	0.00	0.00	0.00
Carbon tetrachloride	4.44	1.68	1.74	7.17	6.23	4.42	1.54	1.42
Chloroform	.23	.44	1.07	.56	.90	.19	.88	.80
1,1-Dichloroethylene	0.00	0.00	0.00	.04	0.00	0.00	0.00	0.00
trans 1,2-Dichloroethylene	.16	0.00	.03	.35	0.00	0.00	.03	.04
Hexachlorobenzene	3.30	2.74	3.03	2.55	2.98	1.74	2.57	2.40
Hexachlorobutadiene	59.68	71.37	65.80	54.83	57.75	76.86	70.84	71.45
Hexachloroethane	15.92	7.22	8.72	14.93	16.26	7.84	5.93	5.76
PCB 1248	0.00	0.00	0.00	.59	0.00	0.00	0.00	0.00
Tetrachloroethylene	3.84	1.52	1.58	2.36	1.65	3.18	1.69	1.63
1,1,2,2,-Tetrachloroethane	0.00	5.06	6.45	1.28	1.83	0.00	6.24	5.52
Trichloroethylene	2.91	.98	.98	6.37	1.83	1.20	1.29	1.22
1,1,2-Trichloroethane	.14	0.00	0.00	.44	.34	0.00	0.00	0.00
Toluene	.15	0.00	0.00	.13	.13	0.00	0.00	0.00
Qualitative Compounds	9.17	9.00	10.59	8.18	10.03	4.58	8.98	9.76
Total Relative Percent	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE 3
 QUALITATIVE RESULTS: NAPL COMPONENT CONCENTRATIONS IN PERCENT
 E.I. du PONT de NEMOURS
 NECCO PARK
 NIAGARA FALLS, NEW YORK

	52	VH-112F	VH-110B	VH-129B	VH-129C	VH-139A	VH-140B	VH-140C
Methanethiol				.07				
Pentachloro 1,3-butadiene	3.55	3.19	3.64	3.19	3.77	2.23	2.56	2.71
Pentachloro 1,3-butadiene								.92
Pentachloroethane	.98	.76	.94	.92	1.04		.66	.68
Pentachlorobenzene	.05	.11	.12	.12	.13	.08	.11	.11
Pentachlorobenzene(trichloroethenyl)	.13	.04		.10	.09	.06	.04	.04
Tetrachloro 1,3-butadiene		.12	.13				.15	.12
Tetrachloro 1,3-butadiene			.08					.07
Unknown	.79	.83	.93	.65	.05	.82	.82	.84
Unknown	1.00	.93	1.02	.84	.82	.37	.92	.88
Unknown	.57	.62	.67	.49	.95	.25	.61	.61
Unknown	.21	.19	.21	.20	.59	.08	.20	.20
Unknown	.21	.15	.16	.19	.25	.11	.24	.22
Unknown	.10	.07	.08	.09	.22	.06	.16	.15
Unknown	.10	.07	.07	.09	.30	.96	.08	.08
Unknown	.09	.06	.04	.08	.10	.06	.08	.06
Unknown	.08				.10		.07	.08
								.07
								.03
Total Qualitative Concentration	7.84	7.14	8.08	7.02	8.39	5.09	6.71	7.85

TABLE 4
 NORMALIZATION OF THE THREE MAJOR COMPONENTS IN NAPL
 E.I. du PONT de NEMOURS
 NECCO PARK
 NIAGARA FALLS, NEW YORK

	52	VH-112F	VH-118B	VH-129B	VH-129C	VH-139A	VH-140B	VH-140C
Hexachlorobenzene	4.18	3.36	3.90	3.53	3.87	2.01	3.24	3.01
Hexachlorobutadiene	75.64	87.75	84.85	75.82	75.01	88.92	89.28	89.74
Hexachloroethane	20.17	8.88	11.24	20.65	21.12	9.07	7.48	7.24
Total Percent	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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Figures

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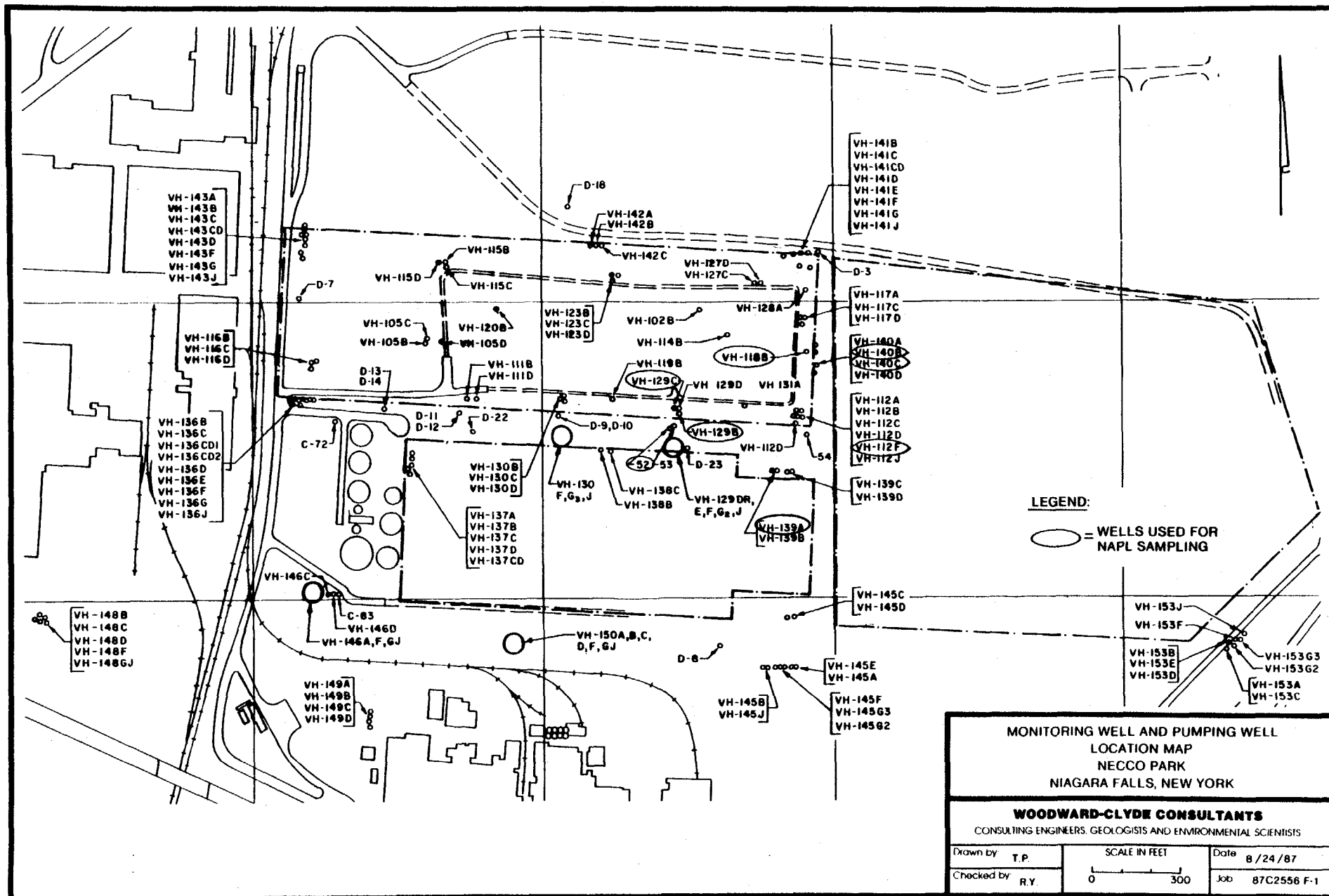


FIGURE 1

NAPL Mass Balance

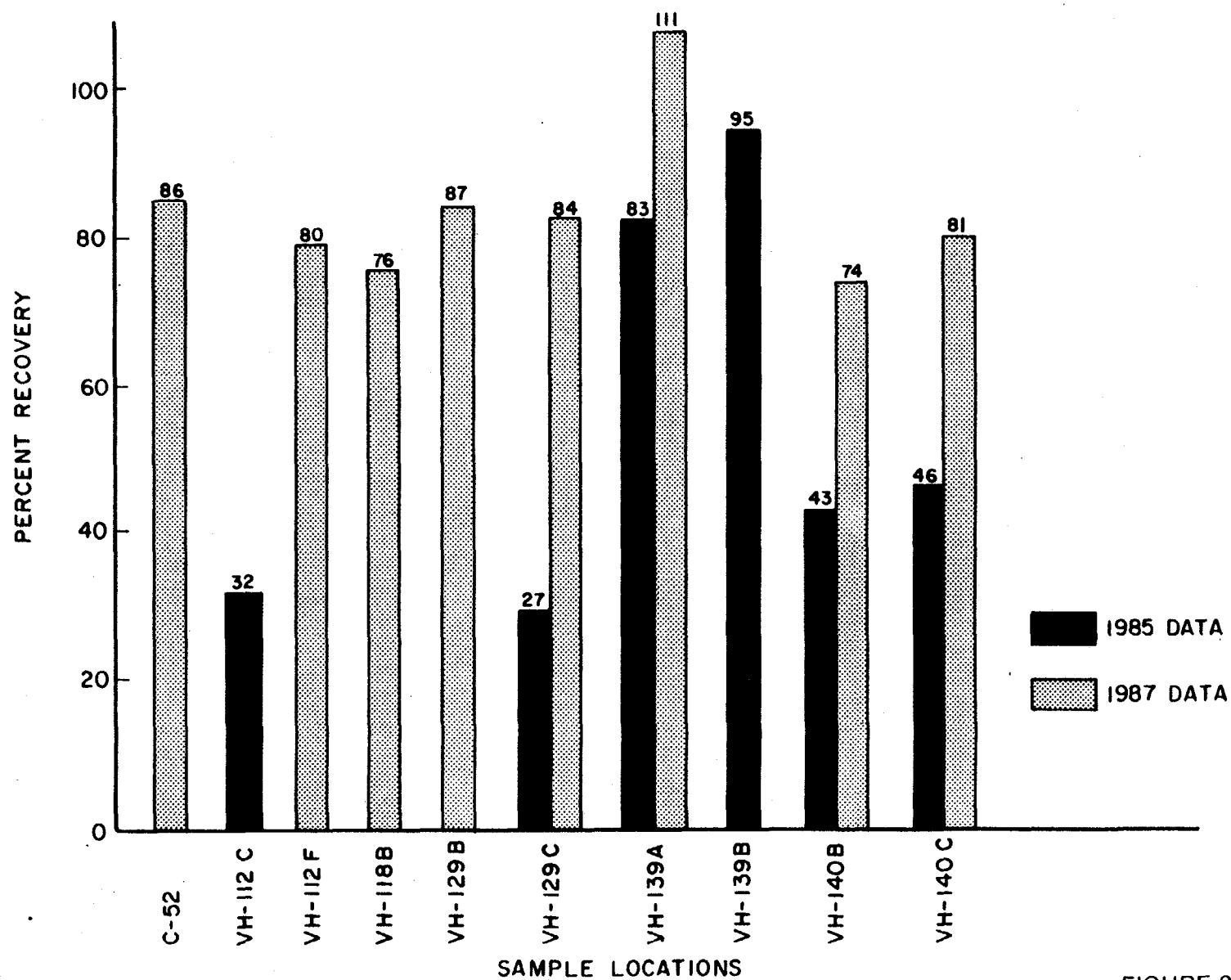
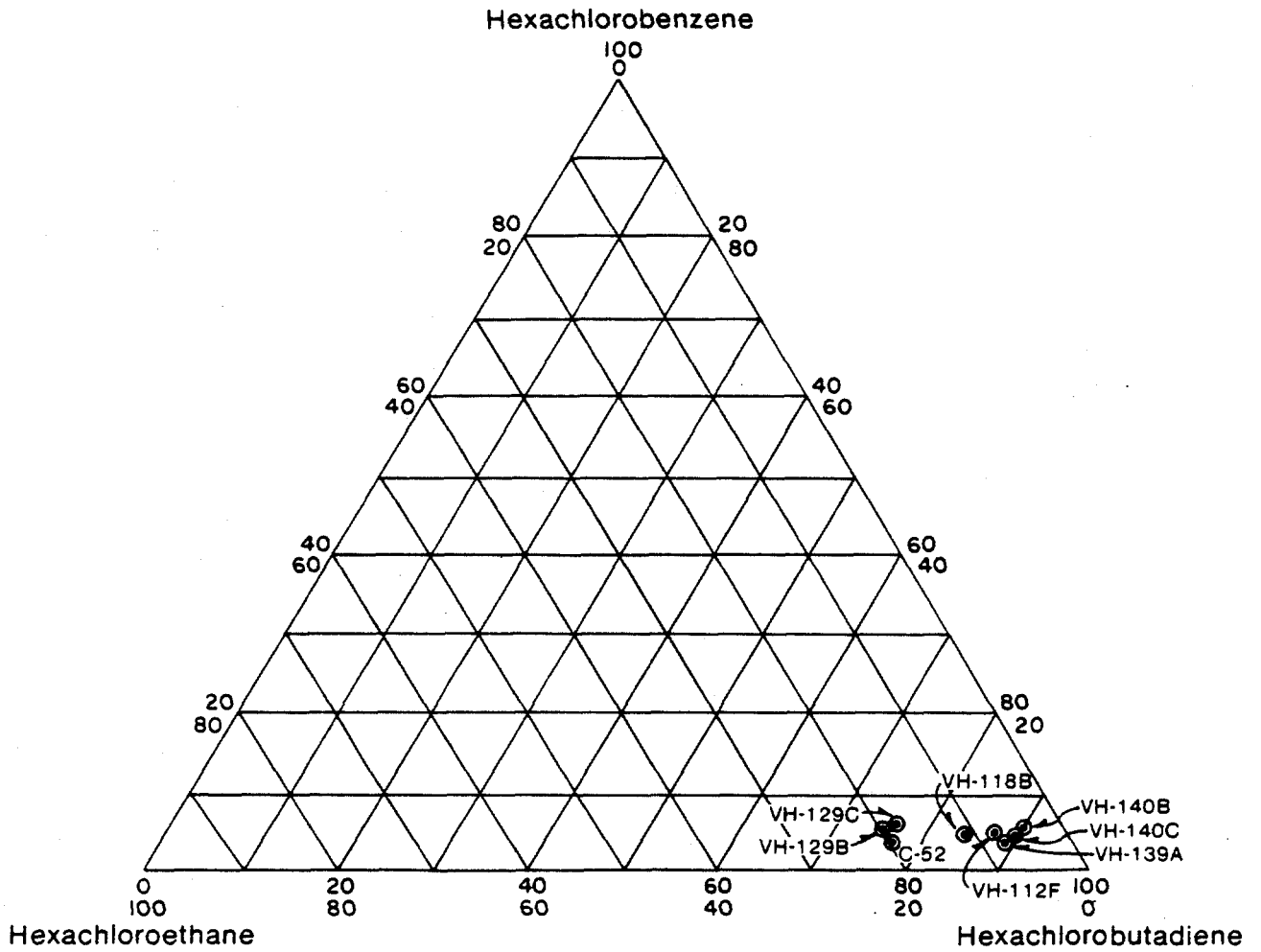


FIGURE 2

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THREE MAJOR COMPONENT ANALYSIS
OF NECCO PARK NAPL

Appendix A

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SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCDUPNEC0 C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	80000000	89
3V	Benzene	521000	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	37900000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	1940000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	ND	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	32800000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	1270000	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	1370000	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	1190000	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	24900000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

984006

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acetone and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^a	Second ug/kg ^a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	BMDL	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

A Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.

B Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.

C Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.

D Recovery normally variable using established methodology.

E Recovery manually verified.

282008

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen Added ug/kg	% Recov
18P	PCB-1242	ND	3200000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3200000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3200000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3200000	ND	ND	ND	0	-			
22P	PCB-1248	5030000	3200000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3200000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3200000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

88400E

ETC

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECD W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water %	1.96									
Viscosity cs	1.9									
Oil and Grease g/l	1030									
Density g/ml	1.6096									
Refractive Index @20 Deg C RI	1.5435									
Solids, total suspended mg/l	IND									
R Indeterminable.										

682008

June 27, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports						
BA0463	GENERAL TESTING	GTCDUPNECO	C 52	870520	0915	Elapsed Hours
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours

[illegible]

064006

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	320000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	260000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	260000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2300000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	4000000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	350000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	230000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	290000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	350000	ND	ND	ND	0	-			
10A	Phenol	ND	140000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	260000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and sheet analysis.

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	180000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	340000	ND	ND	ND	0	-			
3B	Anthracene	ND	180000	ND	ND	ND	0	-			
4B	Benidine	ND	4200000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	750000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	240000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	960000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	390000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	340000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	510000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	550000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	550000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	960000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	180000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	960000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	180000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	400000	ND	ND	ND	0	-			
18B	Chrysene	ND	240000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	960000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	420000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1600000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	960000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	960000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	BM DL	960000	ND	ND	BM DL	0	-			
27B	2,4-Dinitrotoluene	ND	550000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	180000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	960000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	960000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	210000	ND	ND	ND	0	-			
32B	Fluorene	ND	180000	ND	ND	ND	0	-			

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	28200000	180000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	510000000	87000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	960000	ND	ND	ND	0	-			
36B	Hexachloroethane	136000000	150000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	450000	ND	ND	ND	0	-			
38B	Isophorone	ND	210000	ND	ND	ND	0	-			
39B	Naphthalene	ND	150000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	180000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	960000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	960000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	180000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	520000	ND	ND	ND	0	-			
45B	Pyrene	ND	180000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	180000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

062000

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**SPEC - GC/MS Analysis Data (QR12)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCDUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov %	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov %
Aniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9600	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9600	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QR procedures not applicable for samples analyzed by direct injection method.

P6200E

July 23, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/kg		
✓ 1 1,3-Butadiene, pentachloro	290	7.13	224	55880778	C ₄ HCl ₅	35500000		
2 Unknown	491	10.72	-	-	-	7870000		
3 Unknown	410	9.27	-	-	-	10000000		
4 Unknown	459	10.15	-	-	-	5680000		
5 Pentachloro ethane	121	4.12	200	76017	C ₂ H ₁₀ O	9770000		
6 Tetrachloro ethene	21	2.34	164	127184	C ₂ Cl ₄	8420000		
7 Unknown	520	11.24	-	-	-	2100000		
8 Unknown	603	12.72	-	-	-	2060000		
9 Ethane, tetrachloro	76	3.32	166	79345	C ₂ H ₂ Cl ₄	3560000		
10 Benzene, pentachloro (trichloroethenyl)	1006	19.90	376	29082744	C ₈ Cl ₈	1270000		
11 Unknown	637	13.32	-	-	-	1010000		
12 Unknown	647	13.50	-	-	-	957000		
13 Unknown	433	9.68	-	-	-	929000		
14 Unknown	380	8.74	-	-	-	777000		
✓ 15 Pentachloro benzene	660	13.73	248	608935	C ₆ HCl ₅	465000		

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide Compounds - GC/MS Analysis Data (QR82)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P Aldrin		ND	180000	ND	ND	ND	-	-	ND	-	-
2P Alpha-BHC		ND	960000	ND	ND	ND	-	-	ND	-	-
3P Beta-BHC		ND	420000	ND	ND	ND	-	-	ND	-	-
4P Gamma-BHC		ND	960000	ND	ND	ND	-	-	ND	-	-
5P Delta-BHC		ND	300000	ND	ND	ND	-	-	ND	-	-
6P Chlordane		ND	960000	ND	ND	ND	-	-	ND	-	-
7P 4,4'-DDT		ND	270000	ND	ND	ND	-	-	ND	-	-
8P 4,4'-DDE		ND	540000	ND	ND	ND	-	-	ND	-	-
9P 4,4'-DDD		ND	450000	ND	ND	ND	-	-	ND	-	-
10P Dieldrin		ND	240000	ND	ND	ND	-	-	ND	-	-
11P Endosulfan I		ND	960000	ND	ND	ND	-	-	ND	-	-
12P Endosulfan II		ND	960000	ND	ND	ND	-	-	ND	-	-
13P Endosulfan sulfate		ND	540000	ND	ND	ND	-	-	ND	-	-
14P Endrin		ND	960000	ND	ND	ND	-	-	ND	-	-
15P Endrin aldehyde		ND	960000	ND	ND	ND	-	-	ND	-	-
16P Heptachlor		ND	180000	ND	ND	ND	-	-	ND	-	-
17P Heptachlor epoxide		ND	210000	ND	ND	ND	-	-	ND	-	-
25P Toxaphene		ND	960000	ND	ND	ND	-	-	ND	-	-

^a Standard OR procedures not applicable for samples analyzed by direct injection method.

962008

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCDUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	3500000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3500000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3500000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3500000	ND	ND	ND	0	-			
22P	PCB-1248	BMDL	3500000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3500000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3500000	ND	ND	ND	0	-			

A Standard DR procedures not applicable to dilute and shoot analysis.

264008



ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0463 GENERAL TESTING

GTCDUPNECO C52

870520 0915

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water	%	.13								
Viscosity	cs	2.2								
Oil and Grease	g/l	491								
Density	g/ml	1.6350								
Refractive Index @20 Deg C	RI	1.5484								
Solids, total suspended	mg/l	IND								
R Indeterminable.										

864006

VH-112 F

300799

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	8000000	89
3V	Benzene	ND	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	13300000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	3450000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	40100000	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	12100000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	ND	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	ND	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	ND	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	7740000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

ETC

ENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCDUPNECO W112F

870521 1230

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^a	Second ug/kg ^a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	ND	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.^b Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.^d Recovery normally variable using established methodology.^e Recovery manually verified.

10800E

TABLE 1: QUALITATIVE RESULTS

Chain of Custody Data Required for ETC Data Management Summary Reports

GENERAL TESTING

GTC D U P N E C O W 1 1 2 F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date _____

Time

Elapsed
Hours

300802

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTC DUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	320000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	260000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	260000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2300000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	4000000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	350000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	230000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	290000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	350000	ND	ND	ND	0	-			
10A	Phenol	ND	140000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	260000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	180000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	340000	ND	ND	ND	0	-			
3B	Anthracene	ND	180000	ND	ND	ND	0	-			
4B	Benzidine	ND	4200000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	750000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	240000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	960000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	390000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	340000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	510000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	550000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	550000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	960000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	180000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	960000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	180000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	400000	ND	ND	ND	0	-			
18B	Chrysene	ND	240000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	960000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	420000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1600000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	960000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	960000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	960000	ND	ND	ND	0	-			
27B	2,4-Dinitrotoluene	ND	550000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	180000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	960000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	960000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	210000	ND	ND	ND	0	-			
32B	Fluorene	ND	180000	ND	ND	ND	0	-			

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTC DUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concn. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	21700000	180000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	566000000	87000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	960000	ND	ND	ND	0	-			
36B	Hexachloroethane	57300000	150000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	450000	ND	ND	ND	0	-			
38B	Isophorone	ND	210000	ND	ND	ND	0	-			
39B	Naphthalene	ND	150000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	180000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	960000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	960000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	180000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	520000	ND	ND	ND	0	-			
45B	Pyrene	ND	180000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	180000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

SPEC - GC/MS Analysis Data (QR12)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCDUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov %	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov %
Aniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9600	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9600	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QR procedures not applicable for samples analyzed by direct injection method.

July 23, 1987

TABLE 1: QUALITATIVE RESULTS
Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCUPNECO W112 F 870521

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	293	7.12	224	55880778	C ₉ HCl ₅	31900000		
✓ 2 Unknown	492	10.67	-	-	-	8330000		
✓ 3 Unknown	412	9.24	-	-	-	9310000		
✓ 4 Unknown	461	10.12	-	-	-	6190000		
✓ 5 Ethane, 1,1,2,2-tetrachloro	79	3.30	166	79345	C ₂ H ₂ Cl ₄	12000000		
✓ 6 Ethane, pentachloro	123	4.09	200	76017	C ₂ HCl ₅	7550000		
✓ 7 Unknown	605	12.68	-	-	-	1890000		
✓ 8 Tetrachloro ethene	25	2.34	164	127184	C ₂ Cl ₄	3540000		
✓ 9 Unknown	521	11.19	-	-	-	1470000		
✓ 10 Pentachloro benzene	615	12.86	298	608935	C ₆ HCl ₅	1060000		
✓ 11 Unknown	638	13.27	-	-	-	720000		
✓ 12 Unknown	435	9.65	-	-	-	740000		
✓ 13 1,3-Butadiene, tetrachloro	225	5.90	190	42769380	C ₄ H ₂ Cl ₄	1180000		
✓ 14 Unknown	382	8.71	-	-	-	627000		
✓ 15 Benzene, pentachloro (trichloroethenyl)	1007	19.85	376	29082744	C ₈ Cl ₈	419000		

408008

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC/MS Analysis Data (QR82)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCDUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P	Aldrin	ND	180000	ND	ND	ND	-	-	ND	-	-
2P	Alpha-BHC	ND	960000	ND	ND	ND	-	-	ND	-	-
3P	Beta-BHC	ND	420000	ND	ND	ND	-	-	ND	-	-
4P	Gamma-BHC	ND	960000	ND	ND	ND	-	-	ND	-	-
5P	Delta-BHC	ND	300000	ND	ND	ND	-	-	ND	-	-
6P	Chlordane	ND	960000	ND	ND	ND	-	-	ND	-	-
7P	4,4'-DDT	ND	270000	ND	ND	ND	-	-	ND	-	-
8P	4,4'-DDE	ND	540000	ND	ND	ND	-	-	ND	-	-
9P	4,4'-DDD	ND	450000	ND	ND	ND	-	-	ND	-	-
10P	Dieldrin	ND	240000	ND	ND	ND	-	-	ND	-	-
11P	Endosulfan I	ND	960000	ND	ND	ND	-	-	ND	-	-
12P	Endosulfan II	ND	960000	ND	ND	ND	-	-	ND	-	-
13P	Endosulfan sulfate	ND	540000	ND	ND	ND	-	-	ND	-	-
14P	Endrin	ND	960000	ND	ND	ND	-	-	ND	-	-
15P	Endrin aldehyde	ND	960000	ND	ND	ND	-	-	ND	-	-
16P	Heptachlor	ND	180000	ND	ND	ND	-	-	ND	-	-
17P	Heptachlor epoxide	ND	210000	ND	ND	ND	-	-	ND	-	-
25P	Toxaphene	ND	960000	ND	ND	ND	-	-	ND	-	-

^a Standard QR procedures not applicable for samples analyzed by direct injection method.

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA
Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTC0UPNEC0 W112F

870521 1230

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	3500000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3500000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3500000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3500000	ND	ND	ND	0	-			
22P	PCB-1248	ND	3500000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3500000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3500000	ND	ND	ND	0	-			
A Standard QA procedures not applicable to dilute and shoot analysis.											

60800E

ETC

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0469 GENERAL TESTING

GTCDUPNECO W112F

870521 1230 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water	%	27								
Viscosity	cs	2.0								
Oil and Grease	g/l	382								
Density	g/ml	1.6471								
Refractive Index @20 Deg C	RI	1.5498								
Solids, total suspended	mg/l	IND								
R Indeterminate.										

018006

VH-118 B

300811

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Volatile Compounds - GC/MS Analysis Data (QR01)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	80000000	89
3V	Benzene	ND	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	13300000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	8190000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	49200000	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	12100000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	ND	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	256000	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	ND	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	7480000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

210000

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Volatile Compounds - GC/MS Analysis Data (QR01)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^b	Second ug/kg ^b	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	BMDL	1000000	665000	336000	ND	18.0	93	12200	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Simple required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.
^b Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.
^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.
^d Recovery normally variable using established methodology.
^e Recovery manually verified.

ET18008

June 23, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W 118B

870520 1645 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
1 3-Methyl pentane *	463	19.21	86	96140	C ₆ H ₁₄	500000		
2 Hexachloroethane	645	26.32	234	67721	C ₂ H ₁₆	16000000		
3 1,1,2,3,4,4-Hexachloro- 1,3-Butadiene	799	32.34	258	87683	C ₄ C ₁₆	210000000		
4 1,1,2,3,4,4-Hexachloro- 1,3-Butadiene	926	37.30	258	87683	C ₄ C ₁₆	5000000		
5 1,1,3,4-Tetrachloro- 1,3-Butadiene	976	39.25	190	42769380	C ₄ H ₂ C ₁₄	1200000		
6 Pentachloro 1,3-Butadiene	1020	40.97	224	55880778	C ₄ HC ₁₅	188000000		
* Compound also present in Blank.								

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	320000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	260000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	260000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2400000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	4100000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	350000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	240000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	290000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	350000	ND	ND	ND	0	-			
10A	Phenol	ND	150000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	260000	ND	ND	ND	0	-			

A Standard OR procedures not applicable to dilute and shoot analysis.

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Base/Neutral Compounds - GC/MS Analysis Data (QR03)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	190000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	340000	ND	ND	ND	0	-			
3B	Anthracene	ND	190000	ND	ND	ND	0	-			
4B	Benizidine	ND	4300000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	760000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	250000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	980000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	400000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	340000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	520000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	560000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	560000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	980000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	190000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	980000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	190000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	410000	ND	ND	ND	0	-			
18B	Chrysene	ND	250000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	980000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	190000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	190000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	430000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1600000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	980000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	980000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	980000	ND	ND	BMDL	0	-			
27B	2,4-Dinitrotoluene	ND	560000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	190000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	980000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	980000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	220000	ND	ND	ND	0	-			
32B	Fluorene	ND	190000	ND	ND	ND	0	-			

91800E



JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	23100000	190000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	502000000	88000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	980000	ND	ND	ND	0	-			
36B	Hexachloroethane	66500000	160000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	460000	ND	ND	ND	0	-			
38B	Isophorone	ND	220000	ND	ND	ND	0	-			
39B	Naphthalene	ND	160000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	190000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	980000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	980000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	190000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	530000	ND	ND	ND	0	-			
45B	Pyrene	ND	190000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	190000	ND	ND	ND	0	-			

* Standard QA procedures not applicable to dilute and shoot analysis.

300817

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**SPEC - GC/MS Analysis Data (QR12)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^b	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^b
Aniline	ND	9800	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9800	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9800	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9800	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9800	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9800	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9800	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9800	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9800	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9800	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9800	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9800	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QA procedures not applicable for samples analyzed by direct injection method.

810000

July 23, 1987

TABLE 1: QUALITATIVE RESULTS
Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCUPNECO W118B

870520

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	293	7.15	224	55880778	C ₄ HCl ₅	36400000		
— 2 Ethane, 1,1,2,2-tetrachloro	80	3.35	166	79345	C ₂ H ₂ Cl ₄	19900000		
✓ 3 Unknown	493	10.72	-	-	-	9280000		
✓ 4 Unknown	412	9.27	-	-	-	10200000		
✓ 5 Unknown	461	10.15	-	-	-	6670000		
✓ 6 Pentachloro ethane	124	4.14	200	76017	-	9370000		
— 7 Tetrachloro ethene	24	2.35	164	127184	C ₂ Cl ₄	5210000		
✓ 8 Unknown	605	12.71	-	-	-	2140000		
✓ 9 Unknown	522	11.23	-	-	-	1580000		
✓ 10 Pentachloro benzene	615	12.89	248	608935	C ₆ HCl ₅	1160000		
✓ 11 Tetrachloro Butadiene	225	5.94	190	-	C ₄ H ₂ Cl ₄	1330000		
— 12 Tetrachloro Butadiene	254	6.45	190	-	C ₄ H ₂ Cl ₄	811000		
13 Unknown	435	9.68	-	-	-	805000		
14 Unknown	382	8.74	-	-	-	681000		
15 Unknown	1007	19.88	-	-	-	408000		

618008

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide Compounds - GC/MS Analysis Data (QR82)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P	Aldrin	ND	190000	ND	ND	ND	-	-	ND	-	-
2P	Alpha-BHC	ND	980000	ND	ND	ND	-	-	ND	-	-
3P	Beta-BHC	ND	430000	ND	ND	ND	-	-	ND	-	-
4P	Gamma-BHC	ND	980000	ND	ND	ND	-	-	ND	-	-
5P	Delta-BHC	ND	300000	ND	ND	ND	-	-	ND	-	-
6P	Chlordane	ND	980000	ND	ND	ND	-	-	ND	-	-
7P	4,4'-DDT	ND	270000	ND	ND	ND	-	-	ND	-	-
8P	4,4'-DDE	ND	550000	ND	ND	ND	-	-	ND	-	-
9P	4,4'-DDD	ND	460000	ND	ND	ND	-	-	ND	-	-
10P	Dieldrin	ND	250000	ND	ND	ND	-	-	ND	-	-
11P	Endosulfan I	ND	980000	ND	ND	ND	-	-	ND	-	-
12P	Endosulfan II	ND	980000	ND	ND	ND	-	-	ND	-	-
13P	Endosulfan sulfate	ND	550000	ND	ND	ND	-	-	ND	-	-
14P	Endrin	ND	980000	ND	ND	ND	-	-	ND	-	-
15P	Endrin aldehyde	ND	980000	ND	ND	ND	-	-	ND	-	-
16P	Heptachlor	ND	190000	ND	ND	ND	-	-	ND	-	-
17P	Heptachlor epoxide	ND	220000	ND	ND	ND	-	-	ND	-	-
25P	Toxaphene	ND	980000	ND	ND	ND	-	-	ND	-	-

^a Standard QA procedures not applicable for samples analyzed by direct injection method.

028000



JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	3500000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3500000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3500000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3500000	ND	ND	ND	0	-			
22P	PCB-1248	ND	3500000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3500000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3500000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

300821

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Conventional Analysis Data (QR10)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0466 GENERAL TESTING

GTCDUPNECO W118B

870520 1645

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water	%	.15								
Viscosity	cs	1.9								
Oil and Grease	g/l	318								
Density	g/ml	1.6449								
Refractive Index @20 Deg C	RI	1.5489								
Solids, total suspended	mg/l	IND								
A Indeterminable.										

300822

VH-129 B

300823

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg _a	First ug/kg _a	Second ug/kg _a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	80000000	89
3V	Benzene	394000	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	61500000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0 _a	ND	1800000	0 _a
11V	Chloroform	4800000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	362000	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	67
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	11000000	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	20200000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	1120000	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	29800000	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	3790000	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	54600000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

42800C

ETC

ENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^b	Second ug/kg ^b	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	1350000	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17 _c
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.

^b Variance replication, due to the non-homogeneous nature of the sample matrix, manually verified.

^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.

^d Recovery normally variable using established methodology.

^e Recovery manually verified.

C2800C

June 23, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports							
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours	
BA0468	GENERAL TESTING	GTC DUPNECO W 129B		870521	1215	1	

[illegible]

300826

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg ^a	Concen. Added ug/kg ^a	% Recov ^a
1A	2-Chlorophenol	ND	300000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	240000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	240000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2200000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	3800000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	320000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	220000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	270000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	320000	ND	ND	ND	0	-			
10A	Phenol	ND	140000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	240000	ND	ND	ND	0	-			

^a Standard QA procedures not applicable to dilute and shoot analysis.

800827



JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	170000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	320000	ND	ND	ND	0	-			
3B	Anthracene	ND	170000	ND	ND	ND	0	-			
4B	Benizidine	ND	4000000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	700000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	230000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	900000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	370000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	320000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	480000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	510000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	510000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	900000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	170000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	900000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	170000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	380000	ND	ND	ND	0	-			
18B	Chrysene	ND	230000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	900000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	170000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	170000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	400000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1500000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	900000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	900000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	BMDL	900000	ND	ND	BMDL	0	-			
27B	2,4-Dinitrotoluene	ND	510000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	170000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	900000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	900000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	200000	ND	ND	ND	0	-			
32B	Fluorene	ND	170000	ND	ND	ND	0	-			

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	21900000	170000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	470000000	81000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	900000	ND	ND	ND	0	-			
36B	Hexachloroethane	128000000	140000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	420000	ND	ND	ND	0	-			
38B	Isophorone	ND	200000	ND	ND	ND	0	-			
39B	Naphthalene	ND	140000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	170000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	900000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	900000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	170000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	490000	ND	ND	ND	0	-			
45B	Pyrene	ND	170000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	170000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

62800E

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

SPEC - GC/MS Analysis Data (QR12)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
Aniline	ND	9000	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9000	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9000	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9000	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9000	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9000	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9000	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9000	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9000	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9000	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9000	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9000	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QA procedures not applicable for samples analyzed by direct injection method.

July 22, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCUPNECO W1298

870521

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concn. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	293	7.09	224	55880778	C ₄ HCl ₅	31900000		
✓ 2 Unknown	493	10.66	-	-	-	6530000		
✓ 3 Unknown	413	9.23	-	-	-	8390000		
✓ 4 Unknown	462	10.11	-	-	-	4900000		
✓ 5 Pentachloro ethane	124	4.08	200	76017	C ₂ HCl ₅	9180000		
✓ 6 Tetrachloro ethene	26	2.33	164	127184	C ₂ Cl ₄	6920000		
✓ 7 Ethane, 1,1,2,2-tetrachloro	80	3.30	166	79345	C ₂ H ₂ Cl ₄	5300000		
✓ 8 Unknown	606	12.68	-	-	-	1990000		
✓ 9 Unknown	522	11.18	-	-	-	1930000		
✓ 10 1,1,2-Trichloro ethane	9	2.03	132	79005	C ₂ H ₃ Cl ₃	3020000		
✓ 11 Pentachloro Benzene	615	12.84	248	608935	C ₆ HCl ₅	1150000		
✓ 12 Benzene, Pentachloro(trichloroethenyl)	1008	19.85	376	29082744	C ₈ Cl ₈	963000		
✓ 13 Unknown	639	13.27	-	-	-	876000		
✓ 14 Unknown	649	13.44	-	-	-	873000		
✓ 15 Unknown	435	9.63	-	-	-	772000		

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide Compounds - GC/MS Analysis Data (QR82)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0468 GENERAL TESTING

GTCDUPNECO W129B

870521 1215

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P Aldrin		ND	170000	ND	ND	ND	-	-	ND	-	-
2P Alpha-BHC		ND	900000	ND	ND	ND	-	-	ND	-	-
3P Beta-BHC		ND	400000	ND	ND	ND	-	-	ND	-	-
4P Gamma-BHC		ND	900000	ND	ND	ND	-	-	ND	-	-
5P Delta-BHC		ND	280000	ND	ND	ND	-	-	ND	-	-
6P Chlordane		ND	900000	ND	ND	ND	-	-	ND	-	-
7P 4,4'-DDT		ND	250000	ND	ND	ND	-	-	ND	-	-
8P 4,4'-DDE		ND	500000	ND	ND	ND	-	-	ND	-	-
9P 4,4'-DDD		ND	420000	ND	ND	ND	-	-	ND	-	-
10P Dieldrin		ND	230000	ND	ND	ND	-	-	ND	-	-
11P Endosulfan I		ND	900000	ND	ND	ND	-	-	ND	-	-
12P Endosulfan II		ND	900000	ND	ND	ND	-	-	ND	-	-
13P Endosulfan sulfate		ND	500000	ND	ND	ND	-	-	ND	-	-
14P Endrin		ND	900000	ND	ND	ND	-	-	ND	-	-
15P Endrin aldehyde		ND	900000	ND	ND	ND	-	-	ND	-	-
16P Heptachlor		ND	170000	ND	ND	ND	-	-	ND	-	-
17P Heptachlor epoxide		ND	200000	ND	ND	ND	-	-	ND	-	-
25P Toxaphene		ND	900000	ND	ND	ND	-	-	ND	-	-

^a Standard QA procedures not applicable for samples analyzed by direct injection method.

228000

VH-129 C

300833

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCUPNECO W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg _a	First ug/kg _a	Second ug/kg _a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	8000000	89
3V	Benzene	630000	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	52100000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	7570000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	15300000	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	13800000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	1090000	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	ND	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	2840000	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	15300000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

300834

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Volatile Compounds - GC/MS Analysis Data (QR01)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCDUPNECO W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^a	Second ug/kg ^a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	BMDL	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17 _c
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.^b Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.^d Recovery normally variable using established methodology.^e Recovery manually verified.

588008

June 27, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462	GENERAL TESTING	GTCUPNECO	W 129C	870519	1400
ETC Sample No.	Company	Facility	Sample Point	Date	Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
1 Hexachloro ethane	644	26.35	234	67721	C ₂ Cl ₆	58000000		
2 Unknown	670	27.36	-	-	-	540000		
3 1,1,2,3,4,4-Hexachloro,1,3-butadiene	797	32.32	258	87683	C ₄ Cl ₆	208000000		
4 1,1,2,3,4,4-Hexachloro,1,3-butadiene	923	37.25	258	87683	C ₄ Cl ₆	5570000		
5 1,1,3,4-Tetrachloro,1,3-butadiene	974	39.24	190	42769380	C ₄ H ₂ Cl ₄	2000000		
6 Pentachloro,1,3-butadiene	1018	40.96	224	55880778	C ₄ HC1 ₅	186000000		



ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCUPNECO W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	320000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	260000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	260000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2300000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	4000000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	350000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	230000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	290000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	350000	ND	ND	ND	0	-			
10A	Phenol	ND	140000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	260000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

300837

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCUPNECO W129C

870519 1400 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	180000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	340000	ND	ND	ND	0	-			
3B	Anthracene	ND	180000	ND	ND	ND	0	-			
4B	Benidine	ND	4200000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	750000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	240000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	960000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	390000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	340000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	510000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	550000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	550000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	960000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	180000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	960000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	180000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	400000	ND	ND	ND	0	-			
18B	Chrysene	ND	240000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	960000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	180000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	420000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1600000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	960000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	960000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	960000	ND	ND	BMDL	0	-			
27B	2,4-Dinitrotoluene	ND	550000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	180000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	960000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	960000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	210000	ND	ND	ND	0	-			
32B	Fluorene	ND	180000	ND	ND	ND	0	-			

888006



ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports						
BA0462 GENERAL TESTING			GTCDUPNECO W129C		870519 1400	
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concn. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	24900000	180000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	483000000	87000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	960000	ND	ND	ND	0	-			
36B	Hexachloroethane	136000000	150000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	450000	ND	ND	ND	0	-			
38B	Isophorone	ND	210000	ND	ND	ND	0	-			
39B	Naphthalene	ND	150000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	180000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	960000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	960000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	180000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	520000	ND	ND	ND	0	-			
45B	Pyrene	ND	180000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	180000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

668006

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**SPEC - GC/MS Analysis Data (QR12)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCDUPNECO W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
Aniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9600	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9600	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QA procedures not applicable for samples analyzed by direct injection method.

008000

July 29, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCUPNECO W129C

870519

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	292	7.10	224	55880778	C ₄ HC1 ₅	37700000		
2 Unknown	491	10.65	-	-	-	8150000		
3 Unknown	411	9.22	-	-	-	9480000		
4 Unknown	460	10.10	-	-	-	5870000		
5 Ethane, pentachloro	123	4.09	200	76017	-	10400000		
6 Ethane, 1,1,2,2-tetrachloro	79	3.30	166	79345	C ₂ H ₂ Cl ₄	7930000		
7 Tetrachloro ethene	25	2.34	164	127184	C ₂ Cl ₄	6240000		
8 Unknown	603	12.65	-	-	-	2470000		
9 Unknown	520	11.17	-	-	-	2230000		
10 Unknown	423	9.44	-	-	-	2960000		
11 Ethane, 1,1,2-trichloro	8	2.04	132	79005	C ₂ H ₃ Cl ₃	3760000		
12 Pentachloro benzene	613	12.83	248	608935	C ₆ HC1 ₅	1290000		
13 Unknown	636	13.24	-	-	-	969000		
14 Benzene, pentachloro (trichloroethenyl)	1006	19.84	376	29082744	C ₈ Cl ₈	864000		
15 Unknown	434	9.64	-	-	-	966000		

118006

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC/MS Analysis Data (QR82)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCUPNEC0 W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P Aldrin		ND	180000	ND	ND	ND	-	-	ND	-	-
2P Alpha-BHC		ND	960000	ND	ND	ND	-	-	ND	-	-
3P Beta-BHC		ND	420000	ND	ND	ND	-	-	ND	-	-
4P Gamma-BHC		ND	960000	ND	ND	ND	-	-	ND	-	-
5P Delta-BHC		ND	300000	ND	ND	ND	-	-	ND	-	-
6P Chlordane		ND	960000	ND	ND	ND	-	-	ND	-	-
7P 4,4'-DDT		ND	270000	ND	ND	ND	-	-	ND	-	-
8P 4,4'-DDE		ND	540000	ND	ND	ND	-	-	ND	-	-
9P 4,4'-DDD		ND	450000	ND	ND	ND	-	-	ND	-	-
10P Dieldrin		ND	240000	ND	ND	ND	-	-	ND	-	-
11P Endosulfan I		ND	960000	ND	ND	ND	-	-	ND	-	-
12P Endosulfan II		ND	960000	ND	ND	ND	-	-	ND	-	-
13P Endosulfan sulfate		ND	540000	ND	ND	ND	-	-	ND	-	-
14P Endrin		ND	960000	ND	ND	ND	-	-	ND	-	-
15P Endrin aldehyde		ND	960000	ND	ND	ND	-	-	ND	-	-
16P Heptachlor		ND	180000	ND	ND	ND	-	-	ND	-	-
17P Heptachlor epoxide		ND	210000	ND	ND	ND	-	-	ND	-	-
25P Toxaphene		ND	960000	ND	ND	ND	-	-	ND	-	-

^a Standard QA procedures not applicable for samples analyzed by direct injection method.

300842

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCDUPNECO W129C

870519 1400 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	3500000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3500000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3500000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3500000	ND	ND	ND	0	-			
22P	PCB-1248	BMDL	3500000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3500000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3500000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

300843

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Conventional Analysis Data (QR10)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0462 GENERAL TESTING

GTCDUPNECO W129C

870519 1400

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water %	61									
Viscosity cs	2.2									
Oil and Grease g/l	1057									
Density g/ml	1.6377									
Refractive Index @20 Deg C RI	1.5506									
Solids, total suspended mg/l	IND									
A Indeterminable.										

300877

VH-139 A

300845

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	10000000	ND	ND	ND	800	109	ND	80000000	75
2V	Acrylonitrile	ND	10000000	ND	ND	ND	80.0	91	ND	80000000	89
3V	Benzene	ND	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	49100000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	2130000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	ND	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	35300000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	ND	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	ND	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	ND	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	13300000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^a	Second ug/kg ^a	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	ND	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.
^b Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.
^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.
^d Recovery normally variable using established methodology.
^e Recovery manually verified.

June 23, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports							
BA0467	GENERAL TESTING	GTC DUPNECO W 139A		870521 120930			
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours	

[illegible]

300848

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg ^a	Concen. Added ug/kg ^a	% Recov ^a
1A	2-Chlorophenol	ND	300000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	250000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	250000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	2200000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	3800000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	330000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	220000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	270000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	330000	ND	ND	ND	0	-			
10A	Phenol	ND	140000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	250000	ND	ND	ND	0	-			

^a Standard QA procedures not applicable to dilute and sheet analysis.

673008

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	170000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	320000	ND	ND	ND	0	-			
3B	Anthracene	ND	170000	ND	ND	ND	0	-			
4B	Benzidine	ND	4000000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	710000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	230000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	910000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	370000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	320000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	480000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	520000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	520000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	910000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	170000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	910000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	170000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	380000	ND	ND	ND	0	-			
18B	Chrysene	ND	230000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	910000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	170000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	170000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	400000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	1500000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	910000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	910000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	910000	ND	ND	BMDL	0	-			
27B	2,4-Dinitrotoluene	ND	520000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	170000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	910000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	910000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	200000	ND	ND	ND	0	-			
32B	Fluorene	ND	170000	ND	ND	ND	0	-			

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg ^a	Concen. Added ug/kg ^a	% Recov ^a
33B	Hexachlorobenzene	19300000	170000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	854000000	82000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	ND	910000	ND	ND	ND	0	-			
36B	Hexachloroethane	87100000	150000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	430000	ND	ND	ND	0	-			
38B	Isophorone	ND	200000	ND	ND	ND	0	-			
39B	Naphthalene	ND	150000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	170000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	910000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	910000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	170000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	490000	ND	ND	ND	0	-			
45B	Pyrene	ND	170000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	170000	ND	ND	ND	0	-			

^a Standard QA procedures not applicable to dilute and shoot analysis.

ENVIRONMENTAL
TESTING and CERTIFICATION

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

SPEC - GC/MS Analysis Data (QR12)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
Aniline	ND	9100	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9100	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9100	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9100	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9100	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9100	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9100	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9100	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9100	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9100	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9100	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9100	ND	ND	ND	-	-	ND	-	-

^a Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.^b Standard QA procedures not applicable for samples analyzed by direct injection method.

300852

July 22, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTC0UPNECO W139A

870521

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
1 1,3-Butadiene, pentachloro	292	7.10	224	55880778	C ₄ HCl ₅	22300000		
2 Unknown	412	9.24	-	-	-	8205316		
3 Tetrachloro ethene	24	2.33	164	127184	C ₂ Cl ₄	10500000		
4 Unknown	492	10.67	-	-	-	3740000		
5 Unknown	461	10.12	-	-	-	2530000		
6 Pentachloro Benzene	615	12.86	248	608935	C ₆ HCl ₅	817000		
7 Unknown	649	13.47	-	-	-	758000		
8 Unknown	430	9.57	-	-	-	1060000		
9 Unknown	638	13.27	-	-	-	638000		
10 Unknown	435	9.66	-	-	-	958000		
11 Benzene, pentachloro (trichloroethenyl)	608	19.87	376	29082744	C ₈ Cl ₈	655000		
12 Unknown	521	11.19	-	-	-	577000		
13 1,1,2,2-Tetrachloro ethane	78	3.29	166	79345	C ₂ H ₂ Cl ₄	858000		

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide Compounds - GC/MS Analysis Data (QR82)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg ^a	% Recov ^a	Unspiked Sample ug/kg	Concen. Added ug/kg ^a	% Recov ^a
1P Aldrin		ND	170000	ND	ND	ND	-	-	ND	-	-
2P Alpha-BHC		ND	910000	ND	ND	ND	-	-	ND	-	-
3P Beta-BHC		ND	400000	ND	ND	ND	-	-	ND	-	-
4P Gamma-BHC		ND	910000	ND	ND	ND	-	-	ND	-	-
5P Delta-BHC		ND	280000	ND	ND	ND	-	-	ND	-	-
6P Chlordane		ND	910000	ND	ND	ND	-	-	ND	-	-
7P 4,4'-DDT		ND	250000	ND	ND	ND	-	-	ND	-	-
8P 4,4'-DDE		ND	510000	ND	ND	ND	-	-	ND	-	-
9P 4,4'-DDD		ND	430000	ND	ND	ND	-	-	ND	-	-
10P Dieldrin		ND	230000	ND	ND	ND	-	-	ND	-	-
11P Endosulfan I		ND	910000	ND	ND	ND	-	-	ND	-	-
12P Endosulfan II		ND	910000	ND	ND	ND	-	-	ND	-	-
13P Endosulfan sulfate		ND	510000	ND	ND	ND	-	-	ND	-	-
14P Endrin		ND	910000	ND	ND	ND	-	-	ND	-	-
15P Endrin aldehyde		ND	910000	ND	ND	ND	-	-	ND	-	-
16P Heptachlor		ND	170000	ND	ND	ND	-	-	ND	-	-
17P Heptachlor epoxide		ND	200000	ND	ND	ND	-	-	ND	-	-
25P Toxaphene		ND	910000	ND	ND	ND	-	-	ND	-	-

^a Standard QR procedures not applicable for samples analyzed by direct injection method.

300800



ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	3300000	ND	ND	ND	0	-			
19P	PCB-1254	ND	3300000	ND	ND	ND	0	-			
20P	PCB-1221	ND	3300000	ND	ND	ND	0	-			
21P	PCB-1232	ND	3300000	ND	ND	ND	0	-			
22P	PCB-1248	ND	3300000	ND	ND	ND	0	-			
23P	PCB-1260	ND	3300000	ND	ND	ND	0	-			
24P	PCB-1016	ND	3300000	ND	ND	ND	0	-			

Standard QA procedures not applicable to dilute and shoot analysis.

998008

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0467 GENERAL TESTING

GTCDUPNECO W139A

870521 0930

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Results									
	Sample Concen.	MDL								
Water	%	.06								
Viscosity	cs	1.8								
Oil and Grease	g/l	409								
Density	g/ml	1.6553								
Refractive Index @20 Deg C	RI	1.5495								
Solids, total suspended	mg/l	IND								
A Indeterminable.										

95800E

VH-140 B

300857

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Volatile Compounds - GC/MS Analysis Data (QR01)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCUPNECO W140B

870520 1110 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acrolein and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1V	Acrolein	ND	1000000	ND	ND	ND	800	109	ND	8000000	75
2V	Acrylonitrile	ND	1000000	ND	ND	ND	80.0	91	ND	8000000	89
3V	Benzene	ND	440000	521000	205000	ND	18.0	95	630000	1800000	95
4V	bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	470000	ND	ND	ND	18.0	90	ND	1800000	89
6V	Carbon tetrachloride	11500000	280000	37900000	39900000	ND	18.0	102	52100000	1800000	19
7V	Chlorobenzene	ND	600000	ND	ND	ND	18.0	99	ND	1800000	84
8V	Chlorodibromomethane	ND	310000	ND	ND	ND	18.0	96	ND	1800000	99
9V	Chloroethane	ND	1000000	ND	ND	ND	18.0	116	ND	1800000	104
10V	2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	18.0	0	ND	1800000	0
11V	Chloroform	6540000	160000	1940000	1990000	ND	18.0	107	7570000	1800000	86
12V	Dichlorobromomethane	ND	220000	ND	ND	ND	18.0	99	ND	1800000	114
13V	Dichlorodifluoromethane	ND	1000000	ND	ND	ND	18.0	121	ND	1800000	105
14V	1,1-Dichloroethane	ND	470000	ND	ND	ND	18.0	101	ND	1800000	98
15V	1,2-Dichloroethane	ND	280000	ND	ND	ND	18.0	108	ND	1800000	123
16V	1,1-Dichloroethylene	ND	280000	ND	ND	ND	18.0	102	ND	1800000	103
17V	1,2-Dichloropropane	ND	600000	ND	ND	ND	18.0	92	ND	1800000	97
18V	cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	18.0	89	ND	1800000	87
19V	Ethylbenzene	ND	720000	ND	ND	ND	18.0	102	ND	1800000	84
20V	Methyl bromide	ND	1000000	ND	ND	ND	18.0	119	ND	1800000	86
21V	Methyl chloride	ND	1000000	ND	ND	ND	18.0	122	ND	1800000	101
22V	Methylene chloride	ND	280000	ND	ND	9.40	18.0	71	ND	1800000	68
23V	1,1,2,2-Tetrachloroethane	46600000	690000	ND	ND	ND	18.0	84	15300000	1800000	39
24V	Tetrachloroethylene	12600000	410000	32800000	17600000	ND	18.0	99	13800000	1800000	59
25V	Toluene	ND	600000	1270000	1110000	ND	18.0	97	1090000	1800000	81
26V	1,2-Trans-dichloroethylene	256000	160000	1370000	1420000	ND	18.0	103	ND	1800000	113
27V	1,1,1-Trichloroethane	ND	380000	ND	ND	ND	18.0	104	ND	1800000	109
28V	1,1,2-Trichloroethane	ND	500000	1190000	1010000	ND	18.0	97	2840000	1800000	78
29V	Trichloroethylene	9620000	190000	24900000	24000000	ND	18.0	109	15300000	1800000	33
30V	Trichlorofluoromethane	ND	1000000	ND	ND	ND	18.0	107	ND	1800000	105
31V	Vinyl chloride	ND	1000000	ND	ND	ND	18.0	124	ND	1800000	101
18V	trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	18.0	92	ND	1800000	96

858000

SEP 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acetone and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg ^a	First ug/kg ^b	Second ug/kg ^b	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
	Acetone	ND	1000000	ND	ND	44.2	90.0	81	ND	9000000	56
	Methyl ethyl ketone	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	58
	Carbon disulfide	BMDL	1000000	665000	336000	ND	18.0	93	122000	1800000	56
	Vinyl acetate	ND	1000000	ND	ND	ND	90.0	96	ND	9000000	53
	2-Hexanone	ND	1000000	ND	ND	ND	90.0	84	ND	9000000	17
	Methyl-iso-butyl ketone	ND	1000000	ND	ND	ND	90.0	88	ND	9000000	46
	Styrene	ND	1000000	ND	ND	ND	18.0	105	ND	1800000	52
	m-Xylene	ND	1000000	ND	ND	ND	15.0	107	ND	1500000	54
	o+p-Xylenes	ND	1000000	ND	ND	ND	30.0	108	ND	3000000	55

^a Sample required dilution, due to the nature of the matrix, which resulted in these elevated MDLs.
^b Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.
^c Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.
^d Recovery normally variable using established methodology.
^e Recovery manually verified.

300859

ENVIRONMENTAL TESTING and CERTIFICATION

June 27, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds – GC/MS Analysis Data – Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports						
BA0465	GENERAL TESTING	GTCDUPNECO	W 140B	870520	1110	Elapsed
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours

[illegible]

300860

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	160000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	130000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	130000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	1200000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	2000000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	170000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	120000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	140000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	170000	ND	ND	ND	0	-			
10A	Phenol	ND	72000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	130000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

300861



JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCUPNECO W140B

870520 1110

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	91000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	170000	ND	ND	ND	0	-			
3B	Anthracene	ND	91000	ND	ND	ND	0	-			
4B	Benzidine	ND	2100000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	380000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	120000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	480000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	200000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	170000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	250000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	270000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	270000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	480000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	91000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	480000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	91000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	200000	ND	ND	ND	0	-			
18B	Chrysene	ND	120000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	480000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	91000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	91000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	210000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	790000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	480000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	480000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	480000	ND	ND	ND	0	-			
27B	2,4-Dinitrotoluene	ND	270000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	91000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	480000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	480000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	110000	ND	ND	ND	0	-			
32B	Fluorene	BMDL	91000	ND	ND	ND	0	-			

298006

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	19200000	91000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	529000000	43000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	BMDL	480000	ND	ND	ND	0	-			
36B	Hexachloroethane	44300000	77000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	230000	ND	ND	ND	0	-			
38B	Isophorone	ND	110000	ND	ND	ND	0	-			
39B	Naphthalene	ND	77000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	91000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	480000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	480000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	91000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	260000	ND	ND	ND	0	-			
45B	Pyrene	ND	91000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	91000	ND	ND	ND	0	-			

A Standard OR procedures not applicable to dilute and shoot analysis.

300863

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

SPEC - GC/MS Analysis Data (QR12)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
Aniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	9600	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	9600	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	9600	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	9600	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	9600	ND	ND	ND	-	-	ND	-	-

A Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.

B Standard QA procedures not applicable for samples analyzed by direct injection method.

July 28, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCUPNECO W140B

870520

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	294	7.16	224	55880778	C ₄ HCl ₅	25600000		
2 Unknown	494	10.73	-	-	-	8160000		
✓ 3 Unknown	414	9.31	-	-	-	9250000		
✓ 4 Unknown	462	10.16	-	-	-	6120000		
✓ 5 Ethane, 1,1,2,2-tetrachloro	78	3.31	166	79345	C ₂ H ₂ Cl ₄	10800000		
6 Pentachloro ethane	122	4.09	200	76017	C ₂ HCl ₅	6560000		
7 Unknown	604	12.70	-	-	-	1990000		
8 Unknown	425	9.50	-	-	-	2440000		
9 Unknown	521	11.22	-	-	-	1570000		
10 Pentachloro benzene	614	12.87	248	608935	C ₆ HCl ₅	1130000		
✓ 11 Tetrachloro ethene	22	2.31	164	127184	C ₂ Cl ₄	2720000		
12 Unknown	637	13.28	-	-	-	804000		
✓ 13 1,3-Butadiene, 1,1,3,4-tetrachloro	223	5.90	190	42769380	C ₄ H ₂ Cl ₄	1520000		
14 Unknown	434	9.66	-	-	-	824000		
15 Unknown	383	8.75	-	-	-	719000		

300865

July 28, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers				
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula	Estimated Concen. ug/kg		
16 Pentachloro benzene, (trichloroethenyl)	1006	19.87	376	29082744	C ₈ Cl ₈	399000		
17 1,1,2,2-Tetrachloro ethane	81	3.36	166	79345	C ₂ H ₂ Cl ₄	758000		

300866

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide Compounds - GC/MS Analysis Data (QR82)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov %	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov %
1P	Aldrin	ND	91000	ND	ND	ND	-	-	ND	-	-
2P	Alpha-BHC	ND	480000	ND	ND	ND	-	-	ND	-	-
3P	Beta-BHC	ND	210000	ND	ND	ND	-	-	ND	-	-
4P	Gamma-BHC	ND	480000	ND	ND	ND	-	-	ND	-	-
5P	Delta-BHC	ND	150000	ND	ND	ND	-	-	ND	-	-
6P	Chlordane	ND	480000	ND	ND	ND	-	-	ND	-	-
7P	4,4'-DDT	ND	130000	ND	ND	ND	-	-	ND	-	-
8P	4,4'-DDE	ND	270000	ND	ND	ND	-	-	ND	-	-
9P	4,4'-DDD	ND	230000	ND	ND	ND	-	-	ND	-	-
10P	Dieldrin	ND	120000	ND	ND	ND	-	-	ND	-	-
11P	Endosulfan I	ND	480000	ND	ND	ND	-	-	ND	-	-
12P	Endosulfan II	ND	480000	ND	ND	ND	-	-	ND	-	-
13P	Endosulfan sulfate	ND	270000	ND	ND	ND	-	-	ND	-	-
14P	Endrin	ND	480000	ND	ND	ND	-	-	ND	-	-
15P	Endrin aldehyde	ND	480000	ND	ND	ND	-	-	ND	-	-
16P	Heptachlor	ND	91000	ND	ND	ND	-	-	ND	-	-
17P	Heptachlor epoxide	ND	110000	ND	ND	ND	-	-	ND	-	-
25P	Toxaphene	ND	480000	ND	ND	ND	-	-	ND	-	-

A Standard QA procedures not applicable for samples analyzed by direct injection method.

300867

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110 1

ETC Sample No. Company Facility Sample Point Date Time Elapsed Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	1700000	ND	ND	ND	0	-			
19P	PCB-1254	ND	1700000	ND	ND	ND	0	-			
20P	PCB-1221	ND	1700000	ND	ND	ND	0	-			
21P	PCB-1232	ND	1700000	ND	ND	ND	0	-			
22P	PCB-1248	ND	1700000	ND	ND	ND	0	-			
23P	PCB-1260	ND	1700000	ND	ND	ND	0	-			
24P	PCB-1016	ND	1700000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

88800E

ETC

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0465 GENERAL TESTING

GTCDUPNECO W140B

870520 1110 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Results

NPDES
NumberSample
Concn.

MDL

Water %
 Viscosity cs
 Oil and Grease g/l
 Density g/ml
 Refractive Index @20 Deg C RI
 Solids, total suspended mg/l

0.04
 1.9
 763
 1.6438
 1.5495
 IND

N Indeterminable.

698008

VH-140 C

300870



JUN 26, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCDUPNECO W140C

870520 1125

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound Acetone and Acrylonitrile values are screen only.	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concn. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concn. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concn. Added ug/kg	% Recov
1V Acrolein	ND	1000000	ND	ND	ND	ND	800	109	ND	8000000	75
2V Acrylonitrile	ND	1000000	ND	ND	ND	ND	80.0	91	ND	8000000	89
3V Benzene	ND	440000	521000	205000	ND	ND	18.0	95	630000	1800000	95
4V bis(Chloromethyl)ether	ND	1000000	ND	ND	ND	ND	0	-	ND	0	-
5V Bromoform	ND	470000	ND	ND	ND	ND	18.0	90	ND	1800000	89
6V Carbon tetrachloride	11400000	280000	37900000	39900000	ND	ND	18.0	102	52100000	1800000	19.
7V Chlorobenzene	BMDL	600000	ND	ND	ND	ND	18.0	99	ND	1800000	84
8V Chlorodibromomethane	ND	310000	ND	ND	ND	ND	18.0	96	ND	1800000	99
9V Chloroethane	ND	1000000	ND	ND	ND	ND	18.0	116	ND	1800000	104
10V 2-Chloroethylvinyl ether	ND	1000000	ND	ND	ND	ND	18.0	0.	ND	1800000	0.
11V Chloroform	6470000	160000	1940000	1990000	ND	ND	18.0	107	7570000	1800000	86
12V Dichlorobromomethane	ND	220000	ND	ND	ND	ND	18.0	99	ND	1800000	114
13V Dichlorodifluoromethane	ND	1000000	ND	ND	ND	ND	18.0	121	ND	1800000	105
14V 1,1-Dichloroethane	ND	470000	ND	ND	ND	ND	18.0	101	ND	1800000	98
15V 1,2-Dichloroethane	ND	280000	ND	ND	ND	ND	18.0	108	ND	1800000	123
16V 1,1-Dichloroethylene	ND	280000	ND	ND	ND	ND	18.0	102	ND	1800000	103
17V 1,2-Dichloropropane	ND	600000	ND	ND	ND	ND	18.0	92	ND	1800000	97
18V cis-1,3-Dichloropropylene	ND	500000	ND	ND	ND	ND	18.0	89	ND	1800000	87
19V Ethylbenzene	ND	720000	ND	ND	ND	ND	18.0	102	ND	1800000	84
20V Methyl bromide	ND	1000000	ND	ND	ND	ND	18.0	119	ND	1800000	86
21V Methyl chloride	ND	1000000	ND	ND	ND	ND	18.0	122	ND	1800000	101
22V Methylene chloride	ND	280000	ND	ND	9.40	ND	18.0	71	ND	1800000	68
23V 1,1,2,2-Tetrachloroethane	44400000	690000	ND	ND	ND	ND	18.0	84	15300000	1800000	39.
24V Tetrachloroethylene	13100000	410000	32800000	17600000	ND	ND	18.0	99	13800000	1800000	59.
25V Toluene	ND	600000	1270000	1110000	ND	ND	18.0	97	1090000	1800000	81
26V 1,2-Trans-dichloroethylene	322000	160000	1370000	1420000	ND	ND	18.0	103	ND	1800000	113
27V 1,1,1-Trichloroethane	ND	380000	ND	ND	ND	ND	18.0	104	ND	1800000	109
28V 1,1,2-Trichloroethane	ND	500000	1190000	1010000	ND	ND	18.0	97	2840000	1800000	78
29V Trichloroethylene	9840000	190000	24900000	24000000	ND	ND	18.0	109	15300000	1800000	33.
30V Trichlorofluoromethane	ND	1000000	ND	ND	ND	ND	18.0	107	ND	1800000	105
31V Vinyl chloride	ND	1000000	ND	ND	ND	ND	18.0	124	ND	1800000	101
18V trans-1,3-Dichloropropylene	ND	1000000	ND	ND	ND	ND	18.0	92	ND	1800000	96

A Variable replication, due to the non-homogeneous nature of the sample matrix, manually verified.

B Spiked samples that contain compounds present at high levels do not provide valid spike recovery data.

C Recovery normally variable using established methodology.

148000E

Tentatively Identified Organic Compounds - GC/MS Analysis Data - Volatile Fraction (QR06)

Chain of Custody Data Required for ETC Data Management Summary Reports						
BA0464	GENERAL TESTING	GTCDUPNECO	W 140C	870520	1125	Elapsed
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Hours

[illegible]

30822

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Acid Compounds - GC/MS Analysis Data (QR02)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCOUPNECO W140C

870520 1125 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours.

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1A	2-Chlorophenol	ND	170000	ND	ND	ND	0	-			
2A	2,4-Dichlorophenol	ND	140000	ND	ND	ND	0	-			
3A	2,4-Dimethylphenol	ND	140000	ND	ND	ND	0	-			
4A	4,6-Dinitro-o-cresol	ND	1200000	ND	ND	ND	0	-			
5A	2,4-Dinitrophenol	ND	2100000	ND	ND	ND	0	-			
6A	2-Nitrophenol	ND	180000	ND	ND	ND	0	-			
7A	4-Nitrophenol	ND	120000	ND	ND	ND	0	-			
8A	p-Chloro-m-cresol	ND	150000	ND	ND	ND	0	-			
9A	Pentachlorophenol	ND	180000	ND	ND	ND	0	-			
10A	Phenol	ND	75000	ND	ND	ND	0	-			
11A	2,4,6-Trichlorophenol	ND	140000	ND	ND	ND	0	-			

A Standard QA procedures not applicable to dilute and shoot analysis.

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCOUPNECO W140C

870520 1125

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
1B	Acenaphthene	ND	95000	ND	ND	ND	0	-			
2B	Acenaphthylene	ND	180000	ND	ND	ND	0	-			
3B	Anthracene	ND	95000	ND	ND	ND	0	-			
4B	Benzidine	ND	2200000	ND	ND	ND	0	-			
5B	Benzo(a)anthracene	ND	390000	ND	ND	ND	0	-			
6B	Benzo(a)pyrene	ND	130000	ND	ND	ND	0	-			
7B	Benzo(b)fluoranthene	ND	500000	ND	ND	ND	0	-			
8B	Benzo(ghi)perylene	ND	210000	ND	ND	ND	0	-			
9B	Benzo(k)fluoranthene	ND	180000	ND	ND	ND	0	-			
10B	bis(2-Chloroethoxy)methane	ND	270000	ND	ND	ND	0	-			
11B	bis(2-Chloroethyl) ether	ND	290000	ND	ND	ND	0	-			
12B	bis(2-Chloroisopropyl)ether	ND	290000	ND	ND	ND	0	-			
13B	bis(2-Ethylhexyl)phthalate	ND	500000	ND	ND	ND	0	-			
14B	4-Bromophenyl phenyl ether	ND	95000	ND	ND	ND	0	-			
15B	Butyl benzyl phthalate	ND	500000	ND	ND	ND	0	-			
16B	2-Chloronaphthalene	ND	95000	ND	ND	ND	0	-			
17B	4-Chlorophenyl phenyl ether	ND	210000	ND	ND	ND	0	-			
18B	Chrysene	ND	130000	ND	ND	ND	0	-			
19B	Dibenzo(a,h)anthracene	ND	500000	ND	ND	ND	0	-			
20B	1,2-Dichlorobenzene	ND	95000	ND	ND	ND	0	-			
21B	1,3-Dichlorobenzene	ND	95000	ND	ND	ND	0	-			
22B	1,4-Dichlorobenzene	ND	220000	ND	ND	ND	0	-			
23B	3,3'-Dichlorobenzidine	ND	830000	ND	ND	ND	0	-			
24B	Diethyl phthalate	ND	500000	ND	ND	ND	0	-			
25B	Dimethyl phthalate	ND	500000	ND	ND	ND	0	-			
26B	Di-n-butyl phthalate	ND	500000	ND	ND	BMDL	0	-			
27B	2,4-Dinitrotoluene	ND	290000	ND	ND	ND	0	-			
28B	2,6-Dinitrotoluene	ND	95000	ND	ND	ND	0	-			
29B	Di-n-octyl phthalate	ND	500000	ND	ND	ND	0	-			
30B	1,2-Diphenylhydrazine	ND	500000	ND	ND	ND	0	-			
31B	Fluoranthene	ND	110000	ND	ND	ND	0	-			
32B	Fluorene	ND	95000	ND	ND	ND	0	-			



ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Base/Neutral Compounds - GC/MS Analysis Data (QR03)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCDUPNECO W140C

870520 1125

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
33B	Hexachlorobenzene	19300000	95000	21700000	20500000	ND	0	-			
34B	Hexachlorobutadiene	575000000	45000	5.66+08	5.58+08	ND	0	-			
35B	Hexachlorocyclopentadiene	BMDL	500000	ND	ND	ND	0	-			
36B	Hexachloroethane	46400000	80000	57300000	59600000	ND	0	-			
37B	Indeno(1,2,3-c,d)pyrene	ND	240000	ND	ND	ND	0	-			
38B	Isophorone	ND	110000	ND	ND	ND	0	-			
39B	Naphthalene	ND	80000	ND	ND	ND	0	-			
40B	Nitrobenzene	ND	95000	ND	ND	ND	0	-			
41B	N-Nitrosodimethylamine	ND	500000	ND	ND	ND	0	-			
42B	N-Nitrosodi-n-propylamine	ND	500000	ND	ND	ND	0	-			
43B	N-Nitrosodiphenylamine	ND	95000	ND	ND	ND	0	-			
44B	Phenanthrene	ND	270000	ND	ND	ND	0	-			
45B	Pyrene	ND	95000	ND	ND	ND	0	-			
46B	1,2,4-Trichlorobenzene	ND	95000	ND	ND	ND	0	-			

* Standard QA procedures not applicable to dilute and shoot analysis.

528006

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 25, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**SPEC - GC/MS Analysis Data (QR12)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCUPNEC0 W140C

870520 1125

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
	Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov %	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov %
Aniline	ND	10000	ND	ND	ND	-	-	ND	-	-
Benzyl alcohol	ND	10000	ND	ND	ND	-	-	ND	-	-
2-Methylphenol	ND	10000	ND	ND	ND	-	-	ND	-	-
4-Methylphenol	ND	10000	ND	ND	ND	-	-	ND	-	-
Benzoic acid	ND	10000	ND	ND	ND	-	-	ND	-	-
4-Chloroaniline	ND	10000	ND	ND	ND	-	-	ND	-	-
2-Methylnaphthalene	ND	10000	ND	ND	ND	-	-	ND	-	-
2,4,5-Trichlorophenol	ND	10000	ND	ND	ND	-	-	ND	-	-
2-Nitroaniline	ND	10000	ND	ND	ND	-	-	ND	-	-
3-Nitroaniline	ND	10000	ND	ND	ND	-	-	ND	-	-
4-Nitroaniline	ND	10000	ND	ND	ND	-	-	ND	-	-
Dibenzofuran	ND	10000	ND	ND	ND	-	-	ND	-	-

* Standards for these compounds were not run with this sample. The compounds were manually searched for in the sample.

* Standard QA procedures not applicable for samples analyzed by direct injection method.

948006



July 28, 1987

TABLE 1: QUALITATIVE RESULTS

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTC0UPNECO W140C

870520

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

Compound Name	Data			Identifiers		Estimated Concen. ug/kg		
	Scan Number	Retention Time (Min)	M.W.	CAS Number	Empirical Formula			
✓ 1 1,3-Butadiene, pentachloro	295	7.16	224	55880778	C ₄ HCl ₅	27100000		
✓ 2 Unknown	494	10.71	-	-	-	8420000		
✓ 3 1,3-Butadiene, pentachloro	301	7.27	224	55880778	C ₄ HCl ₅	9170000		
✓ 4 Unknown	415	9.30	-	-	-	8770000		
✓ 5 Unknown	463	10.16	-	-	-	6100000		
✓ 6 Ethane, 1,1,2,2-tetrachloro	81	3.34	166	79345	C ₂ H ₂ Cl ₄	1100000		
✓ 7 Ethane, pentachloro	125	4.13	200	76017	C ₂ HCl ₅	6800000		
✓ 8 Unknown	606	12.71	-	-	-	1960000		
✓ 9 Tetrachloro ethene	25	2.34	164	127184	C ₂ Cl ₄	3410000		
✓ 10 Unknown	426	9.50	-	-	-	2230000		
✓ 11 Unknown	522	11.21	-	-	-	1490000		
✓ 12 Benzene, pentachloro	616	12.89	248	608935	C ₆ HCl ₅	1060000		
✓ 13 Unknown	640	13.31	-	-	-	753000		
✓ 14 1,3-Butadiene, 1,1,3,4-tetrachloro	225	5.91	190	42769380	C ₄ H ₂ Cl ₄	1240000		
✓ 15 Unknown	650	13.49	-	-	-	557000		

448006

Tentatively Identified Organic Compounds - GC/MS Analysis Data - B/N/A Fraction (QR08)

[illegible]

ETCENVIRONMENTAL
TESTING and CERTIFICATION

SEP 24, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide Compounds - GC/MS Analysis Data (QR82)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCDUPNECO W140C

870520 1125

1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov %	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov %
1P Aldrin		ND	95000	ND	ND	ND	-	-	ND	-	-
2P Alpha-BHC		ND	500000	ND	ND	ND	-	-	ND	-	-
3P Beta-BHC		ND	220000	ND	ND	ND	-	-	ND	-	-
4P Gamma-BHC		ND	500000	ND	ND	ND	-	-	ND	-	-
5P Delta-BHC		ND	160000	ND	ND	ND	-	-	ND	-	-
6P Chlordane		ND	500000	ND	ND	ND	-	-	ND	-	-
7P 4,4'-DDT		ND	140000	ND	ND	ND	-	-	ND	-	-
8P 4,4'-DDE		ND	280000	ND	ND	ND	-	-	ND	-	-
9P 4,4'-DDD		ND	240000	ND	ND	ND	-	-	ND	-	-
10P Dieldrin		ND	130000	ND	ND	ND	-	-	ND	-	-
11P Endosulfan I		ND	500000	ND	ND	ND	-	-	ND	-	-
12P Endosulfan II		ND	500000	ND	ND	ND	-	-	ND	-	-
13P Endosulfan sulfate		ND	280000	ND	ND	ND	-	-	ND	-	-
14P Endrin		ND	500000	ND	ND	ND	-	-	ND	-	-
15P Endrin aldehyde		ND	500000	ND	ND	ND	-	-	ND	-	-
16P Heptachlor		ND	95000	ND	ND	ND	-	-	ND	-	-
17P Heptachlor epoxide		ND	110000	ND	ND	ND	-	-	ND	-	-
25P Toxaphene		ND	500000	ND	ND	ND	-	-	ND	-	-

A Standard OR procedures not applicable for samples analyzed by direct injection method.

64800E

ETCENVIRONMENTAL
TESTING and CERTIFICATION

JUL 21, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA**Pesticide/PCB Compounds - GC/MS Analysis Data (QR04)**

Chain of Custody Data Required for ETC Data Management Summary Reports

BA0464 GENERAL TESTING

GTCUPNECO W140C

870520 1125 1

ETC Sample No.

Company

Facility

Sample Point

Date

Time

Elapsed
Hours

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/kg	MDL ug/kg	First ug/kg	Second ug/kg	Blank Data ug/kg	Concen. Added ug/kg	% Recov	Unspiked Sample ug/kg	Concen. Added ug/kg	% Recov
18P	PCB-1242	ND	1800000	ND	ND	ND	0	-			
19P	PCB-1254	ND	1800000	ND	ND	ND	0	-			
20P	PCB-1221	ND	1800000	ND	ND	ND	0	-			
21P	PCB-1232	ND	1800000	ND	ND	ND	0	-			
22P	PCB-1248	ND	1800000	ND	ND	ND	0	-			
23P	PCB-1260	ND	1800000	ND	ND	ND	0	-			
24P	PCB-1016	ND	1800000	ND	ND	ND	0	-			

A Standard OR procedures not applicable to dilute and sheet analysis.

08800E

E.

ENVIRONMENTAL
TESTING and CERTIFICATION

JUL 10, 1987

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Conventional Analysis Data (QR10)

Chain of Custody Data Required for ETC Data Management Summary Reports					
BA0464 GENERAL TESTING		GTCOUPNECO W140C		870520 1125 1	
ETC Sample No.	Company	Facility	Sample Point	Date	Elapsed Time Hours

NPDES Number	Results									
	Sample Concn.	MDL								
Water %	.09									
Viscosity cs	1.9									
Oil and Grease g/l	807									
Density g/ml	1.6467									
Refractive Index @20 Deg C RI	1.5496									
Solids, total suspended mg/l	IND									
N = indeterminate.										

10800C

Appendix B

300882

**general
testing
corporation**



water and wastewater testing specialists

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

July 15, 1987

Mr. Tom Fargo
E.I. DuPont de NeMours
Buffalo Avenue & 26th Street
Niagara Falls, NY 14302

Dear Mr. Fargo:

Enclosed is the analytical data from one NAPL sample taken from Pump House #52 at the Necco Park Facility. This sample was taken on May 20, 1987. The analysis of this sample required additional analytical time due to the organic matrix.

Parameters were obtained from a GTC analytical request form. A copy of which has been provided with this report. Four analysis could not be conducted due to the interferences experienced from the sample matrix. These analytes have been flagged and notated as such.

Please call should you have any questions regarding this data.

Sincerely,

GENERAL TESTING CORPORATION

Sue Toscano
Client Representative

ST/jmj

Enclosure

300883

General testing corporation

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

LABORATORY REPORT

Job No. R71282 Date 07/15/87

Client

Mr. Tom Fargo
E.I. DuPont de Nemours
Buffalo Avenue & 26th Street
Niagara Falls, NY 14302

Sample(s) Reference

NAPL Sampling

Date Samples () received (X) collected by General Testing

05/20/87

ANALYTICAL RESULTS

(mg/l unless stated otherwise)

P.O. # _____

Sample Description

DUPONT - NECCO

Date(s)

52

5/20/87

Time(s)

09:15

(ug/g wet weight)

Chloride

*

Cyanide, Total

<5.0

Sulfate

*

Sulfide, Total

<200

Nitrogen, Ammonia

*

Phenol, Total

3.0

TOC

*

Antimony

<1.0

Arsenic

0.36

Barium

<10

Cadmium

<1.0

Calcium

21

Chromium, Hex

<2.5

Chromium, Total

<5.0

Lead

<5.0

Magnesium

<25

Mercury

0.71

Nickel

<4.0

Selenium

0.16

Silver

<1.0

Sodium

82

Specific Gravity

1.64

TOX

730,000

NY CERT.

* Cannot conduct analysis due to matrix of sample.

Analytical procedures in accordance with Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for Chemical Analysis of Water and Wastes, EPA. (<) indicates lowest detectable concentration with procedure used. Data on quality control performed with above sample(s) is available upon request.

Michael K. Perry

Laboratory Director

**General
testing
corporation**

710 Exchange Street
Rochester, NY 14608
(716) 454-3760

85 Trinity Place
Hackensack, NJ 07601
(201) 488-5242

JOB NUMBER 71282

HACKENSACK

LABORATORY CHRONICLE

Sample Number(s)	Parameter	Date Digested	Date Extracted/Distilled	Date Analyzed	Analyst
- - -	Spec. Gravity	(field)	.	5/20/87	EK
- - -	TCN		6/3/87	6/9/87	JW
- - -	Ammonia			-	-
- - -	Phenols		6/16/87	6/17/87	AK
- - -	Sulfide			7/6/87	DT **
- - -	TOC			6/5/87	JB
- - -	TOX			6/16/87	JB
- - -	Routine Digest	6/3/87*			
- - -	Barium	*		6/9/87	PC
- - -	Cadmium	*		6/10/87	MM
- - -	Calcium	*		6/18/87	PC
- - -	Chromium	*		6/4/87	MM
- - -	Lead	*		6/10/87	MM
- - -	Magnesium	*		6/15/87	PC
- - -	Nickel	*		6/9/87	MM
- - -	Sodium	*		6/18/87	PC
- - -	Chromium, Hex	6/17/87		6/17/87	RR **
- - -	Arsenic	6/3/87		6/4/87	JV
- - -	Antimony	6/3/87		6/4/87	JV
- - -	Selenium	6/3/87		6/4/87	JV
- - -	Silver	6/5/87		6/5/87	MM
- - -	Mercury	6/1/87		6/2/87	JV
- - -	:			,	
- - -					
- - -					
- - -					
- - -	** Analyses conducted outside of holding time due to				

Exchange Street 85 Trinity Place
West, NY 14608 Hackensack, NJ 07601

GTC Job No. 71282
Client Project No. _____

Sample Origination & Shipping Information

Collection Site Dupont Necco
Address NIAGARA FALLS NY State RE Pickel Zip _____
Collector R.E. Pickel Print _____ Signature _____

Bottles Prepared by V. GARDNER
Bottles Shipped to Client via GTC
Samples Shipped via GTC

Rec'd by _____
Seal/Shipping # _____
Seal/Shipping # _____

Sample(s) Relinquished by: T. FARGO

Received by: RE Pickel Date/Time _____

1. Sign	1. Sign	5/20/87
for <u>DUPONT</u>	for <u>General testing</u>	14:00
2. Sign	2. Sign	1 1
for	for	:
3. Sign	3. Sign	1 J
for	for	:

Sample(s) Received in Laboratory by V. Gardner 5/20/87 @ 14:00

Client I.D.#	Sample Location	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep				Bottle Set(s) (see below)
				Preserved	Filtered	Y	N	
1	<u>A</u>	<u>52</u>	<u>X</u>	<u>Metals</u>	<u>✓</u>			<u>2,</u>
		<u>5/20/87 9:15</u>		<u>NAPL</u>				
3								
4								
5								

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10
Bottle Type	40 ml Vial	Pint Glass	Qt Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt PL	Gal PL	Steril PL	
# of each		<u>1</u>								

Additional Analytes _____

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.

* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste River or Stream (R), Pond (P), Industrial Discharge (I), (X), pump house

300886

Appendix C

300887

Auditor: KHY
 Date: 8/26/87
 Reviewer: _____
 Date: _____

TABLE F-1

QA/QC AUDIT FORM FOR NAPL
ANALYTICAL RESULTS

I. SAMPLING QA/QC

1. List the wells sampled in the lab report on the Holding Time Worksheet. Get the list of wells sampled from the project manager. Were the requested wells monitored? Record any differences.
- 2a. Check the back of the laboratory report for chain-of-custody forms. Were chain-of-custody forms included with the laboratory report?
- b. Were the proper well numbers, dates, signatures, and preservatives used?
- c. Was one trip blank (TB) included with the laboratory shipment for each sampling date?
- d. Was a field duplicate collected?

II. INSTRUMENT TUNING AND CALIBRATION

A. GC/MS CALIBRATION

1. Check the laboratory chronology QA/QC for BFB and DFTPP calibrations. Compare the results to the abundance criteria listed on Table 5-3. Do the results fit the abundance criteria?

Comments

The requested wells were monitored. However, NAPL was only apply to be sampled from 8 wells rather than 9 due to sample volume

(Y) N

(Y) N

(Y) N

Y N - a trip blank was included for each shipment date there were 2 shipment dates & three sampling days

Y (N) - not required

(Y) N

Woodward-Clyde Consultants

300888

TABLE F-1 (Continued)

	Comments
a) Were internal standards analyzed?	(Y) N
b) Which internal standards were selected?	<u>d₈-Naphthalene</u> <u>d₁₀-Acenaphthalene</u> <u>d₁₀-Phenanthrene</u>
c) Were a minimum of three concentrations analyzed for each standard?	Y (N) - calculated based on retention time
2. Check the Analytical QC section of the laboratory report on the laboratory chronology.	
a) Were laboratory blanks analyzed?	(Y) N
b) How often?	<u>one with every analytical batch</u>
c) Were any compounds detected?	Y N - laboratory blank data is not included with the report but is available upon request
d) If so, what were they?	<u>SEE ATTACHMENT A</u>
3. The laboratory QC section contains spike recovery information. Complete the Spike Recovery Worksheet located in the back of this appendix.	
a) How many samples were spiked with the compounds analyzed?	<u>one - sample VH-129C</u>
4) Compare the compounds listed in the laboratory report to the compounds listed on Table F-2.	- Data issued on 8/87 contained the priority pollutant compounds
a) Were the correct parameters analyzed for?	Y (N) - Data was reissued on 10/87 using the HSL compounds except for Methoxybenzodioxin ketone

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TABLE F-1 (Continued)

	Comments
b) Were all analyses performed for each sample?	(Y) N
c) Were all aspects of the analyses reported completely?	(Y) N
5. Surrogate spikes were analyzed for all of the samples. List the well number, the date collected, and the surrogate spike percent recovery information on the Surrogate Spike Percent Recovery Worksheet in the back of this appendix.	
6. Were any compounds detected in the trip blanks? If so, what compounds were detected for which samples?	- 2 trip blanks were collected Y N However, trip blank data was not presented with the analytical results. Trip blank data is available upon request from the laboratory
7. Compare the analytical methodology to the reported dilution factors.	
a) Do the dilution factors enable the compound to be detected in the linear range?	(Y) N
8. Record field duplicate information on the Field Duplicate Worksheet at the back of this appendix. A duplicate should be collected once every six months.	
a) Was a field duplicate collected?	- not required (Y) N
9. Laboratory replicate data is located in the QC section with the laboratory chronology.	
a) Were laboratory replicates run?	(Y) N one laboratory replicate was run for each fraction

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TABLE F-1 (Continued)

Comments

10. Use the Equipment Blank Worksheet in the back of this appendix.

a) Were two equipment blanks collected for each sampling event?

Y N

b) Were any compounds detected?

Y N

If so, what were they and at what concentrations? _____

11. Were library searches performed on the volatile, base/neutral, and acid fractions?

Y N

Auditor's Signature: _____

Rebecca Young

Date: _____

10/27/87

Reviewer's Signature: _____

Date: _____

Project Manager's Signature: _____

Date: _____

ATTACHMENT A

Two types of laboratory blanks are used by ETC;

1. Solvent blanks
2. QC blank

Solvent blanks are run with the analytical batch to assure that there is not cross contaminant between batches. Solvent blank data is not included with the analytical report but is available upon request.

QC blanks are initiated during sample preparation and accompany the sample. QC blanks are used to check for laboratory contamination through analysis. One QC blank was used for the NAPL samples analyzed. The following are the analytical results of the QC blank:

<u>Group</u>	<u>Compound</u>	<u>Concentration ug/l</u>
Volatiles	Methylene chloride	9.4
Acids	None	--
Base/Neutrals	Di-n-butylphthalate	BDL*

*BDL = below detection limit