PHASE I SEDIMENT DATA ASSESSMENT REPORT

CHERRY FARM SITE (NYSDEC SITE NO. 9-15-063)
RIVER ROAD SITE (NYSDEC SITE NO. 9-15-031)
Tonawanda, New York

SUBMITTED TO

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS
WASTE REMEDIATION

SUBMITTED BY

CHERRY FARM / RIVER ROAD SITE
PRP GROUP

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.
37 Franklin Street
Buffalo, New York 14202
(716) 854-0528 • FAX (716) 854-0459

PARSONS

APRIL 1995
H:\GRAPHICS\726671\CHERRYCV.DS4

PHASE I SEDIMENT ASSESSMENT REPORT
CHERRY FARM/RIVER ROAD SITE
TONAWANDA, NEW YORK
POTENTIALLY RESPONSIBLE PARTY GROUP

PARSONS ENGINEERING SCIENCE, INC.
Buffalo, New York
April 1995

PHASE I SEDIMENT DATA ASSESSMENT REPORT

For:
CHERRY FARM SITE
RIVER ROAD
TONAWANDA, ERIE COUNTY, NEW YORK
(NYSDEC SITE NO. 9-15-063)

RIVER ROAD SITE
4000 RIVER ROAD
TONAWANDA, ERIE COUNTY, NEW YORK
(NYSDEC SITE NO. 9-15-031)

Submitted to:

THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

Submitted by:

THE CHERRY FARM AND RIVER ROAD POTENTIALLY RESPONSIBLE PARTIES

Prepared by:

PARSONS ENGINEERING SCIENCE, INC.
37 FRANKLIN STREET
SUITE 200
BUFFALO, NEW YORK 14202
PHONE: (716) 854-0528
FAX: (716) 854-0459

APRIL 1995

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SECTION 1

INTRODUCTION AND BACKGROUND

1.0 INTRODUCTION

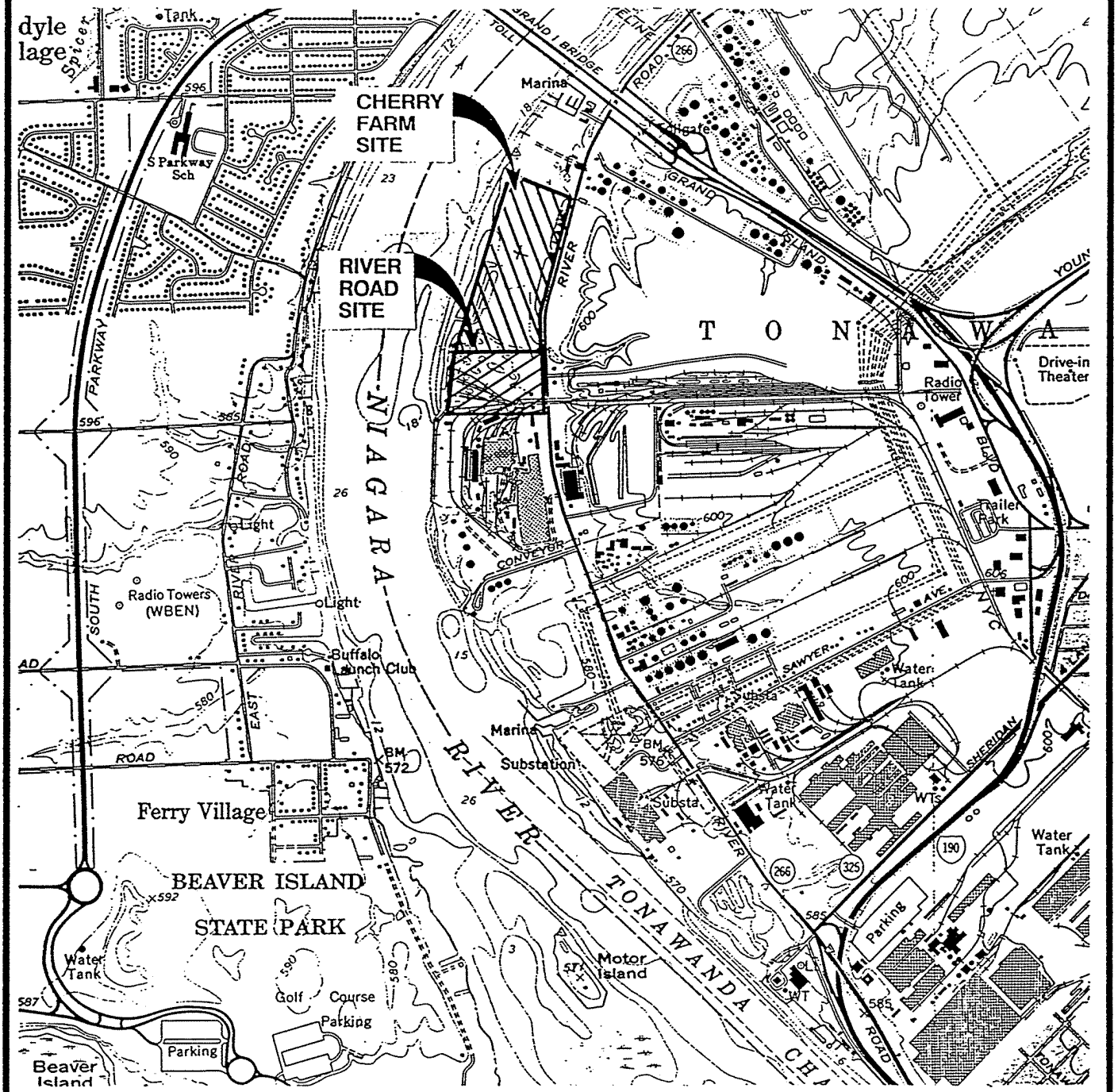
In accordance with the New York State Department of Environmental Conservation (NYSDEC) Order on Consent for the Cherry Farm Site (Index No. B9-0046-84-10, NYSDEC Site No. 9-15-063) and the River Road Site (Index No. B9-0047-91-02, Site No. 9-15-031), the Potentially Responsible Parties (PRP) Group was required to sample river sediments and prepare a technical memorandum or report to the NYSDEC presenting the results. The purpose of sampling was to determine if there exists a discernable difference in quality between sediments sampled adjacent to each site and sediments sampled from upstream locations. This Phase I Sediment Data Assessment Report presents the results of the sampling.

This report is organized into four sections. This first section, Introduction and Background, provides a brief site history and project background. Section 2, Methodology, describes procedures used in sample collection and the analytical methods used for analysis. Section 3, Results, presents the analytical results and the statistical analyses of the data. Conclusions are presented in Section 4.

1.1 BACKGROUND

The River Road Site and the Cherry Farm Site adjoin each other and are located in the Town of Tonawanda (see Figure 1.1). The River Road Site is approximately 23 acres in size and is located along the Niagara River, south of the Grand Island Bridge. The northern half of the Site is owned by Mr. Matthew Duggan of Amherst, New York, and the southern portion of the Site is owned by Niagara River World, Inc. and Clarence Materials Corporation (Pineledge Holding Corporation). The Tonawanda Coke Corporation operates two retention ponds on the Site near the southwestern boundary. The Cherry Farm Site is 55 acres in size and is located immediately north of the River Road Site. The Cherry Farm Site is owned by Niagara Mohawk Power Corporation.

These two Sites were at one time part of a larger piece of property owned by the Wickwire-Spencer Steel Company. The Cherry Farm and River Road Sites were used for the disposal of waste from the steel manufacturing process from approximately 1908 to 1963, and were operated as a landfill for disposal of industrial wastes from facilities in the area from 1963 to until about 1970. Flyash, bottom ash, foundry sand, slag, sludge, liquid boiler cleaning waste, concrete rubble, and miscellaneous fill were disposed on the two Sites. Slag covers a significant portion of the River Road Site and parts of the Cherry Farm Site. Due to the common history, former common ownership, and similar remedial programs, it was considered appropriate to combine the remedial program at the two Sites (henceforth referred to as the Site).



LAT. 42-59'-26"
LONG. 78-56'-14"

SCALE
0 2000 4000 FT.

PARSONS ENGINEERING SCIENCE

SITE LOCATION MAP CHERRY FARM / RIVER ROAD SITES

REFERENCE:

U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, BUFFALO NW, NEW YORK- ONTARIO, CANADA (1965) SCALE 1:24000

SECTION 2

METHODOLOGY

2.0 INTRODUCTION

This section describes the procedures used for sediment sampling and analysis at the Site. The procedures used are outlined in the Sampling and Analysis Plan for Niagara River Sediments, (Remcor, Inc., October 1994) (Appendix A).

2.1 FIELD METHODS

Three zones were sampled in the Niagara River. Zone A sampling locations were located upstream from the site in the vicinity of the Mid-River Marina, Ltd. These samples aided in the determination of overall sediment quality, and any impacts on sediment quality from upstream industries, the City of Buffalo publicly owned treatment works, and Lake Erie. Zone B sampling locations were located immediately upstream of the Site, adjacent to Roblin Steel, Inc. These samples were useful in determining overall sediment quality and the potential for the impact of iron deposition during unloading of lake transport ships. Zone C included all sampling locations adjacent to the Site. River stations were selected in each zone, and three sample locations were selected at each station, as outlined in the Sampling and Analyses Plan (Appendix A). Table 2.1 provides a comparison of proposed and actual sample locations. Figure 2.1 presents the actual locations of Zone C sampling stations.

Each sample was given a unique six digit identification label. The labels were limited to six characters due to laboratory reporting constraints. The first three digits of the sample identification represented the first three digits of the station number. The last three digits of the sample identification represent the distance from the east shore of the Niagara River at which the sample was collected. For example: Sample ID 100100 represents the sample collected at station 10,000, located 100 feet from shore. Sample ID 40010 represents the sample collected at station 4,000, located 10 feet from shore. By using this sample labeling scheme, no two samples had the same label.

Sample location 45100 could not be sampled in the field due to lack of fine sediments at that location. A sample was collected at 46100 instead. Station 4800 could not be safely sampled due to the presence of metal pilings located off-shore in the area. It was determined that the safety of the sampling personnel would be jeopardized if sampling was attempted in that area. Samples were collected at Station 5500 instead.

Sediment samples were collected from the upper 6 inches of sediment using a Ponar Dredge clamshell sampler. The samples were then placed in the laboratory supplied sample bottles, labeled, and stored on ice. Pertinent information was recorded in the field book as well as chain-of-custody (COC) forms. The sampler was decontaminated between sample locations. Samples were shipped to the contract laboratory within 48 hours of collection. All sampling and COC protocols were

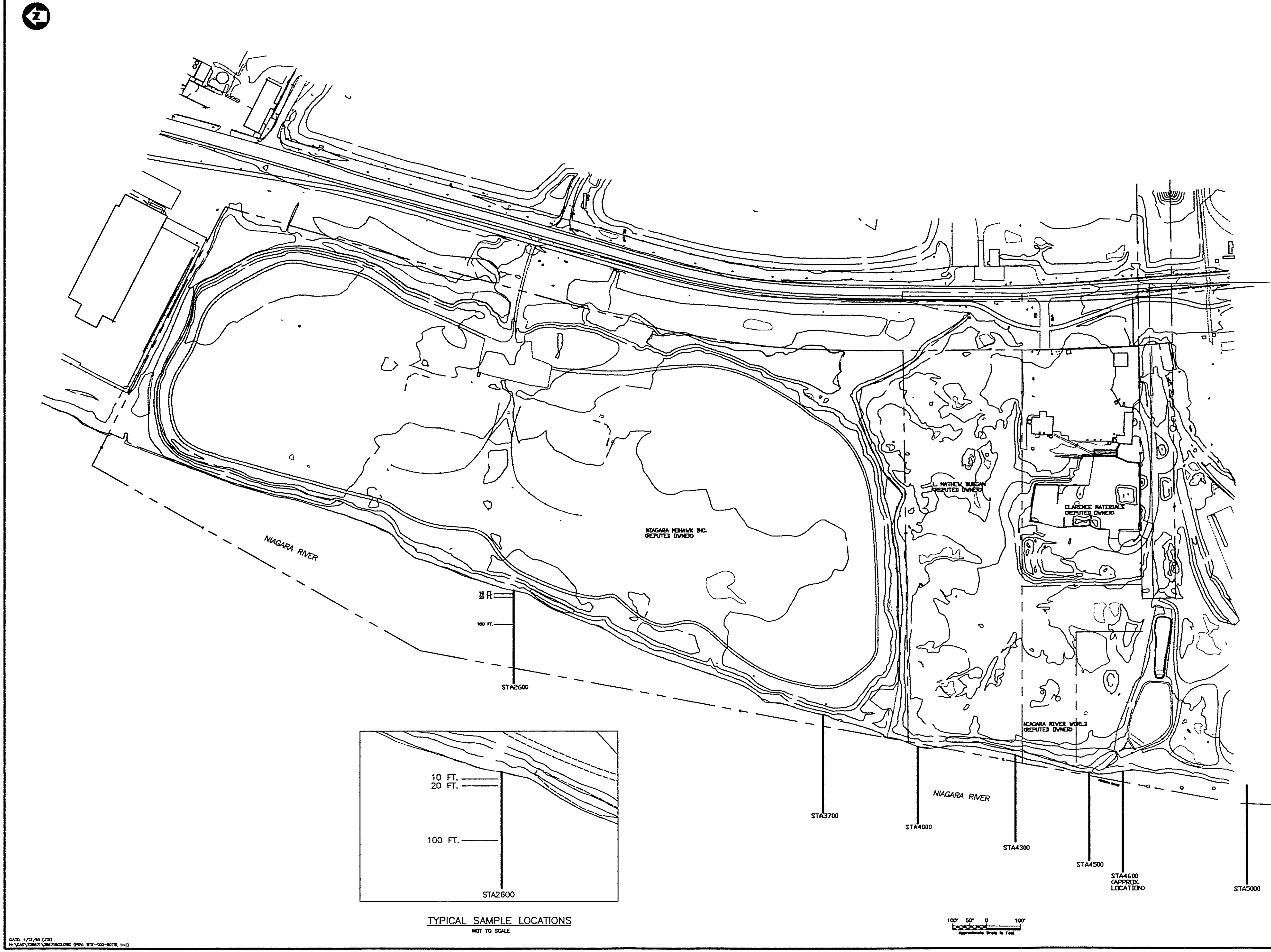
followed as outlined in Appendix A of the Remedial Action Work Plan (Parsons Engineering Science, 1994).

2.2 ANALYTICAL METHODS

All samples and appropriate QA/QC samples were analyzed for Target Compound List semivolatile organic compounds, PCBs, metals, cyanide, and total organic carbon. Sediment samples were also analyzed for grain size and Atterburg Limits. These analyses were selected to conform with the NYSDEC sampling program used previously at the site. All analyses followed appropriate guidelines, per the Quality Assurance Project Plan (QAPP).

TABLE 2.1
ALTERNATIVE SAMPLE LOCATIONS

PROPOSED SAMPLE LOCATIONS	ACTUAL SAMPLE LOCATIONS
45100	46100
48100	55100
48020	55020
48010	55002



CHERRY FARM/RIVER ROAD REMEDIAL DESIGN

ZONE C SAMPLE LOCATIONS

CHERRY FARM/RIVER ROAD PRP GROUP

PARSONS ENGINEERING SCIENCE, INC.
BUFFALO, NEW YORK
(716) 854-0528

Issue Certification
NOT FOR BIDDING OR CONSTRUCTION

Job No. 726071
Designed EWM
Drawn JTS
Checked EWM
Reviewed
Approved
Reg. No. –
Date

Rev	Date	Description	By
A	4/12/95	ISSUED FOR REPORT SUBMITTAL	

FIGURE NO. 2.1

REV. A

SECTION 3

RESULTS

3.0 INTRODUCTION

All sediment analytical data, with the exception of grain size and Atterburg Limits, were validated by Parsons Engineering Science's Detroit Office. Using the validated data, background concentrations of all detected parameters were analyzed statistically and compared to adjacent sediment samples to determine if a discernable difference in sediment quality exists between upstream areas and the Site.

3.1 VALIDATED DATA

Sediment data were validated as specified in the Quality Assurance Project Plan (QAPP), submitted previously to the NYSDEC. The occurrence of QC outliers resulted in some estimated and unusable values. Overall, the usability of the data was not significantly affected. The Data Validation Report is presented in Appendix B.

Semivolatile data were complete and usable for all sediment samples with the exception of hexachlorocyclopentadiene, which was deemed as unusable (R) for several samples. However, this compound has not been detected in previous studies conducted at either the Cherry Farm or River Road Sites. All validated semivolatile sediment data are presented in Table 3.1. All validated PCB, total organic carbon (TOC), and metals data are presented in Table 3.2. This data set was also complete and usable with the exception of a number of cyanide samples. Cyanide values were deemed unusable (R) for many samples, and these samples were not included in the statistical analysis. A list of data qualifiers is presented in Table 3.3. Grain size and Atterburg Limit data are presented in Table 3.4 Atterburg Limit analysis could not be performed on several samples due to the absence of clayey particles in the samples.

3.2 STATISTICAL ANALYSES

To determine whether there is a discernable difference in the quality of sediments between the Site and areas upstream, a representative concentration of background (upstream) sediments must be determined. The representative concentration, as outlined in the Sampling and Analysis Plan and the most recent USEPA Guidance, is the upper 95th percentile confidence limit (UCL) of the arithmetic mean of the background data. The background representative concentration was determined only for compounds which were detected in samples adjacent to the site, otherwise no comparison would be possible.

Mean concentrations for each chemical were determined by averaging detected concentrations along with non-detects, using one-half the sample quantitation limit as the concentration value for non-detects (Tables 3.5 and 3.6). Standard statistical methods were used to calculate the UCL on the arithmetic mean (Table 3.6). The UCL was calculated as follows:

$$UCL_{95} = X + \left(t_{95} \times \frac{S}{\sqrt{n}} \right)$$

Where:

UCL_{95}	=	95th percentile upper confidence limit
X	=	sample mean
S	=	standard deviation of the samples
t_{95}	=	student t value at selected confidence of 95% (2.08)
n	=	number of samples (22)

In accordance with accepted practice, the standard deviation of the samples is used because the number of samples was less than 30. The student t value used was 2.08, and the number of samples was 22.

The concentrations of compounds detected adjacent to the site were compared with the UCL for that compound (Table 3.7). If concentrations of the adjacent sample were greater than the UCL, a B was placed next to the concentration. Those samples which exceeded the representative background concentration were compared to NYSDEC sediment quality criteria. Samples which also exceeded the NYSDEC sediment criteria were indicated by placing an S next to the concentration. Compounds which were not detected in a sample were left blank. Detected compounds which did not exceed background were not marked.

3.3 DISCUSSION OF RESULTS

The purpose of the sediment sampling and analyses was to determine if sediments in the Niagara River have been adversely affected by the Site. To be considered adversely affected, the sediment must meet three criteria:

1. There must be a discernable difference in concentrations between sediments adjacent to the site and background sediments sampled upstream from the Site. Consequently, the UCL of constituents in background samples was compared to concentrations in adjacent sediments. If the concentrations of a detected analyte in adjacent sediment sample exceeded the UCL (i.e.; "exceeds background"), the adjacent sediment was considered to show a discernable difference in that constituent (Tables 3.5, 3.6, and 3.7).
2. Any detected analytes must exceed NYSDEC sediment criteria. Standards for organic compounds were determined using an average Total Organic Carbon content of 39,558 (mg/kg), or 4%. This was an average of all samples collected (Table 3.7).
3. Any detected contaminants which exceed background and NYSDEC sediment criteria must be attributable to the Site.

All contaminants detected in samples adjacent to the Site which exceeded background and NYSDEC sediment criteria are presented in Table 3.8. Seven samples indicated the presence of semivolatile organic compounds which exceed background and sediment criteria. These included samples 46100, 45020, 45010, 43100, 40100,

37100, and 37020. The highest semivolatile organic (SVOC) concentrations were found in sample 43100. Two other samples (40100 and 37100) showed similar levels of contamination. At all three locations, SVOCs were found at higher concentrations 100 feet from shore, and lower concentrations closer to shore. Sample 46100 also contained SVOC contaminants, but at lower concentrations than other samples collected 100 feet from shore.

The remaining three samples that contained SVOC contaminants were located closer to shore. Sample 45020 was characterized by relatively high concentrations of contaminants, whereas lower levels of the same parameters were observed in sample 45010. Sample 37020 contained one analyte present at concentrations above background and sediment criteria; sample 37010 did not exhibit a discernable difference for any parameter.

Metals exceeding background and sediment criteria were present in every sample collected adjacent to the site. Iron and lead were observed in every sample except 46100. Generally, concentrations of metals were highest in samples collected 100 feet from shore and decreased in concentration towards shore. Exceptions to this included sample location 46100, which exhibited only one metal of concern, silver. This was the only location exhibiting a discernable difference for this parameter. Samples collected 20 feet from shore, at station 2600, had the highest concentrations; lower concentrations were observed in samples collected at both 10 feet and 100 feet from shore. Specific metals which did not decrease in concentration towards shore included manganese and chromium. Manganese was present only in samples collected 10 feet from shore. Chromium exhibited highest concentrations (exceeding background and sediment criteria) at 10 feet from shore and lower concentrations at 20 feet and 100 feet from shore, with few exceptions (Table 3.7). Many of the chromium concentrations detected at 20 and 100 feet from shore did not exceed background concentrations.

In the spring of 1994, the NYSDEC collected 12 sediment samples adjacent to the site. Two samples each were collected at stations 4100, 3900, 3400, 2900, 1400, and 1200 (Table 3.9). Levels of semivolatile organic compounds were similar to samples collected in this Phase I sediment investigation. Concentrations of organic constituents at stations 1200 and 1400 were minimal, with the exception of bis(2-ethylhexyl)phthalate detected at station 1200, 65 feet from shore. Elevated levels of organic compounds were observed in samples collected at stations 3000, 3900. and 4100, with higher levels closer to the shoreline. Elevated levels of organics were also observed in sediments at station 2900. At this station, higher levels were observed in the sample collected farthest from shore.

Metals concentrations detected in the NYSDEC study were also comparable to metals concentrations observed during this investigation. At stations 1200 and 1400, approximately one half of the analytes were found at higher concentrations in the near-shore samples; the remaining analytes were found present at higher concentrations in samples collected farthest from shore. At stations 2900 and 3400 the majority of metals exhibited higher concentrations in samples collected farthest from shore. At stations 3900 and 4100, the majority of the metals exhibited higher concentrations in samples collected closest to shore.

TABLE 3.1
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	100100	100020	100010	90100	90020	90011	90010
Phenol	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
bis(2-Chloroethyl) Ether	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2-Chlorophenol	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
1,3-Dichlorobenzene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
1,4-Dichlorobenzene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
1,2-Dichlorobenzene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2-Methylphenol	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2,2'-oxybis(1-Chloropropane)	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
4-Methylphenol	500 J	1,200 UJ	3,700 UJ	560 J	310 J	2,400 UJ	4,800 UJ
N-Nitroso-di-n-propylamine	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
Hexachloroethane	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
Nitrobenzene	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
Isophorone	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
2-Nitrophenol	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
2,4-Dimethylphenol	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
2,4-Dichlorophenol	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
1,2,4-Trichlorobenzene	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
Naphthalene	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
4-Chloroaniline	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 UJ	2,400 UJ	4,800 UJ
Hexachlorobutadiene	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
bis(2-Chloroethoxy) methane	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
4-Chloro-3-Methylphenol	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
2-Methylnaphthalene	1,100 U	1,200 UJ	3,700 UJ	3,300 U	760 U	2,400 UJ	4,800 UJ
Hexachlorocyclopentadiene	1,100 R	1,200 R	3,700 R	3,300 R	760 UJ	2,400 R	4,800 R
2,4,6-Trichlorophenol	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2,4,5-Trichlorophenol	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
2-Chloronaphthalene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2-Nitroaniline	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
Dimethylphthalate	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Acenaphthylene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2,6-Dinitrotoluene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
3-Nitroaniline	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 UJ	12,000 UJ	24,000 UJ
Acenaphthene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	310 J	620 J
2,4-Dinitrophenol	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 UJ	12,000 UJ	24,000 UJ
4-Nitrophenol	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
Dibenzofuran	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
2,4-Dinitrotoluene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Diethylphthalate	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
4-Chlorophenyl-phenylether	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Fluorene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	330 J	650 J
4-Nitroaniline	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
4,6-Dinitro-2-methylphenol	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
N-Nitrosodiphenylamine	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
4-Bromophenyl-phenylether	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Hexachlorobenzene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Pentachlorophenol	5,600 UJ	6,100 UJ	18,000 UJ	17,000 UJ	3,800 U	12,000 UJ	24,000 UJ
Phenanthrene	1,200 J	850 J	1,600 J	470 J	230 J	5,000 J	10,000 J
Anthracene	340 J	170 J	3,700 UJ	3,300 UJ	760 U	730 J	1,600 J
Carbazole	120 J	150 J	400 J	3,300 UJ	760 U	970 J	2,000 J
Di-n-butylphthalate	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Fluoranthene	1,800 J	1,500 J	3,800 J	720 J	340 J	7,600 J	15,000 J
Pyrene	1,300 J	1,100 J	2,600 J	540 J	260 J	5,600 J	11,000 J
Butylbenzylphthalate	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
3,3'-Dichlorobenzidine	2,200 UJ	2,400 UJ	7,400 UJ	6,700 UJ	1,500 U	4,900 UJ	9,500 UJ
Benzo(a) anthracene	730 J	520 J	1,200 J	3,300 UJ	760 U	2,400 J	4,500 J
Chrysene	840 J	690 J	1,700 J	3,300 UJ	86 J	2,900 J	5,200 J
bis(2-Ethylhexyl) phthalate	1,100 U	1,200 U	3,700 U	3,300 U	6,000	2,400 U	4,800 UJ
Di-n-octylphthalate	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Benzo(b) fluoranthene	540 J	580 J	1,600 J	3,300 UJ	760 U	1,900 J	3,500 J
Benzo(k) fluoranthene	570 J	400 J	1,300 J	3,300 UJ	760 U	1,900 J	3,500 J
Benzo(a) pyrene	590 J	430 J	1,300 J	3,300 UJ	760 U	1,900 J	3,400 J
Indeno(1,2,3-cd) pyrene	280 J	210 J	640 J	3,300 UJ	760 U	780 J	1,500 J
Dibenz(a,h) anthracene	1,100 UJ	1,200 UJ	3,700 UJ	3,300 UJ	760 U	2,400 UJ	4,800 UJ
Benzo(g,h,i) perylene	300 J	230 J	720 J	3,300 UJ	760 U	780 J	1,500 J

TABLE 3.1 (CON'T)
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	80100	80020	80010	70100	70020	70010	60100
Phenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
bis(2-Chloroethyl) Ether	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2-Chlorophenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
1,3-Dichlorobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
1,4-Dichlorobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
1,2-Dichlorobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2-Methylphenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2,2'-oxybis(1-Chloropropane)	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
4-Methylphenol	24,000 UJ	900 U	890 U	74 J	2,500 U	920 U	400 U
N-Nitroso-di-n-propylamine	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Hexachloroethane	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Nitrobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Isophorone	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2-Nitrophenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2,4-Dimethylphenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2,4-Dichlorophenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
1,2,4-Trichlorobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Naphthalene	24,000 UJ	770 J	750 J	58 J	450 J	100 J	400 U
4-Chloroaniline	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Hexachlorobutadiene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
bis(2-Chloroethoxy) methane	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
4-Chloro-3-Methylphenol	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2-Methylnaphthalene	24,000 UJ	180 J	230 J	440 U	2,500 U	920 U	400 U
Hexachlorocyclopentadiene	24,000 R	900 UJ	890 UJ	440 UJ	2,500 UJ	920 UJ	400 UJ
2,4,6-Trichlorophenol	24,000 UJ	900 UJ	890 UJ	440 U	2,500 U	920 U	400 U
2,4,5-Trichlorophenol	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
2-Chloronaphthalene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
2-Nitroaniline	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
Dimethylphthalate	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Acenaphthylene	2,400 J	1,200	1,600	440 U	2,500 U	920 U	400 U
2,6-Dinitrotoluene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
3-Nitroaniline	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
Acenaphthene	24,000 UJ	900 J	860 J	45 J	2,500 U	920 U	400 U
2,4-Dinitrophenol	120,000 UJ	4,500 UJ	4,400 UJ	2,200 U	12,000 U	4,600 U	2,000 U
4-Nitrophenol	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
Dibenzofuran	24,000 UJ	1,100	1,300	440 U	2,500 U	920 U	400 U
2,4-Dinitrotoluene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Diethylphthalate	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
4-Chlorophenyl-phenylether	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Fluorene	4,200 J	2,300	2,800	74 J	360 J	920 U	400 U
4-Nitroaniline	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
4,6-Dinitro-2-methylphenol	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
N-Nitrosodiphenylamine	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
4-Bromophenyl-phenylether	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Hexachlorobenzene	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Pentachlorophenol	120,000 UJ	4,500 U	4,400 U	2,200 U	12,000 U	4,600 U	2,000 U
Phenanthrene	39,000 J	7,200	9,000 J	400 J	1,400 J	530 J	400 U
Anthracene	7,200 J	2,100	2,700	90 J	400 J	100 J	400 U
Carbazole	24,000 UJ	220 J	280 J	440 U	2,500 U	920 U	400 U
Di-n-butylphthalate	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Fluoranthene	45,000 J	9,300 J	12,000 J	480	2,300 J	780 J	400 U
Pyrene	30,000 J	6,500	8,900 J	340 J	1,700 J	580 J	400 U
Butylbenzylphthalate	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
3,3'-Dichlorobenzidine	48,000 UJ	1,800 U	1,800 U	880 U	4,900 U	1,800 U	790 U
Benzo(a) anthracene	14,000 J	3,700	5,000	180 J	970 J	310 J	400 U
Chrysene	15,000 J	3,600	5,000	180 J	1,000 J	340 J	400 U
bis(2-Ethylhexyl) phthalate	3,100 J	900 U	890 U	440 U	2,500 U	920 U	400 U
Di-n-octylphthalate	24,000 UJ	900 U	890 U	440 U	2,500 U	920 U	400 U
Benzo(b)fluoranthene	13,000 J	2,400	3,200	130 J	610 J	200 J	400 U
Benzo(k)fluoranthene	9,300 J	1,600	1,800	92 J	580 J	220 J	400 U
Benzo(a)pyrene	12,000 J	2,600	3,300	120 J	650 J	200 J	400 U
Indeno(1,2,3-cd)pyrene	5,800 J	1,400	1,700	67 J	340 J	130 J	400 U
Dibenz(a,h) anthracene	24,000 UJ	110 J	160 J	440 U	2,500 U	920 U	400 U
Benzo(g,h,i)perylene	6,400 J	1,400	1,800	72 J	380 J	130 J	400 U

TABLE 3.1 (CON'T)
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	60020	60012	60002	55100	55020	55002	50100
Phenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
bis(2-Chloroethyl) Ether	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2-Chlorophenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
1,3-Dichlorobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
1,4-Dichlorobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
1,2-Dichlorobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2-Methylphenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2,2'-oxybis(1-Chloropropane)	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
4-Methylphenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
N-Nitroso-di-n-propylamine	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Hexachloroethane	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Nitrobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Isophorone	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2-Nitrophenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2,4-Dimethylphenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2,4-Dichlorophenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
1,2,4-Trichlorobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Naphthalene	95 J	220 J	89 J	880 U	140 J	210 J	430 UJ
4-Chloroaniline	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Hexachlorobutadiene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
bis(2-Chloroethoxy) methane	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
4-Chloro-3-Methylphenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2-Methylnaphthalene	440 U	890 U	440 U	880 U	920 U	97 J	430 UJ
Hexachlorocyclopentadiene	440 UJ	890 UJ	440 UJ	880 UJ	920 UJ	940 UJ	430 UJ
2,4,6-Trichlorophenol	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2,4,5-Trichlorophenol	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
2-Chloronaphthalene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
2-Nitroaniline	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
Dimethylphthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Acenaphthylene	140 J	890 U	440 U	880 U	160 J	200 J	430 UJ
2,6-Dinitrotoluene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
3-Nitroaniline	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
Acenaphthene	190 J	150 J	54 J	880 U	160 J	130 J	430 UJ
2,4-Dinitrophenol	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
4-Nitrophenol	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
Dibenzofuran	110 J	130 J	64 J	880 U	150 J	190 J	430 UJ
2,4-Dinitrotoluene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Diethylphthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
4-Chlorophenyl-phenylether	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Fluorene	280 J	240 J	110 J	880 U	340 J	420 J	430 UJ
4-Nitroaniline	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
4,6-Dinitro-2-methylphenol	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
N-Nitrosodiphenylamine	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
4-Bromophenyl-phenylether	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Hexachlorobenzene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Pentachlorophenol	2,200 U	4,400 U	2,200 U	4,400 U	4,600 U	4,700 U	2,100 UJ
Phenanthrene	1,400	1,500	730	880 U	2,100	1,800	380 J
Anthracene	290 J	410 J	180 J	880 U	470 J	400 J	87 J
Carbazole	54 J	120 J	440 U	880 U	920 U	940 U	430 UJ
Di-n-butylphthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Fluoranthene	1,600	1,900 J	1,000 J	97 J	2,800	2,200	810 J
Pyrene	1,300	1,500	800	880 U	2,100	1,700	670 J
Butylbenzylphthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
3,3'-Dichlorobenzidine	880 U	1,800 U	880 U	1,800 U	1,800 U	1,900 U	850 UJ
Benzo(a) anthracene	700	900	450	880 U	1,100	840 J	320 J
Chrysene	700	1,000	490	880 U	1,100	910 J	350 J
bis(2-Ethylhexyl) phthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 U
Di-n-octylphthalate	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Benzo(b) fluoranthene	400 J	550 J	260 J	880 U	700 J	540 J	240 J
Benzo(k) fluoranthene	360 J	400 J	260 J	880 U	680 J	440 J	310 J
Benzo(a) pyrene	440	510 J	280 J	880 U	740 J	540 J	310 J
Indeno(1,2,3-cd) pyrene	220 J	210 J	140 J	880 U	330 J	240 J	160 J
Dibenz(a,h) anthracene	440 U	890 U	440 U	880 U	920 U	940 U	430 UJ
Benzo(g,h,i) perylene	210 J	190 J	140 J	880 U	320 J	230 J	170 J

TABLE 3.1 (CON'T)
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	50020	50002	46100	45020	45010	43100	43020
Phenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
bis(2-Chloroethyl) Ether	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2-Chlorophenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
1,3-Dichlorobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
1,4-Dichlorobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
1,2-Dichlorobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2-Methylphenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2,2'-oxybis(1-Chloropropane)	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
4-Methylphenol	920 UJ	1,000 UJ	140 J	3,900 U	2,200 U	55,000 UJ	2,200 UJ
N-Nitroso-di-n-propylamine	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Hexachloroethane	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Nitrobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Isophorone	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2-Nitrophenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2,4-Dimethylphenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2,4-Dichlorophenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
1,2,4-Trichlorobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Naphthalene	100 J	1,000 UJ	1,300	2,600 J	840 J	54,000 J	910 J
4-Chloroaniline	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Hexachlorobutadiene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
bis(2-Chloroethoxy) methane	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
4-Chloro-3-Methylphenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2-Methylnaphthalene	920 UJ	1,000 UJ	580 J	750 J	2,200 U	55,000 J	2,200 UJ
Hexachlorocyclopentadiene	920 UJ	1,000 UJ	900 UJ	3,900 UJ	2,200 UJ	55,000 UJ	2,200 UJ
2,4,6-Trichlorophenol	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2,4,5-Trichlorophenol	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 U	270,000 UJ	11,000 UJ
2-Chloronaphthalene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
2-Nitroaniline	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 U	270,000 UJ	11,000 UJ
Dimethylphthalate	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Acenaphthylene	920 UJ	1,000 UJ	1,100	9,900	3,500 J	52,000 J	300 J
2,6-Dinitrotoluene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
3-Nitroaniline	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 U	270,000 UJ	11,000 UJ
Acenaphthene	920 UJ	100 J	1,500	1,400 J	230 J	14,000 J	2,200 UJ
2,4-Dinitrophenol	4,600 UJ	5,000 UJ	4,500 UJ	19,000 UJ	11,000 UJ	270,000 UJ	11,000 UJ
4-Nitrophenol	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 U	270,000 UJ	11,000 UJ
Dibenzofuran	920 UJ	130 J	1,200	6,400	1,200 J	19,000 J	2,200 UJ
2,4-Dinitrotoluene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Diethylphthalate	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
4-Chlorophenyl-phenylether	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Fluorene	120 J	140 J	2,000	15,000	4,000 J	100,000 J	350 J
4-Nitroaniline	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 U	270,000 UJ	11,000 UJ
4,6-Dinitro-2-methylphenol	4,600 UJ	5,000 UJ	4,500 UJ	19,000 UJ	11,000 UJ	270,000 UJ	11,000 UJ
N-Nitrosodiphenylamine	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
4-Bromophenyl-phenylether	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Hexachlorobenzene	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Pentachlorophenol	4,600 UJ	5,000 UJ	4,500 U	19,000 U	11,000 UJ	270,000 UJ	11,000 UJ
Phenanthrene	1,200 J	2,500 J	5,800	64,000 J	26,000 J	390,000 J	2,500 J
Anthracene	240 J	160 J	2,200	31,000 J	15,000 J	74,000 J	730 J
Carbazole	200 J	230 J	620 J	950 J	240 J	55,000 UJ	250 J
Di-n-butylphthalate	920 UJ	140 J	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Fluoranthene	1,900 J	3,300 J	8,700 J	61,000 J	35,000 J	150,000 J	4,400 J
Pyrene	1,500 J	2,000 J	7,400 J	58,000 J	35,000 J	220,000 J	3,400 J
Butylbenzylphthalate	920 UJ	170 J	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
3,3'-Dichlorobenzidine	1,800 UJ	2,000 UJ	1,800 UJ	7,800 UJ	4,500 U	110,000 UJ	4,500 UJ
Benzo(a) anthracene	730 J	500 J	6,300	31,000 J	22,000 J	82,000 J	2,000 J
Chrysene	850 J	970 J	6,100	32,000 J	22,000 J	94,000 J	1,900 J
bis(2-Ethylhexyl) phthalate	2,100 J	2,000 U	900 U	3,900 U	2,200 U	55,000 UJ	2,200 U
Di-n-octylphthalate	920 UJ	1,000 UJ	900 U	3,900 U	2,200 U	55,000 UJ	2,200 UJ
Benzo(b)fluoranthene	650 J	380 J	3,400	18,000	13,000 J	34,000 J	1,600 J
Benzo(k)fluoranthene	550 J	420 J	2,300	9,000	5,100 J	40,000 J	1,600 J
Benzo(a) pyrene	630 J	250 J	3,400	21,000	14,000 J	71,000 J	1,900 J
Indeno(1,2,3-cd) pyrene	300 J	130 J	1,700	11,000	7,400 J	23,000 J	1,000 J
Dibenz(a,h) anthracene	920 UJ	1,000 UJ	220 J	800 J	640 J	55,000 UJ	2,200 UJ
Benzo(g,h,i) perylene	300 J	140 J	1,800	13,000	7,900 J	29,000 J	1,200 J

TABLE 3.1 (CON'T)
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	43010	40100	40020	40010	37100	37021
Phenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
bis(2-Chloroethyl) Ether	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2-Chlorophenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
1,3-Dichlorobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
1,4-Dichlorobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
1,2-Dichlorobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2-Methylphenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2,2'-oxybis(1-Chloropropane)	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
4-Methylphenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
N-Nitroso-di-n-propylamine	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Hexachloroethane	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Nitrobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Isophorone	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2-Nitrophenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2,4-Dimethylphenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2,4-Dichlorophenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
1,2,4-Trichlorobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Naphthalene	180 J	3,600 J	310 J	420 UJ	650 J	14,000 J
4-Chloroaniline	400 UJ	5,100 UJ	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Hexachlorobutadiene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
bis(2-Chloroethoxy) methane	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
4-Chloro-3-Methylphenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2-Methylnaphthalene	400 UJ	1,400 J	850 UJ	420 UJ	4,800 UJ	360 J
Hexachlorocyclopentadiene	400 UJ	5,100 UJ	850 UJ	420 UJ	4,800 UJ	2,000 R
2,4,6-Trichlorophenol	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2,4,5-Trichlorophenol	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
2-Chloronaphthalene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
2-Nitroaniline	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
Dimethylphthalate	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Acenaphthylene	58 J	3,100 J	850 UJ	420 UJ	1,500 J	260 J
2,6-Dinitrotoluene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
3-Nitroaniline	2,000 UJ	26,000 UJ	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
Acenaphthene	400 UJ	1,400 J	850 UJ	420 UJ	540 J	2,000 UJ
2,4-Dinitrophenol	2,000 UJ	26,000 UJ	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
4-Nitrophenol	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
Dibenzofuran	400 UJ	1,500 J	850 UJ	420 UJ	870 J	270 J
2,4-Dinitrotoluene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Diethylphthalate	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
4-Chlorophenyl-phenylether	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Fluorene	43 J	5,200	130 J	420 UJ	2,900 J	520 J
4-Nitroaniline	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
4,6-Dinitro-2-methylphenol	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
N-Nitrosodiphenylamine	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
4-Bromophenyl-phenylether	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Hexachlorobenzene	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Pentachlorophenol	2,000 UJ	26,000 U	4,300 UJ	2,100 UJ	24,000 UJ	9,800 UJ
Phenanthrene	340 J	28,000	560 J	82 J	35,000 J	2,600 J
Anthracene	110 J	10,000	170 J	420 UJ	14,000 J	780 J
Carbazole	49 J	570 J	86 J	420 UJ	780 J	2,000 UJ
Di-n-butylphthalate	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Fluoranthene	950 J	29,000	1,100 J	130 J	43,000 J	5,500 J
Pyrene	780 J	28,000	890 J	100 J	32,000 J	4,200 J
Butylbenzylphthalate	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
3,3'-Dichlorobenzidine	790 UJ	10,000 U	1,700 UJ	830 UJ	9,700 UJ	3,900 UJ
Benzo(a) anthracene	450 J	14,000	580 J	48 J	14,000 J	2,600 J
Chrysene	500 J	15,000	670 J	68 J	14,000 J	2,600 J
bis(2-Ethylhexyl) phthalate	400 U	2,400 J	850 U	1,400 U	4,800 U	2,000 U
Di-n-octylphthalate	400 UJ	5,100 U	850 UJ	420 UJ	4,800 UJ	2,000 UJ
Benzo(b)fluoranthene	370 J	11,000	360 J	46 J	11,000 J	2,300 J
Benzo(k)fluoranthene	430 J	6,800	480 J	48 J	9,300 J	1,600 J
Benzo(a)pyrene	460 J	12,000	460 J	46 J	14,000 J	2,100 J
Indeno(1,2,3-cd) pyrene	260 J	5,000 J	200 J	420 UJ	7,000 J	960 J
Dibenz(a,h) anthracene	400 UJ	520 J	850 UJ	420 UJ	540 J	2,000 UJ
Benzo(g,h,i) perylene	290 J	5,200	220 J	42 J	7,900 J	950 J

TABLE 3.1 (CON'T)
CHERRY FARM/RIVER ROAD SITE SEDIMENT DATA
SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID / Analyte	37020	37010	26100	26020	26010
Phenol	1,900 UJ	510 U	910 U	460 U	890 U
bis(2-Chloroethyl) Ether	1,900 UJ	510 U	910 U	460 U	890 U
2-Chlorophenol	1,900 UJ	510 U	910 U	460 U	890 U
1,3-Dichlorobenzene	1,900 UJ	510 U	910 U	460 U	890 U
1,4-Dichlorobenzene	1,900 UJ	510 U	910 U	460 U	890 U
1,2-Dichlorobenzene	1,900 UJ	510 U	910 U	460 U	890 U
2-Methylphenol	1,900 UJ	510 U	910 U	460 U	890 U
2,2'-oxybis(1-Chloropropane)	1,900 UJ	510 U	910 U	460 U	890 U
4-Methylphenol	1,900 UJ	510 U	910 U	460 U	890 U
N-Nitroso-di-n-propylamine	1,900 UJ	510 U	910 U	460 U	890 U
Hexachloroethane	1,900 UJ	510 U	910 U	460 U	890 U
Nitrobenzene	1,900 UJ	510 U	910 U	460 U	890 U
Isophorone	1,900 UJ	510 U	910 U	460 U	890 U
2-Nitrophenol	1,900 UJ	510 U	910 U	460 U	890 U
2,4-Dimethylphenol	1,900 UJ	510 U	910 U	460 U	890 U
2,4-Dichlorophenol	1,900 UJ	510 U	910 U	460 U	890 U
1,2,4-Trichlorobenzene	1,900 UJ	510 U	910 U	460 U	890 U
Naphthalene	4,800 J	1,000	650 J	720	1,900
4-Chloroaniline	1,900 UJ	510 U	910 U	460 U	890 U
Hexachlorobutadiene	1,900 UJ	510 U	910 U	460 U	890 U
bis(2-Chloroethoxy) methane	1,900 UJ	510 U	910 U	460 U	890 U
4-Chloro-3-Methylphenol	1,900 UJ	510 U	910 U	460 U	890 U
2-Methylnaphthalene	1,900 UJ	69 J	910 U	87 J	200 J
Hexachlorocyclopentadiene	1,900 R	510 UJ	910 UJ	460 UJ	890 UJ
2,4,6-Trichlorophenol	1,900 UJ	510 U	910 U	460 U	890 U
2,4,5-Trichlorophenol	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
2-Chloronaphthalene	1,900 UJ	510 U	910 U	460 U	890 U
2-Nitroaniline	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
Dimethylphthalate	1,900 UJ	510 U	910 U	460 U	890 U
Acenaphthylene	1,900 UJ	63 J	380 J	110 J	180 J
2,6-Dinitrotoluene	1,900 UJ	510 U	910 U	460 U	890 U
3-Nitroaniline	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
Acenaphthene	1,900 UJ	93 J	910 U	460 U	94 J
2,4-Dinitrophenol	9,700 UJ	2,600 UJ	4,600 UJ	2,300 UJ	4,400 UJ
4-Nitrophenol	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
Dibenzofuran	1,900 UJ	95 J	910 U	72 J	140 J
2,4-Dinitrotoluene	1,900 UJ	510 U	910 U	460 U	890 U
Diethylphthalate	1,900 UJ	510 U	910 U	460 U	890 U
4-Chlorophenyl-phenylether	1,900 UJ	510 U	910 U	460 U	890 U
Fluorene	1,900 UJ	130 J	180 J	100 J	240 J
4-Nitroaniline	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
4,6-Dinitro-2-methylphenol	9,700 UJ	2,600 UJ	4,600 UJ	2,300 UJ	4,400 UJ
N-Nitrosodiphenylamine	1,900 UJ	510 U	910 U	460 U	890 U
4-Bromophenyl-phenylether	1,900 UJ	510 U	910 U	460 U	890 U
Hexachlorobenzene	1,900 UJ	510 U	910 U	460 U	890 U
Pentachlorophenol	9,700 UJ	2,600 U	4,600 U	2,300 U	4,400 U
Phenanthrene	1,000 J	490 J	1,200	530	830 J
Anthracene	380 J	170 J	630 J	420 J	300 J
Carbazole	1,900 UJ	510 U	910 U	460 U	890 U
Di-n-butylphthalate	1,900 UJ	510 U	910 U	460 U	890 U
Fluoranthene	2,600 J	900	3,300	1,600	2,000
Pyrene	1,800 J	760	2,600	1,400	1,700
Butylbenzylphthalate	1,900 UJ	510 U	910 U	460 U	890 U
3,3'-Dichlorobenzidine	3,900 UJ	1,000 UJ	1,800 UJ	910 UJ	1,800 UJ
Benzo(a) anthracene	1,300 J	450 J	2,100	920	1,200
Chrysene	1,400 J	500 J	2,300	1,000	1,200
bis(2-Ethylhexyl) phthalate	1,900 U	510 U	910 U	460 U	890 U
Di-n-octylphthalate	1,900 UJ	510 U	910 U	460 U	890 U
Benzo(b) fluoranthene	1,300 J	270 J	970	450 J	560 J
Benzo(k) fluoranthene	840 J	230 J	1,100	490	600 J
Benzo(a) pyrene	1,100 J	260 J	1,300	570	660 J
Indeno(1,2,3-cd) pyrene	540 J	130 J	580 J	240 J	260 J
Dibenz(a,h) anthracene	1,900 UJ	510 U	910 U	460 U	890 U
Benzo(g,h,i) perylene	560 J	130 J	550 J	240 J	260 J

TABLE 3.2
CHERRY FARM RIVER ROAD SITE SEDIMENT DATA
PCBs, TOTAL ORGANIC CARBON AND METALS

Sample ID	100100	100020	100010	90100	90020	90011	90010	80100
PCBs (ug/kg)								
Aroclor-1016	130 U	150 U	180 U	200 U	180 U	120 U	110 U	570 U
Aroclor-1221	130 U	150 U	180 U	200 U	180 U	120 U	110 U	570 U
Aroclor-1232	130 U	150 U	180 U	200 U	180 U	120 U	110 U	570 U
Aroclor-1242	130 U	150 U	180 U	200 U	180 U	120 U	110 U	570 U
Aroclor-1248	2,000 J	600 J	360 J	850 J	260 J	270 J	170 J	1,200 J
Aroclor-1254	130 U	150 U	180 U	200 U	180 U	120 U	110 U	570 U
Aroclor-1260	200	150 U	260	210	180 U	120 U	110 U	570 U
Total Organic Carbon (mg/kg)	12,472	84,238	91,433	123,933	83,359	34,571	35,509	43,214
Metals (mg/kg)								
Aluminum	5,330	7,100	18,400	12,200	15,700	5,460	5,370	4,220
Antimony	17.60 J	13.00 UJ	16.90 UJ	17.90 UJ	16.40 UJ	9.70 UJ	10.20 UJ	9.90 UJ
Arsenic	7.5	6.4	16.1	9.6	8.4	4.3	5.7	5.3 J
Barium	71.4	91.5	166.0	79.5 J	46.5 J	28.4 J	26.9 J	37.6 J
Beryllium	0.280 UJ	0.340 UJ	1.800 J	0.470 UJ	0.430 UJ	0.250 UJ	0.270 UJ	0.260 UJ
Cadmium	0.570 UJ	1.500 J	0.890 UJ	3.300 J	1.400 J	2.000 J	0.530 UJ	0.520 UJ
Calcium	62,500	26,800	37,400	19,200	12,700	16,000	10,400	8,970
Chromium	15.3	23.9	54.3	38.5	27.6	16.8	13.7	14.1
Cobalt	4.6 J	8.2 J	11.7 J	11.8 J	4.9 J	5.4 J	4.7 J	5.3 J
Copper	17.5	45.6	61.9	81.4	32.1	23.6	20.2	22.2
Iron	14,600	20,500	36,800	25,400	15,900	13,000	10,600	11,000
Lead	23.3 J	34.1 J	75.0 J	73.8 J	16.4 J	18.2 J	11.2 J	22.6 J
Magnesium	3,780	6,410	6,850	8,430	5,750	5,140	4,570	3,610
Manganese	225	317	350	578	370	291	227	157
Mercury	0.170 U	0.250	0.470	0.380	0.370	0.350	0.310	0.140 U
Nickel	12.5	16.2	27.9	34.8	17.7	17.6	13.8	16.5
Potassium	496 J	975 J	1,840 J	1,430 J	1,060 J	681 J	534 J	690 J
Selenium	1.60 U	1.70 U	2.20 U	2.40 UJ	2.00 UJ	1.30 U	1.30 U	1.40 U
Silver	1.7 UJ	2.1 UJ	2.7 UJ	3.8 J	2.6 UJ	1.5 UJ	1.6 UJ	1.6 UJ
Sodium	496 U	235 U	710 U	165 U	212 U	99 U	114 U	95 U
Thallium	1.60 U	1.70 U	1.90 U	2.40 U	2.00 U	1.40 U	1.30 U	1.20 U
Vanadium	14.6	22.4	44.5	24.7	22.8	16.6	13.0 J	14.1
Zinc	74.0 J	138.0 J	189.0 J	238.0 J	123.0 J	120.0 J	84.3 J	132.0 J
Cyanide	0.730 UJ	0.910 UJ	1.000 UJ	1.300 UJ	1.100 UJ	0.670 UJ	0.700 UJ	0.610 UJ

TABLE 3.2 (CON'T)
CHERRY FARM RIVER ROAD SITE SEDIMENT DATA
PCBs, TOTAL ORGANIC CARBON AND METALS

Sample ID	80020	80010	70100	70020	70010	60100	60020	60012
PCBs (ug/kg)								
Aroclor-1016	110 UJ	110 U	110 UJ	150 U	110 U	100 U	110 UJ	110 U
Aroclor-1221	110 UJ	110 U	110 UJ	150 U	110 U	100 U	110 UJ	110 U
Aroclor-1232	110 UJ	110 U	110 UJ	150 U	110 U	100 U	110 UJ	110 U
Aroclor-1242	110 UJ	110 U	110 UJ	150 U	110 U	100 U	110 UJ	110 U
Aroclor-1248	140 J	150 J	180 J	960 J	120 J	620 J	840 J	1,100 J
Aroclor-1254	110 UJ	110 U	110 UJ	150 U	110 U	100 U	110 UJ	110 U
Aroclor-1260	110 UJ	110 U	110 UJ	150 U	110 U	100 UJ	110 UJ	110 U
Total Organic Carbon (mg/kg)	4,472 J	7,188 J	6,838 J	48,296 J	26,517 J	15,552 J	7,719 J	23,540 J
Metals (mg/kg)								
Aluminum	3,250	3,140	3,630	5,750	6,600	3,710	2,580	2,660
Antimony	9.50 UJ	9.90 UJ	9.80 UJ	12.70 UJ	8.60 UJ	7.30 UJ	9.20 UJ	8.00 UJ
Arsenic	5.0	5.3	3.1	5.6	7.0	6.6	3.0	4.0
Barium	21.7 J	22.4 J	24.0 J	44.6 J	135.0	25.6 J	20.1 J	32.5 J
Beryllium	0.260 J	0.270 J	0.280 J	0.350 J	0.950 J	0.200 J	0.260 J	0.230 J
Cadmium	0.500 UJ	0.520 UJ	0.570 J	0.670 UJ	3.300 J	0.380 UJ	0.480 UJ	0.600 J
Calcium	4,270 J	4,700 J	40,200 J	15,600 J	33,500 J	14,200 J	16,800 J	21,200 J
Chromium	12.9 J	13.1 J	6.9 J	24.6 J	239.0 J	7.7 J	14.2 J	12.8 J
Cobalt	5.3 J	3.9 J	4.5 J	8.8 J	7.3 J	3.4 J	3.0 J	2.9 J
Copper	6.3 J	5.7 J	8.7 J	45.2 J	49.9 J	3.2 J	3.8 J	14.4 J
Iron	15,900 J	18,700 J	12,700 J	17,000 J	42,400 J	9,540 J	8,140 J	11,800 J
Lead	14.2	12.8	7.5	71.0	156.0	16.5	12.9	53.5
Magnesium	2,170	2,320	8,380	5,270	13,200	3,750	4,220	3,560
Manganese	232	247	230	452	6,070	199	222	252
Mercury	0.140 UJ	0.130 UJ	0.130 UJ	0.210 J	0.230 J	0.120 UJ	0.130 UJ	0.130 UJ
Nickel	15.4	11.9	20.6	21.2	23.9	8.9	8.1 J	10.2 J
Potassium	426 J	249 J	384 J	1,050 J	654 J	436 J	403 J	409 J
Selenium	1.30 UJ	1.30 UJ	1.20 U	1.70 U	1.30 UJ	0.97 U	1.30 U	1.20 U
Silver	4.2 J	1.6 UJ	1.6 UJ	2.0 UJ	1.4 UJ	1.1 UJ	1.4 UJ	1.3 UJ
Sodium	116 U	93 U	152 U	138 U	168 U	116 U	140 U	132 U
Thallium	1.30 U	1.30 U	1.20 U	1.70 U	1.30 U	0.97 U	1.30 U	1.20 U
Vanadium	16.9	18.4	10.1 J	17.8	52.9	9.6	8.1 J	9.3 J
Zinc	99.8 J	111.0 J	67.3 J	162.0 J	213.0 J	47.0 J	52.0 J	75.0 J
Cyanide	0.650 R	0.610 R	0.700 R	0.730 R	0.700 R	0.440 R	0.650 R	0.610 R

TABLE 3.2 (CON'T)
CHERRY FARM RIVER ROAD SITE SEDIMENT DATA
PCBs, TOTAL ORGANIC CARBON AND METALS

Sample ID	60002	55100	55020	55002	50100	50020	50002	46100
PCBs (ug/kg)								
Aroclor–1016	110 UJ	110 UJ	110 UJ	110 U	100 UJ	110 UJ	120 UJ	110 U
Aroclor–1221	110 UJ	110 UJ	110 UJ	110 U	100 UJ	110 UJ	120 UJ	110 U
Aroclor–1232	110 UJ	110 UJ	110 UJ	110 U	100 UJ	110 UJ	120 UJ	110 U
Aroclor–1242	110 UJ	110 UJ	110 UJ	110 U	100 UJ	110 UJ	120 UJ	110 U
Aroclor–1248	750 J	400 J	1,100 J	1,100 J	470 J	440 J	300 J	710 J
Aroclor–1254	110 UJ	110 UJ	110 UJ	110 U	100 UJ	110 UJ	120 UJ	110 U
Aroclor–1260	110 UJ	110 UJ	110 UJ	110 U	100 UJ	2,300 J	120 UJ	110 U
Total Organic Carbon (mg/kg)	12,520 J	16,349 J	29,283 J	23,070 J	9,558	64,355	61,046	11,819 J
Metals (mg/kg)								
Aluminum	2,630	3,100	3,650	4,100	2,340	4,540	6,600	3,160
Antimony	9.90 UJ	9.00 UJ	9.30 UJ	9.60 UJ	8.10 UJ	9.70 UJ	9.70 UJ	8.80 UJ
Arsenic	4.4	4.5	4.7	4.8	4.2	6.7	12.2	3.6
Barium	27.5 J	24.1 J	32.7 J	30.0 J	21.3 J	43.7 J	143.0	24.1 J
Beryllium	0.280 J	0.250 J	0.260 J	0.270 J	0.210 UJ	0.260 UJ	1.000 J	0.250 J
Cadmium	0.720 J	0.470 UJ	0.490 UJ	0.510 UJ	0.510 J	0.560 J	2.300 J	0.810 J
Calcium	13,200 J	24,000 J	16,000 J	16,100 J	44,900	15,200	40,500	29,100 J
Chromium	15.1 J	9.5 J	14.0 J	42.3 J	6.9	16.6	64.5	8.0 J
Cobalt	3.6 J	4.1 J	4.0 J	4.1 J	2.7 J	4.5 J	30.2	2.6 J
Copper	12.5 J	5.1 J	22.6 J	21.5 J	7.9	34.5	257.0	5.0 J
Iron	17,600 J	10,300 J	11,800 J	13,000 J	8,220	18,600	86,000	9,000 J
Lead	44.3	10.6	21.8	22.0	8.7 J	28.4 J	70.7 J	10.4
Magnesium	3,870	6,250	5,090	5,390	5,900	5,280	5,410	4,530
Manganese	321	285	333	287	369	864	46,300	260
Mercury	0.130 UJ	0.130 UJ	0.140 UJ	0.140 UJ	0.130 U	0.140 U	0.150 U	0.140 UJ
Nickel	10.0 J	9.4	11.5	26.9	12.9	14.5	57.7	11.6
Potassium	198 J	458 J	539 J	586 J	401 J	777 J	739 J	554 J
Selenium	1.30 UJ	1.10 U	1.30 UJ	1.20 U	1.20 U	1.30 U	1.20 U	1.20 U
Silver	1.6 UJ	1.4 UJ	1.5 UJ	1.5 UJ	1.3 UJ	1.5 UJ	1.5 UJ	2.8 J
Sodium	91 U	143 U	87 U	88 U	220 U	148 U	302 U	223 U
Thallium	1.30 U	1.10 UJ	1.30 U	1.20 U	1.10 U	1.20 U	1.50 U	1.20 U
Vanadium	10.4 J	10.5 J	11.4 J	12.2 J	11.6	16.3	33.7	10.3 J
Zinc	74.4 J	50.5 J	88.8 J	97.2 J	46.5 J	100.0 J	84.2 J	52.8 J
Cyanide	0.660 R	0.650 R	0.590 R	0.700 R	0.600 UJ	0.690 UJ	0.710 UJ	0.590 R

TABLE 3.2 (CON'T)
CHERRY FARM RIVER ROAD SITE SEDIMENT DATA
PCBs, TOTAL ORGANIC CARBON AND METALS

Sample ID	46020	45010	43100	43020	43010	40100	40020	40010
PCBs (ug/kg)								
Aroclor–1016	90 UJ	110 U	110 UJ	110 U	95 UJ	120 UJ	100 UJ	100 UJ
Aroclor–1221	90 UJ	110 U	110 UJ	110 U	95 UJ	120 UJ	100 UJ	100 UJ
Aroclor–1232	90 UJ	110 U	110 UJ	110 U	95 UJ	120 UJ	100 UJ	100 UJ
Aroclor–1242	90 UJ	110 U	110 UJ	110 U	95 UJ	120 UJ	100 UJ	100 UJ
Aroclor–1248	210 J	50 J	90 J	240 J	95 UJ	320 J	120 J	100 UJ
Aroclor–1254	90 UJ	110 U	110 UJ	110 U	95 UJ	120 UJ	100 UJ	100 UJ
Aroclor–1260	90 UJ	110 UJ	110 UJ	140	95 UJ	120 UJ	340 J	100 UJ
Total Organic Carbon (mg/kg)	22,597 J	20,207 J	34,858	55,345	40,210	76,222	46,883	45,177
Metals (mg/kg)								
Aluminum	3,960	5,430	3,800	4,410	7,150	5,090	4,850	8,980
Antimony	15.00 J	11.80 J	10.60 J	9.40 UJ	8.40 UJ	11.50 UJ	11.30 J	11.90 J
Arsenic	13.0	9.2	20.7 J	7.2	7.2	21.2	11.6	6.0 J
Barium	72.3	167.0	65.6	42.3 J	141.0	64.4	54.3	163.0
Beryllium	0.830 J	0.800 J	0.800 J	0.700 J	1.100 J	0.300 UJ	0.780 J	1.400
Cadmium	4.400 J	3.100 J	5.300	3.100	0.520 J	2.700	2.400	2.600
Calcium	35,500 J	174,000 J	19,700	26,600	122,000	45,400	30,700	130,000
Chromium	73.6 J	535.0 J	61.1	48.7	593.0	43.8	85.3	717.0
Cobalt	13.4	6.5 J	20.2	12.8	7.8 J	12.2 J	9.5 J	12.1
Copper	43.8 J	20.9 J	47.0	60.1	63.0	57.5	54.3	45.6
Iron	119,000 J	52,800 J	187,000	86,700	67,500	90,900	76,300	117,000
Lead	81.0	73.3	94.7 J	114.0 J	131.0 J	109.0 J	102.0 J	86.7 J
Magnesium	3,500	15,900	6,980	5,030	27,100	4,300	5,040	23,500
Manganese	2,990	17,400	2,890	1,480	18,100	1,550	2,670	25,200
Mercury	0.120 J	0.440 J	0.180	0.130 U	0.120 U	0.380	0.130 U	0.120 U
Nickel	21.1	14.8	36.8	24.9	19.1	23.3	19.3	13.7
Potassium	264 J	758 J	416 J	530 J	550 J	618 J	345 J	644 J
Selenium	1.00 U	1.30 U	1.10 U	1.30 U	1.10 UJ	1.40 U	1.20 U	1.00 U
Silver	1.2 UJ	1.4 UJ	1.3 UJ	1.5 UJ	1.3 UJ	1.8 UJ	1.4 UJ	1.2 UJ
Sodium	164 U	420 U	110 U	143 U	240 U	400 U	152 U	241 U
Thallium	1.00 U	1.30 UJ	1.30 U	1.20 U	1.10 UJ	1.50 U	1.10 U	1.10 U
Vanadium	51.5	167.0	67.8	44.4	158.0	39.6	49.1	190.0
Zinc	366.0 J	118.0 J	312.0 J	333.0 J	136.0 J	334.0 J	291.0 J	164.0 J
Cyanide	0.540 R	0.560 R	0.590 UJ	0.720 UJ	0.430 UJ	0.760 UJ	0.670 UJ	0.500 UJ

TABLE 3.2 (CON'T)
CHERRY FARM RIVER ROAD SITE SEDIMENT DATA
PCBs, TOTAL ORGANIC CARBON AND METALS

Sample ID	37100	37021	37020	37010	26100	26020	26010
PCBs (ug/kg)							
Aroclor–1016	120 U	120 U	120 U	120 U	110 U	110 U	110 U
Aroclor–1221	120 U	120 U	120 U	120 U	110 U	110 U	110 U
Aroclor–1232	120 U	120 U	120 U	120 U	110 U	110 U	110 U
Aroclor–1242	120 U	120 U	120 U	120 U	110 U	110 U	110 U
Aroclor–1248	200 J	90 J	130 J	340 J	150 J	260 J	340 J
Aroclor–1254	120 U	120 U	120 U	120 U	110 U	110 U	110 U
Aroclor–1260	120 U	62 J	120 U	120 U	110 U	110 U	110 U
Total Organic Carbon (mg/kg)	38,127	49,817	59,264	23,167 J	35,862 J	31,580 J	41,786 J
Metals (mg/kg)							
Aluminum	5,980	5,290	6,230	7,420	4,320	4,780	4,120
Antimony	27.40 J	12.10 J	19.00 J	16.40 J	12.30 J	12.00 J	10.00 UJ
Arsenic	13.4	15.8	18.7	9.1	9.4	14.0	10.9
Barium	68.6	102.0	97.8	85.7	42.3 J	73.6	58.6
Beryllium	1.100 J	0.830 J	0.860 J	0.940 J	0.240 U	0.850 J	0.260 U
Cadmium	3.700	2.800	2.100	2.700 J	3.400 J	3.800 J	2.400 J
Calcium	24,500	40,700	22,100	36,200 J	14,600 J	17,100 J	19,900 J
Chromium	134.0	36.3	42.4	72.0 J	28.4 J	51.3 J	55.4 J
Cobalt	19.2	11.8 J	13.9	10.8 J	10.2 J	15.3	11.5 J
Copper	88.7	40.6	41.9	27.3 J	29.3 J	44.7 J	39.4 J
Iron	152,000	105,000	118,000	54,400 J	65,400 J	126,000 J	82,400 J
Lead	249.0 J	113.0 J	109.0 J	71.3	60.7	103.0	73.1
Magnesium	5,680	4,640	4,840	5,290	4,900	3,610	3,780
Manganese	4,810	2,410	2,590	2,090	889	1,640	1,430
Mercury	0.300	0.550	0.400	0.170 J	0.190 J	0.150 J	0.200 J
Nickel	37.2	23.7	29.0	29.5	25.8	32.8	23.6
Potassium	444 J	345 J	672 J	1,120 J	583 J	475 J	600 J
Selenium	1.40 U	1.30 U	1.20 U	1.50 UJ	1.30 U	1.20 U	1.10 UJ
Silver	1.7 UJ	1.5 UJ	1.5 UJ	1.7 UJ	1.4 UJ	1.6 UJ	1.6 UJ
Sodium	189 U	220 U	95 U	210 U	84 U	177 U	107 U
Thallium	1.30 U	1.30 U	1.40 U	1.50 U	1.30 U	1.20 U	1.10 U
Vanadium	74.2	43.9	50.3	34.8	31.0	52.3	37.5
Zinc	399.0 J	316.0 J	311.0 J	208.0 J	246.0 J	470.0 J	279.0 J
Cyanide	0.690 UJ	0.760 UJ	0.630 UJ	0.680 R	0.540 R	0.630 R	0.630 R

TABLE 3.3
CHERRY FARM/RIVER ROAD SITE
DATA QUALIFIERS

U – non–detected at value given **UJ** – estimated non–detected at value given **R** – unusable data

TABLE 3.4
CHERRY FARM/RIVER ROAD SITE
SEDIMENT GRAIN SIZE/ATTERBURG LIMITS

Sample Location	Gravel %	Sand %	Silt/Clay %	Moisture Content %
100100	35.4	62.6	2.0	34
100020	9.7	64.5	25.8	43
100010	2.4	55.1	42.5	98
90100	0.0	22.1	77.9	112
90020	0.8	69.5	29.7	31
90010	0.2	73.3	26.5	47
80100	2.9	76.5	20.6	41
80020	1.6	97.5	0.9	30
80010	1.0	96.7	2.3	28
70100	43.1	54.3	2.6	24
70020	0.5	80.4	19.1	64
70010	55.6	43.1	1.3	26
60100	56.0	43.0	1.0	17
60020	3.9	93.2	2.9	26
60002	1.6	90.8	7.6	29
55100	6.1	93.2	0.7	25
55020	1.2	84.7	14.1	31
55002	0.0	82.2	17.8	33
50100	4.7	94.1	1.2	27
50020	1.2	84.7	14.1	31
50002	14.1	75.0	10.9	31
46100	10.1	89.8	0.1	31
45020	51.2	48.1	0.7	23
45010	46.1	38.1	15.8	28
43100	40.6	58.8	0.6	28
43020	26.9	60.8	12.3	27
43010	49.2	49.5	1.3	21
40100	10.8	75.0	14.2	44
40020	46.8	42.4	10.8	31
40010	69.1	30.0	0.9	18
37100	41.1	57.2	1.7	35
37020	27.2	59.2	13.6	33
37010	21.3	70.1	8.6	22
26100	0.2	79.6	20.2	35
26020	0.1	88.9	11.0	32
26010	1.9	88.5	9.6	28

TABLE 3.4 (CON'T)
CHERRY FARM/RIVER ROAD SITE
SEDIMENT GRAIN SIZE/ATTERBURG LIMITS

Sample Location	Liquid Limit	Plastic Limit	Nat. Water Content %
70020	33	25	64.5
90100	72	42	128.3
90020	43	36	83.4

Note: All remaining samples could not be tested for Atterburg Limits due to the absence of clay/silt sized particles.

TABLE 3.5
CHERRY FARM/RIVER ROAD SITE
BACKGROUND SEDIMENT DATA

STATION	10000			9000			8000
FEET FROM SHORE	100	20	10	100	20	10	100
DEPTH	18.0'	8.2'	5.1'	13.3'	1.0'	0.5'	5.3'
SAMLE ID	**100100**	**100020**	**100010**	**90100**	**90020**	**90010**	**80100**
PCBs ug/kg							
Aroclor 1248	2,000	600	360	850	260	170	1,200
Aroclor 1260	200	75	260	210	90	55	285
SEMIVOLATILES ug/kg							
Napthalene	550	600	1,850	1,650	380	2,400	12,000
2–Methylnapthalene	550	600	1,850	1,650	380	2,400	12,000
Acenaphthylene	550	600	1,850	1,650	380	2,400	2,400
Acenapthene	550	600	1,850	1,650	380	620	12,000
Dibenzofuran	550	600	1,850	1,650	380	2,400	12,000
Fluorene	550	600	1,850	1,650	380	650	4,200
Phenanthrene	1,200	850	1,600	470	230	10,000	39,000
Anthracene	340	170	1,850	1,650	380	1,600	7,200
Carbazole	120	150	400	1,650	380	2,000	12,000
Di–n–butylphthalate	550	600	1,850	1,650	380	2,400	12,000
Fluoranthene	1,800	1,500	3,800	720	340	15,000	45,000
Pyrene	1,300	1,100	2,600	540	260	11,000	30,000
Butylbenzylphalate	550	600	1,850	1,650	380	2,400	12,000
Benzo(a)anthracene	730	520	1,200	1,650	380	4,500	14,000
Chrysene	840	690	1,700	1,650	86	5,200	15,000
bis(2–Ethylhexyl)phthalate	550	600	1,850	1,650	6,000	2,400	3,100
Benzo(b)flouranthene	540	580	1,600	1,650	380	3,500	13,000
Benzo(k)flouranthene	570	400	1,300	1,650	380	3,500	9,300
Benzo(a)pyrene	590	430	1,300	1,650	380	3,400	12,000
Indeno(1,2,3–cd)pyrene	280	210	640	1,650	380	1,500	5,800
Debenz(a,h)anthracene	550	600	1,850	1,650	380	2,400	12,000
Benzo(g,h,i)perylene	300	230	720	1,650	380	1,500	6,400
4–Methylphenol	500	600	1,850	560	310	2,400	12,000
METALS mg/kg							
ALUMINUM	5,330	7,100	18,400	12,200	15,700	5,370	4,220
ANTIMONY	17.60	6.50	8.45	8.95	8.20	5.10	4.95
ARSENIC	7.5	6.4	16.1	9.6	8.4	5.7	5.3
BARIUM	71.4	91.5	166.0	79.5	46.5	26.9	37.6
BERYLLIUM	0.140	0.170	1.800	0.235	0.215	0.135	0.130
CADMIUM	0.285	1.500	0.445	3.300	1.400	0.265	0.260
CALCIUM	62,500	26,800	37,400	19,200	12,700	10,400	8,970
CHROMIUM	15.3	23.9	54.3	38.5	27.6	13.7	14.1
COBALT	4.6	8.2	11.7	11.8	4.9	4.7	5.3
COPPER	17.5	45.6	61.9	81.4	32.1	20.2	22.2
IRON	14,600	20,500	36,800	25,400	15,900	10,600	11,000
LEAD	23.3	34.1	75.0	73.8	16.4	11.2	22.6
MAGNESIUM	3,780	6,410	6,850	8,430	5,750	4,570	3,610
MANGANESE	225	317	350	578	370	227	157
MERCURY	0.085	0.250	0.470	0.380	0.370	0.310	0.070
NICKEL	12.5	16.2	27.9	34.8	17.7	13.8	16.5
POTASSIUM	496	975	1,840	1,430	1,060	534	690
SELENIUM	0.80	0.85	1.10	1.20	1.00	0.65	0.70
SILVER	0.85	1.05	1.35	3.80	1.30	0.80	0.80
SODIUM	496.0	117.5	355.0	82.5	106.0	57.0	47.5
THALLIUM	0.80	0.85	0.95	1.20	1.00	0.65	0.60
VANADIUM	14.6	22.4	44.5	24.7	22.8	13.0	14.1
ZINC	74.0	138.0	189.0	238.0	123.0	84.3	132.0
CYANIDE	0.365	0.455	0.500	0.650	0.550	0.350	0.305

– Indicates undetected value. One half of the Standard Quantitation Limit was used

TABLE 3.5 (CON'T)
CHERRY FARM/RIVER ROAD SITE
BACKGROUND SEDIMENT DATA

STATION	8000		7000			6000		
FEET FROM SHORE	20	10	100	20	10	100	20	2 (DUP)
DEPTH	0.75'	0.5'	20.4'	14.0'	0.0'	25.3'	22.0'	18.0'
SAMLE ID	**80020**	**80010**	**70100**	**70020**	**70010**	**60100**	**60020**	**60012**
PCBs ug/kg								
Aroclor 1248	140	150	180	960	120	620	840	1,100
Aroclor 1260	55	55	55	75	55	50	55	55
SEMIVOLATILES ug/kg								
Napthalene	770	750	58	450	100	200	95	220
2-Methylnapthalene	180	230	220	1,250	460	200	220	445
Acenaphthylene	1,200	1,600	220	1,250	460	200	140	445
Acenapthene	900	860	45	1,250	460	200	190	150
Dibenzofuran	1,100	1,300	220	1,250	460	200	110	130
Fluorene	2,300	2,800	74	360	460	200	280	240
Phenanthrene	7,200	9,000	400	1,400	530	200	1,400	1,500
Anthracene	2,100	2,700	90	400	100	200	290	410
Carbazole	220	280	220	1,250	460	200	54	120
Di-n-butylphthalate	450	445	220	1,250	460	200	220	445
Fluoranthene	9,300	12,000	480	2,300	780	200	1,600	1,900
Pyrene	6,500	8,900	340	1,700	580	200	1,300	1,500
Butylbenzylphalate	450	445	220	1,250	460	200	220	445
Benzo(a)anthracene	3,700	5,000	180	970	310	200	700	900
Chrysene	3,600	5,000	180	1,000	340	200	700	1,000
bis(2-Ethylhexyl)phthalate	450	445	220	1,250	460	200	220	445
Benzo(b)flouranthene	2,400	3,200	130	610	200	200	400	550
Benzo(k)flouranthene	1,600	1,800	92	580	220	200	360	400
Benzo(a)pyrene	2,600	3,300	120	650	200	200	440	510
Indeno(1,2,3-cd)pyrene	1,400	1,700	67	340	130	200	220	210
Debenz(a,h)anthracene	110	160	220	1,250	460	200	220	445
Benzo(g,h,i)perylene	1,400	1,800	72	380	130	200	210	190
4-Methylphenol	450	445	74	1,250	460	200	220	445
METALS mg/kg								
ALUMINUM	3,250	3,140	3,630	5,750	6,600	3,710	2,580	2,660
ANTIMONY	4.75	4.45	4.90	6.35	4.30	3.65	4.60	4.00
ARSENIC	5.0	5.3	3.1	5.6	7.0	6.6	3.0	4.0
BARIUM	21.7	22.4	24.0	44.6	135.0	25.6	20.1	32.5
BERYLLIUM	0.260	0.270	0.280	0.350	0.950	0.200	0.260	0.230
CADMIUM	0.250	0.260	0.570	0.335	3.300	0.190	0.240	0.600
CALCIUM	4,270	4,700	40,200	15,600	33,500	14,200	16,800	21,200
CHROMIUM	12.9	13.1	6.9	24.6	239.0	7.7	14.2	12.8
COBALT	5.3	3.9	4.5	8.8	7.3	3.4	3.0	2.9
COPPER	6.3	5.7	8.7	45.2	49.9	3.2	3.8	14.4
IRON	15,900	18,700	12,700	17,000	42,400	9,540	8,140	11,800
LEAD	14.2	12.8	7.5	71.0	156.0	16.5	12.9	53.5
MAGNESIUM	2,170	2,320	8,380	5,270	13,200	3,750	4,220	3,560
MANGANESE	232	247	230	452	6,070	199	222	252
MERCURY	0.070	0.065	0.065	0.210	0.230	0.060	0.060	0.065
NICKEL	15.4	11.9	20.6	21.2	23.9	8.9	8.1	10.2
POTASSIUM	426	249	384	1,050	654	436	403	409
SELENIUM	0.65	0.65	0.60	0.85	0.65	0.49	0.65	0.60
SILVER	4.20	0.80	0.80	1.00	0.70	0.55	0.70	0.65
SODIUM	58.0	46.4	76.0	69.0	84.0	58.0	70.0	66.0
THALLIUM	0.65	0.65	0.60	0.85	0.65	0.49	0.65	0.60
VANADIUM	16.9	18.4	10.1	17.8	52.9	9.6	8.1	9.3
ZINC	99.8	111.0	67.3	162.0	213.0	47.0	52.0	75.0
CYANIDE								

[ ] – Indicates undetected value. One half of the Standard Quantitation Limit was used

TABLE 3.5 (CON'T)
CHERRY FARM/RIVER ROAD SITE
BACKGROUND SEDIMENT DATA

STATION	6000	5500			5000		
FEET FROM SHORE	2	100	20	2	100	20	2
DEPTH	18.0'	23.0'	20.0'	17.0'	25.5'	20.0'	20.0'
SAMLE ID	**60002**	**55100**	**55020**	**55002**	**50100**	**50020**	**50002**
PCBs ug/kg							
Aroclor 1248	750	400	1,100	1,100	470	440	300
Aroclor 1260	55	55	55	55	50	2,300	60
SEMIVOLATILES ug/kg							
Napthalene	89	440	140	210	215	100	500
2–Methylnapthalene	220	440	460	97	215	460	500
Acenaphthylene	220	440	160	200	215	460	500
Acenapthene	54	440	160	130	215	460	100
Dibenzofuran	64	440	150	190	215	460	130
Fluorene	110	440	340	420	215	120	140
Phenanthrene	730	440	2,100	1,800	380	1,200	2,500
Anthracene	180	440	470	400	87	240	160
Carbazole	220	440	460	470	215	200	230
Di–n–butylphthalate	220	440	460	470	215	460	140
Fluoranthene	1,000	97	2,800	2,200	810	1,900	3,300
Pyrene	800	440	2,100	1,700	670	1,500	2,000
Butylbenzylphalate	220	440	460	470	215	460	170
Benzo(a)anthracene	450	440	1,100	840	320	730	500
Chrysene	490	440	1,100	910	350	850	970
bis(2–Ethylhexyl)phthalate	220	440	460	470	215	2,100	1,000
Benzo(b)flouranthene	260	440	700	540	240	650	380
Benzo(k)flouranthene	260	440	680	440	310	550	420
Benzo(a)pyrene	280	440	740	540	310	630	250
Indeno(1,2,3–cd)pyrene	140	440	330	240	160	300	130
Debenz(a,h)anthracene	220	440	460	470	215	460	500
Benzo(g,h,i)perylene	140	440	320	230	170	300	140
4–Methylphenol	220	440	460	470	215	460	500
METALS mg/kg							
ALUMINUM	2,630	3,100	3,650	4,100	2,340	4,540	6,600
ANTIMONY	4.50	4.50	4.65	4.80	4.05	4.85	4.85
ARSENIC	4.4	4.5	4.7	4.8	4.2	6.7	12.2
BARIUM	27.5	24.1	32.7	30.0	21.3	43.7	143.0
BERYLLIUM	0.280	0.250	0.260	0.270	0.105	0.130	1.000
CADMIUM	0.720	0.235	0.240	0.255	0.510	0.560	2.300
CALCIUM	13,200	24,000	16,000	16,100	44,900	15,200	40,500
CHROMIUM	15.1	9.5	14.0	42.3	6.9	16.6	64.5
COBALT	3.6	4.1	4.0	4.1	2.7	4.5	30.2
COPPER	12.5	5.1	22.6	21.5	7.9	34.5	257.0
IRON	17,600	10,300	11,800	13,000	8,220	18,600	86,000
LEAD	44.3	10.6	21.8	22.0	8.7	28.4	70.7
MAGNESIUM	3,870	6,250	5,090	5,390	5,900	5,280	5,410
MANGANESE	321	285	333	287	369	864	46,300
MERCURY	0.065	0.065	0.070	0.070	0.065	0.070	0.075
NICKEL	10.0	9.4	11.5	26.9	12.9	14.5	57.7
POTASSIUM	198	458	539	586	401	777	739
SELENIUM	0.65	0.55	0.65	0.60	0.60	0.65	0.60
SILVER	0.80	0.70	0.75	0.75	0.65	0.75	0.75
SODIUM	45.5	71.5	43.3	44.2	110.0	74.0	151.0
THALLIUM	0.65	0.55	0.65	0.60	0.55	0.60	0.75
VANADIUM	10.4	10.5	11.4	12.2	11.6	16.3	33.7
ZINC	74.4	50.5	88.8	97.2	46.5	100.0	84.2
CYANIDE					0.300	0.345	0.355

– Indicates undetected value. One half of the Standard Quantitation Limit was used

TABLE 3.6
CHERRY FARM/RIVER ROAD SITE
SEDIEMENT BACKGROUND DATA CALCULATIONS

	Number of Samples	Average Conc.	Stnd Dev–S	Sample Variance–S	Degrees Freedom	Student–t (95%)	95th % UCL–S
PCBs ug/kg							
Aroclor 1248	22	641	471	221,736	21	2.08	850
Aroclor 1260	22	194	476	226,631	21	2.08	405
SEMIVOLATILES ug/kg							
Napthalene	22	1,080	2,517	6,336,958	21	2.08	2,197
2–Methylnapthalene	22	1,138	2,501	6,257,451	21	2.08	2,247
Acenaphthylene	22	797	736	542,061	21	2.08	1,124
Acenapthene	22	1,057	2,494	6,222,231	21	2.08	2,164
Dibenzofuran	22	1,175	2,504	6,269,668	21	2.08	2,285
Fluorene	22	835	1,067	1,137,667	21	2.08	1,308
Phenanthrene	22	3,824	8,338	69,522,730	21	2.08	7,522
Anthracene	22	975	1,585	2,513,070	21	2.08	1,678
Carbazole	22	988	2,511	6,304,902	21	2.08	2,102
Di–n–butylphthalate	22	1,160	2,493	6,217,070	21	2.08	2,266
Fluoranthene	22	4,947	9,769	95,424,084	21	2.08	9,279
Pyrene	22	3,501	6,564	43,091,603	21	2.08	6,412
Butylbenzylphalate	22	1,162	2,493	6,214,196	21	2.08	2,267
Benzo(a)anthracene	22	1,787	3,050	9,303,859	21	2.08	3,140
Chrysene	22	1,923	3,254	10,591,491	21	2.08	3,366
bis(2–Ethylhexyl)phthalate	22	1,125	1,363	1,856,437	21	2.08	1,729
Benzo(b)flouranthene	22	1,461	2,751	7,567,660	21	2.08	2,681
Benzo(k)flouranthene	22	1,157	1,980	3,921,486	21	2.08	2,035
Benzo(a)pyrene	22	1,407	2,558	6,541,335	21	2.08	2,541
Indeno(1,2,3–cd)pyrene	22	749	1,246	1,552,150	21	2.08	1,301
Debenz(a,h)anthracene	22	1,148	2,498	6,239,894	21	2.08	2,256
Benzo(g,h,i)perylene	22	786	1,365	1,863,078	21	2.08	1,392
4–Methylphenol	22	1,115	2,493	6,214,397	21	2.08	2,220
METALS mg/kg							
ALUMINUM	22	5,755	4,281	18,326,331	21	2.08	7,653
ANTIMONY	22	5.86	3.01	9.03	21	2.08	7.19
ARSENIC	22	6.4	3.0	9.3	21	2.08	7.7
BARIUM	22	53.1	43.5	1,889.3	21	2.08	72.3
BERYLLIUM	22	0.360	0.396	0.157	21	2.08	0.535
CADMIUM	22	0.819	0.957	0.916	21	2.08	1.243
CALCIUM	22	22,652	14,738	217,216,035	21	2.08	29,188
CHROMIUM	22	31.3	48.9	2,391.6	21	2.08	52.9
COBALT	22	6.5	5.9	34.7	21	2.08	9.1
COPPER	22	35.4	53.7	2,883.2	21	2.08	59.2
IRON	22	19,841	17,098	292,338,228	21	2.08	27,423
LEAD	22	36.7	35.2	1,241.5	21	2.08	52.3
MAGNESIUM	22	5,430	2,386	5,690,705	21	2.08	6,488
MANGANESE	22	2,677	9,821	96,453,263	21	2.08	7,032
MERCURY	22	0.147	0.129	0.017	21	2.08	0.205
NICKEL	22	18.3	11.2	125.9	21	2.08	23.3
POTASSIUM	22	670	395	156,129	21	2.08	845
SELENIUM	22	0.72	0.18	0.03	21	2.08	0.80
SILVER	22	1.1	1.0	0.9	21	2.08	1.5
SODIUM	22	105.8	109.1	11,908.7	21	2.08	154.2
THALLIUM	22	0.71	0.17	0.03	21	2.08	0.78
VANADIUM	22	18.4	11.6	135.5	21	2.08	23.6
ZINC	22	106.7	53.4	2,847.4	21	2.08	130.3
CYANIDE	22	0.418	0.117	0.014	21	2.08	0.469

TABLE 3.7
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT EVALUATION

STATION			4600		4500				4300	
FEET FROM SHORE	95th %	NYSDEC	100		20		10		100	
DEPTH	UCL-S	Sediment	23.0'		7.0'		1.0'		15.2'	
SAMLE ID		Criteria (1)	**46100**		**45020**		**45010**		**43100**	
PCBs ug/kg										
Aroclor 1248	850	772	710 J		210 J		50 J		90 J	
Aroclor 1260	405	772								
SEMIVOLATILES ug/kg										
Napthalene	2,197	340	1,300	B,S	2,600 J		840 J	B,S	54,000 J	
2-Methylnapthalene	2,247	65	580 J		750 J			B,S	55,000 J	
Acenaphthylene	1,124		1,100	B	9,900	B	3,500 J	B	52,000 J	
Acenapthene	2,164	5600	1,500		1,400 J		230 J	B,S	14,000 J	
Dibenzofuran	2,285		1,200	B	6,400		1,200 J	B	19,000 J	
Fluorene	1,308	35	2,000	B,S	15,000	B,S	4,000 J	B,S	100,000 J	
Phenanthrene	7,522	4800	5,800	B,S	64,000 J	B,S	26,000 J	B,S	390,000 J	
Anthracene	1,678	85	2,200	B,S	31,000 J	B,S	15,000 J	B,S	74,000 J	
Carbazole	2,102		620 J		950 J		240 J			
Di-n-butylphthalate	2,266									
Fluoranthene	9,279	40800	8,700 J	B,S	61,000 J	B	35,000 J	B,S	150,000 J	
Pyrene	6,412	350	7,400 J	B,S	58,000 J	B,S	35,000 J	B,S	220,000 J	
Butylbenzylphalate	2,267									
Benzo(a)anthracene	3,140		6,300	B	31,000 J	B	22,000 J	B	82,000 J	
Chrysene	3,366	400	6,100	B,S	32,000 J	B,S	22,000 J	B,S	94,000 J	
bis(2-Ethylhexyl)phthalate	1,729	7980								
Benzo(b)flouranthene	2,681		3,400	B	18,000	B	13,000 J	B	34,000 J	
Benzo(k)flouranthene	2,035		2,300	B	9,000	B	5,100 J	B	40,000 J	
Benzo(a)pyrene	2,541	400	3,400	B,S	21,000	B,S	14,000 J	B,S	71,000 J	
Indeno(1,2,3-cd)pyrene	1,301		1,700	B	11,000	B	7,400 J	B	23,000 J	
Debenz(a,h)anthracene	2,256	60	220 J		800 J		640 J			
Benzo(g,h,i)perylene	1,392		1,800	B	13,000	B	7,900 J	B	29,000 J	
4-Methylphenol	2,220		140 J							
METALS mg/kg										
ALUMINUM	7,653		3,160		3,960		5,430		3,800	
ANTIMONY	7.19	2.00		B,S	15.00 J	B,S	11.80 J	B,S	10.60 J	
ARSENIC	7.7	6.0	3.6	B,S	13.0	B,S	9.2	B,S	20.7 J	
BARIUM	72.3		24.1 J		72.3	B	167.0 J		65.6	
BERYLLIUM	0.535		0.250 J	B	0.830 J	B	0.800 J	B	0.800 J	
CADMIUM	1.243	0.600	0.810 J	B,S	4.400 J	B,S	3.100 J	B,S	5.300	
CALCIUM	29,188		29,100 J	B	35,500 J	B	174,000 J		19,700	
CHROMIUM	52.9	26.0	8.0 J	B,S	73.6 J	B,S	535.0 J	B,S	61.1	
COBALT	9.1		2.6 J	B	13.4		6.5 J	B	20.2	
COPPER	59.2	16.0	5.0 J		43.8 J		20.9 J		47.0	
IRON	27,423	20,000	9,000 J	B,S	119,000 J	B,S	52,800 J	B,S	187,000	
LEAD	52.3	31.0	10.4	B,S	81.0	B,S	73.3	B,S	94.7 J	
MAGNESIUM	6,488		4,530		3,500	B	15,900	B	6,980	
MANGANESE	7,032	460	260		2,990	B,S	17,400		2,890	
MERCURY	0.205	0.150			0.120 J	B,S	0.440 J		0.180	
NICKEL	23.3	16.0	11.6		21.1		14.8	B,S	36.8	
POTASSIUM	845		554 J		264 J		758 J		416 J	
SELENIUM	0.80									
SILVER	1.5	1.0	2.8	B,S						
SODIUM	154.2									
THALLIUM	0.78									
VANADIUM	23.6		10.3 J	B	51.5	B	167.0	B	67.8	
ZINC	130.3	120.0	52.8 J	B,S	366.0 J		118.0 J	B,S	312.0 J	
CYANIDE	0.469									

(1) -NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%.

B - Concentrations exceed background concentrations

B,S - Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.7 (CON'T)
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT EVALUATION

STATION			4300			4000		
FEET FROM SHORE	95th %	NYSDEC	20	10		100		20
DEPTH	UCL-S	Sediment	7.5'	1.0'		15.0'		7.4'
SAMLE ID		Criteria (1)	**43020**	**43010**		**40100**		**40020**
PCBs ug/kg								
Aroclor 1248	850	772	240			320 J		120 J
Aroclor 1260	405	772	140					340 J
SEMIVOLATILES ug/kg								
Napthalene	2,197	340	910 J	180 J	B,S	3,600 J		310 J
2-Methylnapthalene	2,247	65				1,400 J		
Acenaphthylene	1,124		300 J	58 J	B	3,100 J		
Acenapthene	2,164	5600				1,400 J		
Dibenzofuran	2,285					1,500 J		
Fluorene	1,308	35	350 J	43 J	B,S	5,200		130 J
Phenanthrene	7,522	4800	2,500 J	340 J	B,S	28,000		560 J
Anthracene	1,678	85	730 J	110 J	B,S	10,000		170 J
Carbazole	2,102		250 J	49 J		570 J		86 J
Di-n-butylphthalate	2,266							
Fluoranthene	9,279	40800	4,400 J	950 J	B	29,000		1,100 J
Pyrene	6,412	350	3,400 J	780 J	B,S	28,000		890 J
Butylbenzylphalate	2,267							
Benzo(a)anthracene	3,140		2,000 J	450 J	B	14,000		580 J
Chrysene	3,366	400	1,900 J	500 J	B,S	15,000		670 J
bis(2-Ethylhexyl)phthalate	1,729	7980						
Benzo(b)flouranthene	2,681		1,600 J	370 J	B	11,000		360 J
Benzo(k)flouranthene	2,035		1,600 J	430 J	B	6,800		480 J
Benzo(a)pyrene	2,541	400	1,900 J	460 J	B,S	12,000		460 J
Indeno(1,2,3-cd)pyrene	1,301		1,000 J	260 J	B	5,000 J		200 J
Debenz(a,h)anthracene	2,256	60				520 J		
Benzo(g,h,i)perylene	1,392		1,200 J	290 J	B	5,200		220 J
4-Methylphenol	2,220							
METALS mg/kg								
ALUMINUM	7,653		4,410	7,150		5,090		4,850
ANTIMONY	7.19	2.00					B,S	11.30 J
ARSENIC	7.7	6.0	7.2	7.2	B,S	21.2	B,S	11.6
BARIUM	72.3		42.3 J	B 141.0		64.4		54.3
BERYLLIUM	0.535		B 0.700 J	B 1.100 J			B	0.780 J
CADMIUM	1.243	0.600	B,S 3.100	0.520 J	B,S	2.700	B,S	2.400
CALCIUM	29,188		26,600	B 122,000	B	45,400	B	30,700
CHROMIUM	52.9	26.0	48.7	B,S 593.0		43.8	B,S	85.3
COBALT	9.1		B 12.8	7.8 J	B	12.2 J	B	9.5 J
COPPER	59.2	16.0	B,S 60.1	B,S 63.0		57.5		54.3
IRON	27,423	20,000	B,S 86,700	B,S 67,500	B,S	90,900	B,S	76,300
LEAD	52.3	31.0	B,S 114.0 J	B,S 131.0 J	B,S	109.0 J	B,S	102.0 J
MAGNESIUM	6,488		5,030	B 27,100		4,300		5,040
MANGANESE	7,032	460	1,480	B,S 18,100		1,550		2,670
MERCURY	0.205	0.150			B,S	0.380		
NICKEL	23.3	16.0	B,S 24.9	19.1	B,S	23.3		19.3
POTASSIUM	845		530 J	550 J		618 J		345 J
SELENIUM	0.80							
SILVER	1.5	1.0						
SODIUM	154.2							
THALLIUM	0.78							
VANADIUM	23.6		B 44.4	B 158.0	B	39.6	B	49.1
ZINC	130.3	120.0	B,S 333.0 J	B,S 136.0 J	B,S	334.0 J	B,S	291.0 J
CYANIDE	0.469							

(1) – NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%.

B – Concentrations exceed background concentrations

B,S – Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.7 (CON'T)
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT EVALUATION

STATION			4000	3700		
FEET FROM SHORE	95th %	NYSDEC	10	100	20	20 (dup)
DEPTH	UCL-S	Sediment	1.0'		3.0'	3.0'
SAMLE ID		Criteria (1)	**40010**	**37100**	**37020**	**37021**
PCBs ug/kg						
Aroclor 1248	850	772		200 J	130 J	90 J
Aroclor 1260	405	772				62 J
SEMIVOLATILES ug/kg						
Napthalene	2,197	340		650 J	B,S 4,800	B,S 14,000 J
2-Methylnapthalene	2,247	65				360 J
Acenaphthylene	1,124			B 1,500 J		260 J
Acenapthene	2,164	5600		540 J		
Dibenzofuran	2,285			870 J		270 J
Fluorene	1,308	35		B,S 2,900 J		520 J
Phenanthrene	7,522	4800	82 J	B,S 35,000 J	1,000 J	2,600 J
Anthracene	1,678	85		B,S 14,000 J	380 J	780 J
Carbazole	2,102			780 J		
Di-n-butylphthalate	2,266					
Fluoranthene	9,279	40800	130 J	B,S 43,000 J	2,600 J	5,500 J
Pyrene	6,412	350	100 J	B,S 32,000 J	1,800 J	4,200 J
Butylbenzylphalate	2,267					
Benzo(a)anthracene	3,140		48 J	B 14,000 J	1,300 J	2,600 J
Chrysene	3,366	400	68 J	B,S 14,000 J	1,400 J	2,600 J
bis(2-Ethylhexyl)phthalate	1,729	7980				
Benzo(b)flouranthene	2,681		46 J	B 11,000 J	1,300 J	2,300 J
Benzo(k)flouranthene	2,035		48 J	B 9,300 J	840 J	1,600 J
Benzo(a)pyrene	2,541	400	46 J	B,S 14,000 J	1,100 J	2,100 J
Indeno(1,2,3-cd)pyrene	1,301			B 7,000 J	540 J	960 J
Debenz(a,h)anthracene	2,256	60		540 J		
Benzo(g,h,i)perylene	1,392		42 J	B 7,900 J	560 J	950 J
4-Methylphenol	2,220					
METALS mg/kg						
ALUMINUM	7,653		B 8,980	5,980	6,230	5,290
ANTIMONY	7.19	2.00	B,S 11.90 J	B,S 27.40	B,S 19.00 J	B,S 12.10 J
ARSENIC	7.7	6.0	6.0 J	B,S 13.4	B,S 18.7	B,S 15.8
BARIUM	72.3		B 163.0	68.6	B 97.8	B 102.0
BERYLLIUM	0.535		B 1.400	B 1.100 J	B 0.860 J	B 0.830 J
CADMIUM	1.243	0.600	B,S 2.600	B,S 3.700	B,S 2.100	B,S 2.800
CALCIUM	29,188		B 130,000	24,500	22,100	B 40,700
CHROMIUM	52.9	26.0	B,S 717.0	B,S 134.0	42.4	36.3
COBALT	9.1		B 12.1	B 19.2	B 13.9	B 11.8 J
COPPER	59.2	16.0	45.6	B,S 88.7	41.9	40.6
IRON	27,423	20,000	B,S 117,000	B,S 152,000	B,S 118,000	B,S 105,000
LEAD	52.3	31.0	B,S 86.7	B,S 249.0 J	B,S 109.0 J	B,S 113.0 J
MAGNESIUM	6,488		B 23,500	5,680	4,840	4,640
MANGANESE	7,032	460	B,S 25,200	4,810	2,590	2,410
MERCURY	0.205	0.150		B,S 0.300	B,S 0.400	B,S 0.550
NICKEL	23.3	16.0	13.7	B,S 37.2	B,S 29.0	B,S 23.7
POTASSIUM	845		644 J	444 J	672 J	345 J
SELENIUM	0.80					
SILVER	1.5	1.0				
SODIUM	154.2					
THALLIUM	0.78					
VANADIUM	23.6		B 190.0	B 74.2	B 50.3	B 43.9
ZINC	130.3	120.0	B,S 164.0 J	B,S 399.0 J	B,S 311.0	B,S 316.0 J
CYANIDE	0.469					

(1) - NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%.

B - Concentrations exceed background concentrations

B,S - Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.7 (CON'T)
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT EVALUATION

STATION			3700		2600			
FEET FROM SHORE	95th %	NYSDEC	10		100		20	10
DEPTH	UCL–S	Sediment	1.0'		25.0'			1.0'
SAMLE ID		Criteria (1)	**37010**		**26100**		**26020**	**26010**
PCBs ug/kg								
Aroclor 1248	850	772	340 J		150 J		260 J	340 J
Aroclor 1260	405	772						
SEMIVOLATILES ug/kg								
Napthalene	2,197	340	1,000		650 J		720	1,900
2–Methylnapthalene	2,247	65	69 J				87 J	200 J
Acenaphthylene	1,124		63 J		380 J		110 J	180 J
Acenapthene	2,164	5600	93 J					94 J
Dibenzofuran	2,285		95 J				72 J	140 J
Fluorene	1,308	35	130 J		180 J		100 J	240 J
Phenanthrene	7,522	4800	490 J		1,200		530	830 J
Anthracene	1,678	85	170 J		630 J		420 J	300 J
Carbazole	2,102							
Di–n–butylphthalate	2,266							
Fluoranthene	9,279	40800	900		3,300		1,600	2,000
Pyrene	6,412	350	760		2,600		1,400	1,700
Butylbenzylphalate	2,267							
Benzo(a)anthracene	3,140		450 J		2,100		920	1,200
Chrysene	3,366	400	500 J		2,300		1,000	1,200
bis(2–Ethylhexyl)phthalate	1,729	7980						
Benzo(b)flouranthene	2,681		270 J		970		450 J	560 J
Benzo(k)flouranthene	2,035		230 J		1,100		490	600 J
Benzo(a)pyrene	2,541	400	260 J		1,300		570	660 J
Indeno(1,2,3–cd)pyrene	1,301		130 J		580 J		240 J	260 J
Debenz(a,h)anthracene	2,256	60						
Benzo(g,h,i)perylene	1,392		130 J		550 J		240 J	260 J
4–Methylphenol	2,220							
METALS mg/kg								
ALUMINUM	7,653		7,420		4,320		4,780	4,120
ANTIMONY	7.19	2.00	B,S 16.40 J		B,S 12.30 J		B,S 12.00 J	
ARSENIC	7.7	6.0	B,S 9.1		B,S 9.4		B,S 14.0	B,S 10.9
BARIUM	72.3		B 85.7		42.3 J		B 73.6	58.6
BERYLLIUM	0.535		B 0.940 J				B 0.850 J	
CADMIUM	1.243	0.600	B,S 2.700 J		B,S 3.400 J		B,S 3.800 J	B,S 2.400 J
CALCIUM	29,188		B 36,200 J		14,600 J		17,100 J	19,900 J
CHROMIUM	52.9	26.0	B,S 72.0 J		28.4 J		51.3 J	B,S 55.4 J
COBALT	9.1		B 10.8 J		B 10.2 J		B 15.3	B 11.5 J
COPPER	59.2	16.0	27.3 J		29.3 J		44.7 J	39.4 J
IRON	27,423	20,000	B,S 54,400 J		B,S 65,400 J		B,S 126,000 J	B,S 82,400 J
LEAD	52.3	31.0	B,S 71.3		B,S 60.7		B,S 103.0	B,S 73.1
MAGNESIUM	6,488		5,290		4,900		3,610	3,780
MANGANESE	7,032	460	2,090		889		1,640	1,430
MERCURY	0.205	0.150	0.170 J		0.190 J		0.150 J	0.200 J
NICKEL	23.3	16.0	B,S 29.5		B,S 25.8		B,S 32.8	B,S 23.6
POTASSIUM	845		B 1120 J		583 J		475 J	600 J
SELENIUM	0.80							
SILVER	1.5	1.0						
SODIUM	154.2							
THALLIUM	0.78							
VANADIUM	23.6		B 34.8		B 31.0		B 52.3	B 37.5
ZINC	130.3	120.0	B,S 208.0 J		B,S 246.0 J		B,S 470.0 J	B,S 279.0 J
CYANIDE	0.469							

(1) – NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%.

B – Concentrations exceed background concentrations

B,S – Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.8
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT SUMMARY

STATION			4600	4500		4300			4000	
FEET FROM SHORE	95th %	NYSDEC	100	20	10	100	20	10	100	20
DEPTH	UCL–S	Sediment	23.0'	7.0'	1.0'	15.2'	7.5'	1.0'	15.0'	7.4'
SAMLE ID		Criteria (1)	**46100**	**45020**	**45010**	**43100**	**43020**	**43010**	**40100**	**40020**
SEMIVOLATILES ug/kg										
Napthalene	2,197	340		B,S 2,600 J		B,S 54,000 J			B,S 3,600 J	
2–Methylnapthalene	2,247	65				B,S 55,000 J				
Fluorene	1,308	35	B,S 2,000	B,S 15,000	B,S 4,000 J	B,S 100,000 J			B,S 5,200	
Phenanthrene	7,522	4,800		B,S 64,000 J	B,S 26,000 J	B,S 390,000 J			B,S 28,000	
Anthracene	1,678	85	B,S 2,200	B,S 31,000 J	B,S 15,000 J	B,S 74,000 J			B,S 10,000	
Fluoranthene	9,279	40,800		B,S 61,000 J	B 35,000 J	B,S 150,000 J				
Pyrene	6,412	350	B,S 7,400 J	B,S 58,000 J	B,S 35,000 J	B,S 220,000 J			B,S 28,000	
Chrysene	3,366	400	B,S 6,100	B,S 32,000 J	B,S 22,000 J	B,S 94,000 J			B,S 15,000	
Benzo(a)pyrene	2,541	400	B,S 3,400	B,S 21,000	B,S 14,000 J	B,S 71,000 J			B,S 12,000	
METALS mg/kg										
ANTIMONY	7.19	2.00		B,S 15.00 J	B,S 11.80 J	B,S 10.60 J				B,S 11.30 J
ARSENIC	7.7	6.0		B,S 13.0	B,S 9.2	B,S 20.7 J			B,S 21.2	B,S 11.6
CADMIUM	1.243	0.600		B,S 4.400 J	B,S 3.100 J	B,S 5.300	B,S 3.100		B,S 2.700	B,S 2.400
CHROMIUM	52.9	26.0		B,S 73.6 J	B,S 535.0 J	B,S 61.1		B,S 593.0		B,S 85.3
COPPER	59.2	16.0					B,S 60.1	B,S 63.0		
IRON	27,423	20,000		B,S 119,000 J	B,S 52,800 J	B,S 187,000	B,S 86,700	B,S 67,500	B,S 90,900	B,S 76,300
LEAD	52.3	31.0		B,S 81.0	B,S 73.3	B,S 94.7 J	B,S 114.0 J	B,S 131.0 J	B,S 109.0 J	B,S 102.0 J
MANGANESE	7,032	460			B,S 17,400			B,S 18,100		
MERCURY	0.205	0.150			B,S 0.440 J				B,S 0.380	
NICKEL	23.3	16.0				B,S 36.8	B,S 24.9		B,S 23.3	
SILVER	1.5	1.0	B,S 2.8							
ZINC	130.3	120.0		B,S 366.0 J		B,S 312.0 J	B,S 333.0 J	B,S 136.0 J	B,S 334.0 J	B,S 291.0 J

(1) –NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%.

B,S – Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.8 (CON'T)
CHERRY FARM/RIVER ROAD SITE
SEDIMENT IMPACT SUMMARY

STATION			4000	3700				2600		
FEET FROM SHORE	95th %	NYSDEC	10	100	20	20 (dup)	10	100	20	10
DEPTH	UCL–S	Sediment	1.0'		3.0'	3.0'	1.0'	25.0'		1.0'
SAMLE ID		Criteria (1)	**40010**	**37100**	**37020**	**37021**	**37010**	**26100**	**26020**	**26010**
SEMIVOLATILES ug/kg										
Napthalene	2,197	340			B,S 4,800	B,S 14,000 J				
2–Methylnapthalene	2,247	65								
Fluorene	1,308	35		B,S 2,900 J						
Phenanthrene	7,522	4,800		B,S 35,000 J						
Anthracene	1,678	85		B,S 14,000 J						
Fluoranthene	9,279	40,800		B,S 43,000 J						
Pyrene	6,412	350		B,S 32,000 J						
Chrysene	3,366	400		B,S 14,000 J						
Benzo(a)pyrene	2,541	400		B,S 14,000 J						
METALS mg/kg										
ANTIMONY	7.19	2.00	B,S 11.90 J	B,S 27.40	B,S 19.00 J	B,S 12.10 J	B,S 16.40 J	B,S 12.30 J	B,S 12.00 J	
ARSENIC	7.7	6.0		B,S 13.4	B,S 18.7	B,S 15.8	B,S 9.1	B,S 9.4	B,S 14.0	B,S 10.9
CADMIUM	1.243	0.600	B,S 2.600	B,S 3.700	B,S 2.100	B,S 2.800	B,S 2.700 J	B,S 3.400 J	B,S 3.800 J	B,S 2.400 J
CHROMIUM	52.9	26.0	B,S 717.0	B,S 134.0			B,S 72.0 J			B,S 55.4 J
COPPER	59.2	16.0		B,S 88.7						
IRON	27,423	20,000	B,S 117,000	B,S 152,000	B,S 118,000	B,S 105,000	B,S 54,400 J	B,S 65,400 J	B,S 126,000 J	B,S 82,400 J
LEAD	52.3	31.0	B,S 86.7	B,S 249.0 J	B,S 109.0 J	B,S 113.0 J	B,S 71.3	B,S 60.7	B,S 103.0	B,S 73.1
MANGANESE	7,032	460	B,S 25,200							
MERCURY	0.205	0.150		B,S 0.300	B,S 0.400	B,S 0.550				
NICKEL	23.3	16.0		B,S 37.2	B,S 29.0	B,S 23.7	B,S 29.5	B,S 25.8	B,S 32.8	B,S 23.6
SILVER	1.5	1.0								
ZINC	130.3	120.0	B,S 164.0 J	B,S 399.0 J	B,S 311.0	B,S 316.0 J	B,S 208.0 J	B,S 246.0 J	B,S 470.0 J	B,S 279.0 J

(1) –NYSDEC Technical Guidance for Screening Contaminated Sediment. Values from Table 1 determined using average TOC dry weight of 4%

B,S – Concentrations exceed background and NYSDEC Lowest Effect criteria.

TABLE 3.9
CHERRY FARM/RIVER ROAD SITE
NYSDEC SEDIMENT DATA

STATION	1200		1400		2900		3400		3900		4100	
FEET FROM SHORE	65	35	70	35	80	40	80	40	40	27	25	10
SAMPLE NUMBER	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
PCBs ug/kg												
Aroclor 1248	170	430	86	0	0	160	180	0	0	810	32	360
SEMIVOLATILES ug/kg												
Napthalene	170 J	140 J	69 J		1,600	4,100 E	21,000 E	7,800 E	32,000 E	2,100	2,600	1,000
2-Methylnapthalene					140 J	360 J	3,000	670	2,000	1,200	120 J	490
Fluorene					230 J	540	2,100	1,300	1,900	31,000 E	160 J	620
Phenanthrene	80 J	85 J	25 J		1,200	2,400	6,900 E	4,300 E	7,100 E	9,800 E	500	1,700
Anthracene	23 J	24 J			350 J	870	2,000	1,700	2,100	740	150 J	1,800
Fluoranthene	220 J	270 J	120 J		2,500	3,900 E	7,700 E	7,100 E	7,800 E	64,000 E	1,200	3,000
Pyrene	200 J	260 J	110 J		2,100	3,400 E	12,000 E	8,500 E	18,000 E	15,000 E	790	6,400 E
Chrysene	140 J	210 J	110 J		1,400	2,300	7,100 E	5,600 E	3,600	740	530	1,400
Benzo(a)pyrene	110 J	130 J	79 J	220 J	1,000	1,700	2,700	4,400 E	5,700 E	18,000 E	316 J	1,300
METALS mg/kg												
ANTIMONY	15.60	17.10	16.50	16.60	18.30	15.10	21.20	19.20	17.40	17.70	14.90	15.10
ARSENIC	6.1	5.4	4.8	4.4	29.9	20.5	33.6	42.5	50.1	62.2	8.2	7.2
CADMIUM	0.320	0.370	0.220	0.140	1.500	0.650	1.400	2.000	1.300	2.900	0.460	0.990
CHROMIUM	15.2	16.3	12.7	9.9	26.0	32.5	60.7	65.5	59.8	84.5	125.0	1,000.0
COPPER	13.1	10.0	12.7	10.4	50.1	45.3	145.0	86.3	75.2	85.9	2.5	2.5
IRON	23,900	22,800	19,100	16,800	50,000	54,400	229,000	141,000	157,000	149,000	32,800	104,000
LEAD	28.7	28.8	22.4	13.3	76.2	61.5	277.0	321.0	152.0	222.0	66.4	92.2
MANGANESE	436	377										
MERCURY	0.120	0.130	0.130		0.740		0.940		1.400			
NICKEL	16.5	13.5	13.6	19.6	21.6	15.4	42.0	29.4	29.9	33.4	33.8	171.0
SILVER	0.24	0.11	0.08	0.19	0.39	0.20	0.65	0.56	1.10	1.10	0.05	0.05
ZINC	137.0	136.0	92.9	68.4	257.0	299.0	1,080.0	611.0	537.0	1,160.0	129.0	200.0

SECTION 4

CONCLUSIONS AND RECOMMENDATIONS

4.0 INTRODUCTION

The following section describes conclusions derived from sediment data collected during the Phase I investigation, and from the statistical analyses performed on this data. Recommendations for future activities on this issue are also provided.

4.1 CONCLUSIONS

Elevated concentrations of SVOCs and metals were observed in sediment adjacent to the River Road Site and southern portion of the Cherry Farm Site, as indicated by results from this investigation and those obtained by the NYSDEC. Generally, the contaminants present do not appear to be attributable to the Site.

Virtually no organic contamination exceeding background or NYSDEC sediment criteria are present in sediments north (downstream) of station 3000. Organic contaminant concentrations do, however, exceed background and sediment criteria at station 4500 near shore, with higher concentrations detected farther from shore at stations 4300, 4000, and 3700 than near the shore at those three locations.

The majority of the semivolatile organic compounds detected adjacent to the Site are classified as polyaromatic hydrocarbons (PAHs), as defined by USEPA SW846. For presentation purposes, total PAHs were used to demonstrate contaminant distribution adjacent to the Site. A plot of total PAH concentrations, detected in samples collected 10 feet and 100 feet from shore, is displayed in Figure 4.1. This plot of concentrations 10 feet and 100 feet from shore shows a peak of contamination near station 4300.

Water table contour maps presented in the RI/FS for the River Road Site (Dvirka and Bartilucci, 1993) indicate that groundwater flow is generally perpendicular to shore. This indicates that groundwater contribution to the river, and to sediment, would be consistent along the entire shore and not from one local area, which would serve as a point source for contaminants.

All of the organic contaminants detected in adjacent sediments have been detected on the Site in subsurface soil, surface soil, groundwater and surface sediment samples, but in much lower concentrations than in the adjacent river sediments (Dvirka and Bartilucci, 1993; O'Brien and Gere, 1989). Higher concentrations of these contaminants have been detected on the Site in the light non-aqueous phase liquid (LNAPL) layer found as a sheen on groundwater at the River Road Site. Due to the immiscible, low density nature of the LNAPL, it is unlikely that contaminants in the LNAPL would reach sediments on the river bottom.

The pattern for most observed metal analytes is similar to the pattern of organic contaminants in that the concentrations are significantly higher at the southern

(upstream) end of the Site. As illustrated in Figure 4.2, the concentration of iron, used here as a "tracer" parameter due to its predominance and due to the fact that no sample showed significant levels of other metals without also showing elevated iron, is substantially higher in background samples collected at station 5000, approximately 1,600 feet upstream from the edge of the Site, than in samples immediately downstream in comparison of results near the shore. A smaller source of iron appears to be near river station 4000, as indicated in Figure 4.2. This secondary source is of a lower concentration than the apparent main source located upstream of the Site.

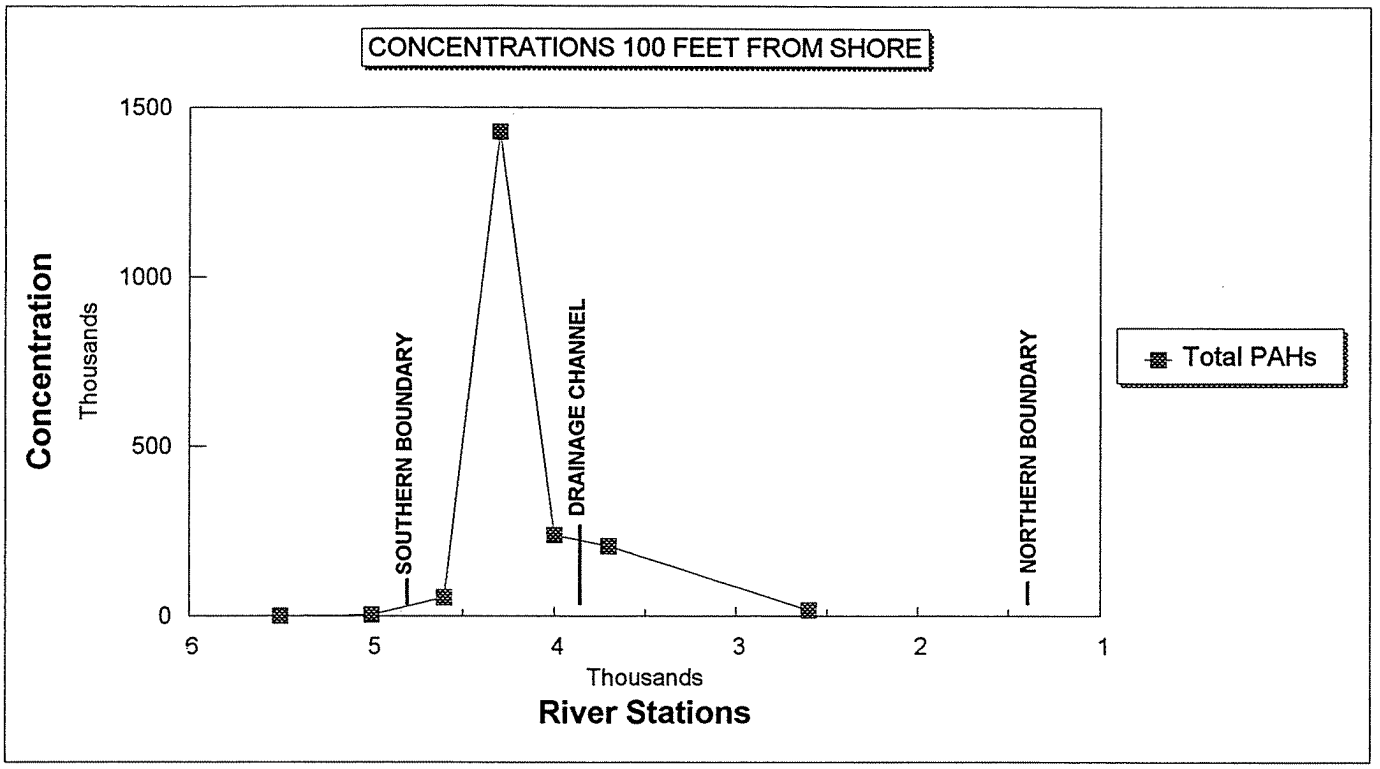
Several other metals also exhibit increased concentrations at station 5000, including aluminum, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, nickel, and vanadium. Most metals are detected at high concentrations near shore upstream of the Site. These same metals are detected at locations farther from shore, adjacent to the Site. This pattern, again, seems to indicate a point source of metals contaminants upstream of the Site.

Chromium is an exception to the concentration distribution pattern of most other metals. As displayed in Figure 4.3, chromium concentrations are higher near shore, beginning near river station 4500. Concentrations continue to be elevated along the shore; they reach a maximum near river station 4000. This pattern of sustained, higher concentrations indicates that chromium may be found along the entire shoreline of the River Road Site rather than from a point source. Chromium levels in samples obtained 20 feet from the shore were significantly lower than concentrations observed close to shore.

4.2 RECOMMENDATIONS

A Phase II Sediment Assessment is not recommended for the Site. The drainage diversions, regrading, and capping planned for the Site will preclude contamination of river sediments by the Site. Planned shoreline stabilization along the Niagara River includes capture of sediment and eroded fill from the shoreline. To accommodate shoreline stabilization along the Site, between six inches and one foot of sediment will be retrieved up to ten feet from the shore and placed within the capped area. This area will be stabilized through the installation of natural and/or engineered materials as a means of minimizing future erosion damage. The Site remediation plans are outlined in the Preliminary Remedial Design Report provided to the NYSDEC on April 7, 1995. Contaminant concentrations in locations adjacent to with the Site are generally low in comparison to contaminant concentrations from upstream locations. Attempts to remediate sediment to a greater extent than that proposed in the Preliminary Remedial Design Report may be inappropriate given the introduction of contamination from upstream point sources.

FIGURE 4.1
TOTAL PAH CONCENTRATIONS



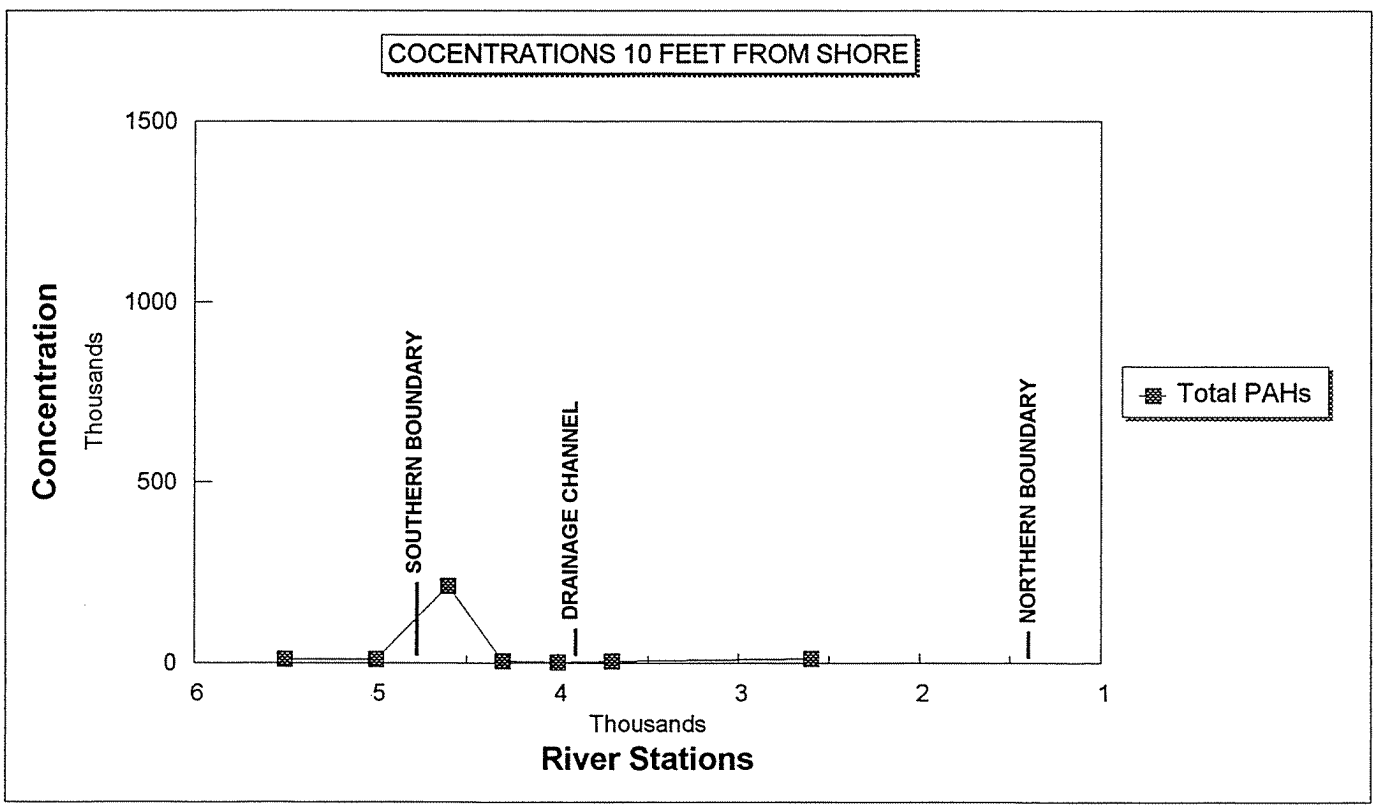
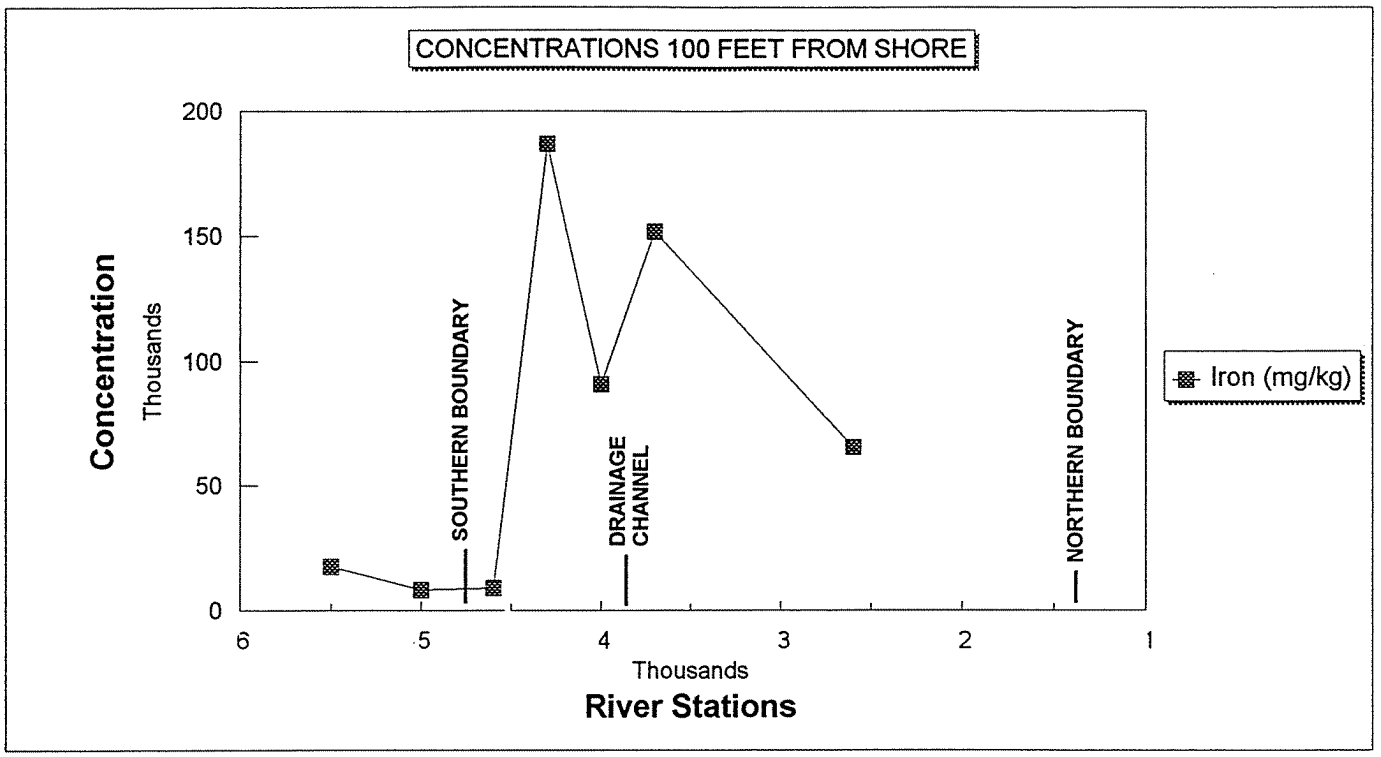


FIGURE 4.2
IRON CONCENTRATIONS



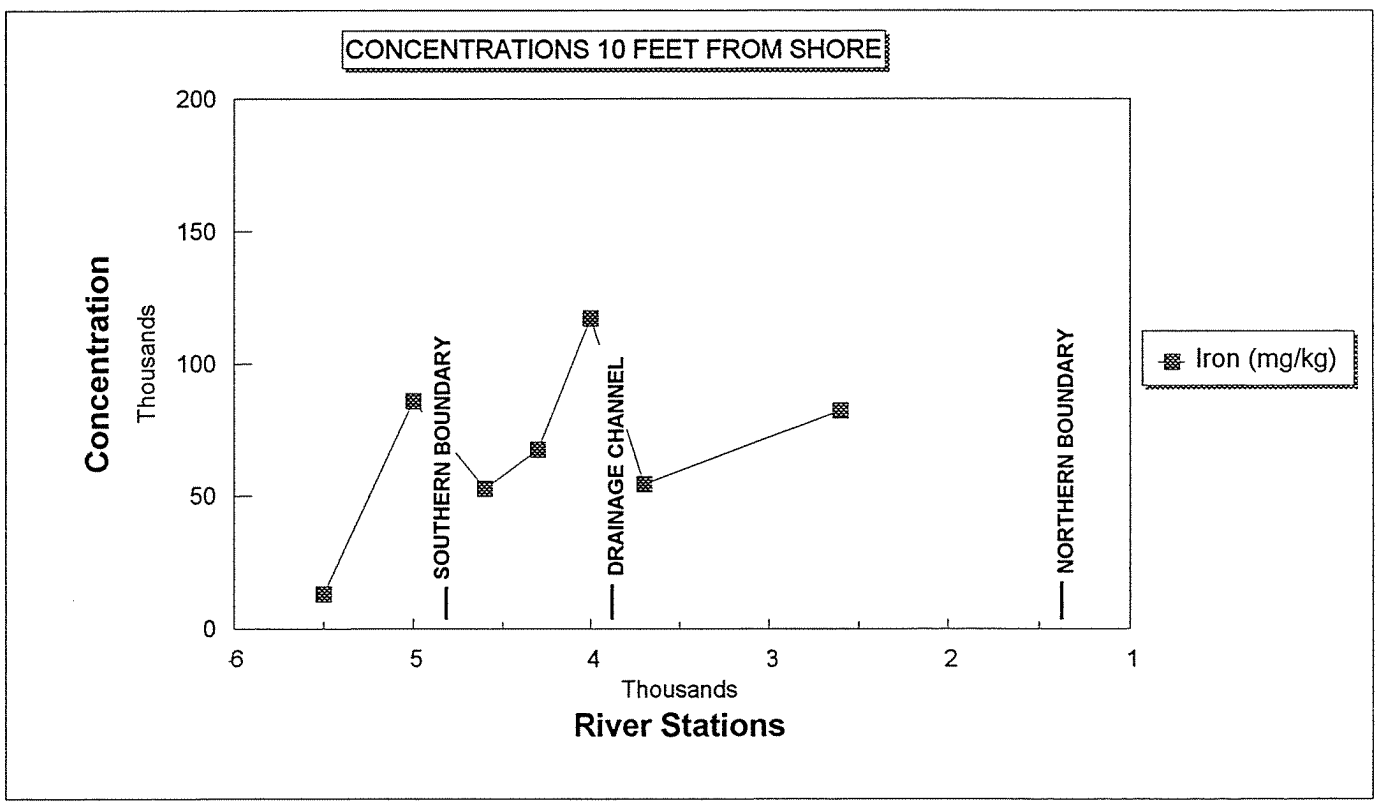
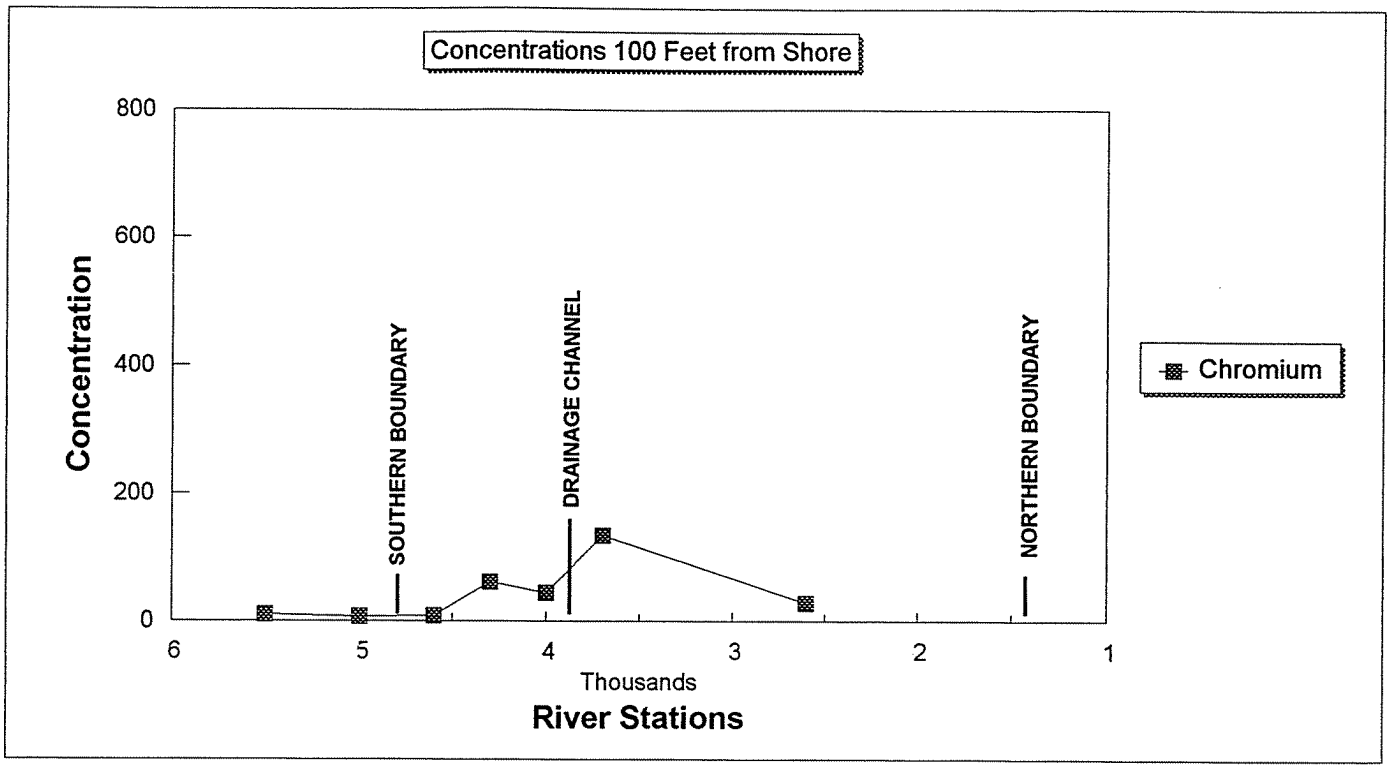
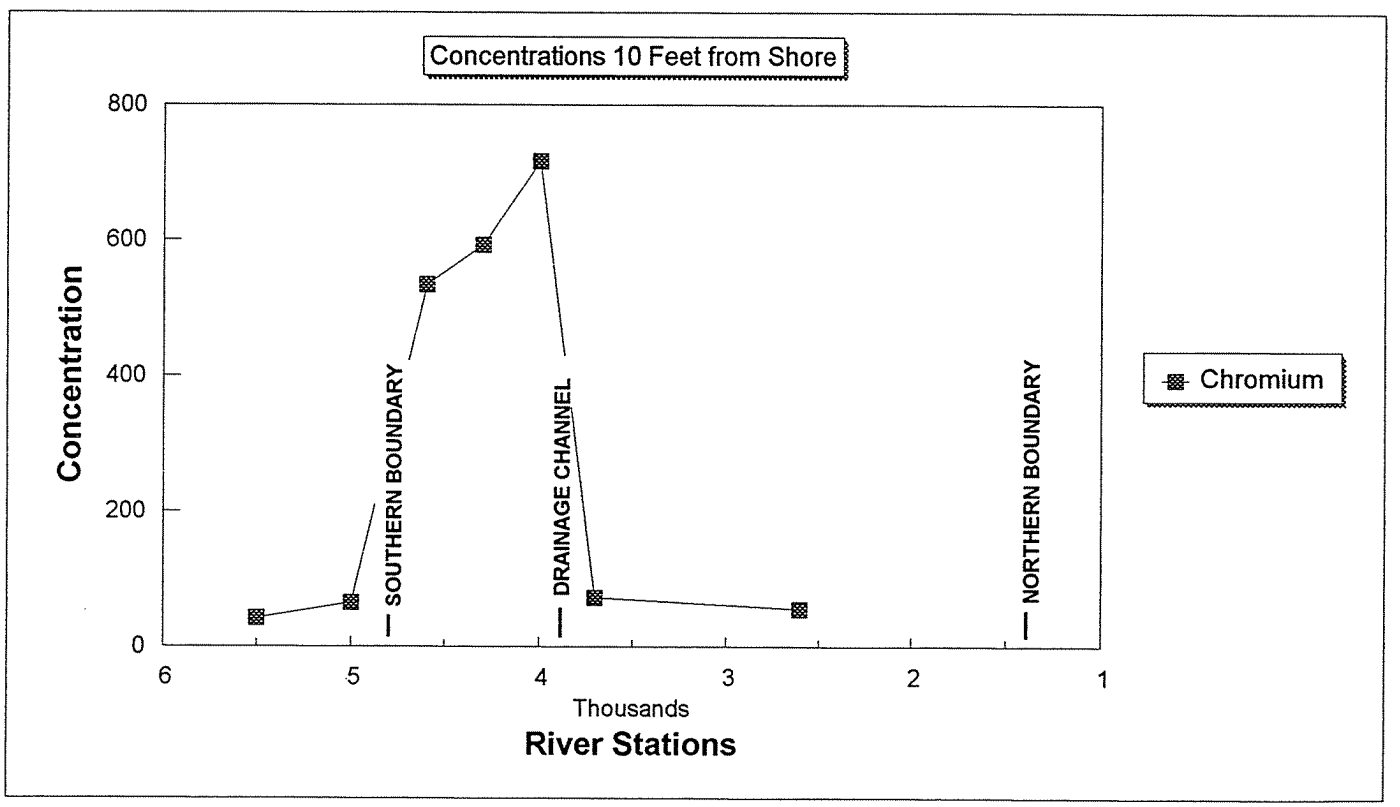


FIGURE 4.3
CHROMIUM CONCENTRATIONS





APPENDIX A

SAMPLING AND ANALYSIS PLAN FOR NIAGARA RIVER SEDIMENTS REMCOR, 1994

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010

Langdon Marsh
Commissioner

October 31, 1994

James H. Kyles
Engineering-Science, Inc.
37 Franklin Street, Suite 200
Buffalo, New York 14202

Dear Mr. Kyles:

RE: Cherry Farm/River Road Site, Erie County, New York
(Site No. 9-15-063 & 031)

The New York State Department of Environmental Conservation (NYSDEC) has completed the review of the Sampling and Analysis Plan (SAP), dated October 11, 1994, for the Niagara River Sediments prepared by REMCOR for the above referenced site. The SAP is approved with the following conditions:

1. The locations of upstream samples in Zone A and Zone B have been selected for specific reasons (see Section 2.1 of the SAP). Sample locations at Stations 5200 and 6000, in front of the Roblin Steel loading/unloading dock, and at Station 7000, downstream of the 5 feet sewer outlet, may affect the background concentration calculations based on 95th percentile upper confidence limit. Therefore, the Department will have the right to take into account the affect of outliers that may inappropriately skew the resulting calculations.

2. In paragraph 3 of the Section 3.2 of SAP, it is stated that the calculations of background concentrations will be performed only for constituents where the analytical results from samples adjacent to the site (Zone C) exceed NYSDEC sediment criteria. To clarify this, please refer to the enclosed NYSDEC document, "Technical Guidance for Screening Contaminated Sediments - November 1993." All compounds listed in Table 1, Table 2 and Appendix 2 of this document must be included for the screening and calculations of the background concentrations. First, contaminants listed in Table 1 (including footnotes) and Table 2 must be considered using criteria given in these tables. Secondly, those compounds listed in Appendix 2, but not included in Tables 1 & 2, must be considered using ER-L concentrations given in the appendix.

SAMPLING AND ANALYSIS PLAN

NIAGARA RIVER SEDIMENTS

:26594

SAMPLING AND ANALYSIS PLAN

NIAGARA RIVER SEDIMENTS

prepared for

CHERRY FARM/RIVER ROAD PRPs

OCTOBER 11, 1994

PROJECT NO. 93120.1

REMCOR, INC.
PITTSBURGH, PENNSYLVANIA

:26594

TABLE OF CONTENTS

TABLE OF CONTENTS
(Continued)

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) has been prepared for the Niagara River sediments in the vicinity of the Cherry Farm/River Road Site (Site). The New York State Department of Environmental Conservation (NYSDEC) has included sampling of river sediments in the amended Record of Decision (ROD) for the Cherry Farm Site and the ROD for the River Road Site. The intent of this SAP is to determine if there is a "discernible difference" in the sediments adjacent to the Site in comparison to those found "upstream" of the site. Both "discernible difference" and "upstream" are defined in this SAP.

1.1 OBJECTIVE

Develop a sampling, analysis, and evaluation plan that provides for the collection of representative sediment samples from the Niagara River, the appropriate analytical testing, and the comparison of the analytical results. The result of the implementation of this SAP will be a determination of whether or not the Site has had an effect on the river sediments which is discernible from the overall quality of sediments in the Niagara River.

1.2 SCOPE

The scope of this SAP is to determine if there are discernible differences between the constituents detected in the sediments adjacent to the Site from those upstream of the Site and, if so, if the sediments at the Site are of lower quality. The SAP is based on a two-phase program:

- Phase I - Determine if there is a discernible difference between the sediments found adjacent to the Site and those found upstream of the Site
- Phase II - If, and only if, there is a discernible difference in the sediment quality (and the sediments adjacent to the Site are of lower quality), the Phase II SAP will evaluate the feasibility of a remedial action associated with the sediments in the Niagara River.

1.3 BACKGROUND

The NYSDEC has collected 12 samples from the Niagara River along the shoreline at the Site. The samples were taken at 6 river stations along a 2,900-foot section of the river (Figure 1). No background (upstream) samples were collected by the NYSDEC. The 12 samples were analyzed for semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and inorganic compounds.

The amended ROD for the Cherry Farm Site and the ROD for the River Road Site both include sediment sampling as a component of the selected remedy. Neither ROD goes beyond recommending sampling. The Cherry Farm/River Road Potentially Responsible Parties (PRPs) have agreed to perform a phased river sampling program, as described in the Scope of Work.

1.4 DEFINITIONS

The following definitions apply to the SAP:

- "Site" - The portions of the Cherry Farm/River Road site shown in Figure 1.
- "Record of Decision" or "ROD" - The New York State amended ROD relating to the Cherry Farm Site signed in October 1993, as referenced in Footnote 1,[1] and the ROD relating to the River Road Site signed in March 1994, as referenced in Footnote 2.[2]
- River Sediment - Unconsolidated material deposited by the Niagara River.
- Upstream - Any area upgradient of a specified location. For the purposes of this SAP, all areas of the Niagara River south of the Niagara River World/Tonawanda Coke (ponds) property line are considered upstream.

---

[1] New York State Department of Environmental Conservation, October 7, 1993, "Amended Record of Decision, Niagara Mohawk/Cherry Farm, Site No. 9-15-063," Signed by Ann Hill DeBarbieri.

[2] New York State Department of Environmental Conservation, March 24, 1994, "Record of Decision, River Road Site, Town of Tonawanda, Erie County, I.D. Number 9-15-031," Signed by Ann Hill DeBarbieri.

- Downstream - Any area downgradient of a specified location. For the purposes of this SAP, all areas north of the north drainage ditch are considered downstream.

- Navigation Channel - The zone in the Niagara River that was historically dredged to promote shipping. The navigation channel is shown in Figures 1 and 2. The flow velocity in this channel is sufficiently high to maintain the required depths without frequent dredging. During a recent conversation with the U.S. Army Corps of Engineers, Buffalo District, it was indicated that the channel has not required dredging in over 20 years. The navigation channel does not, therefore, represent a depositional environment, and there is no reason to consider any sampling in the channel.

- Discernible Difference - For the purposes of this SAP, a discernible difference will be determined by comparing constituent concentrations in sediments adjacent to the Site to the 95th percentile upper confidence limit (a/k/a background concentration) for constituent's detected in upstream sediments. Concentrations of specific constituents that exceed the 95th percentile upper confidence limit for that constituent in upstream samples will be deemed to be discernibly different.

1.5 SUMMARY

This SAP provides a phased approach for evaluating the sediments in the Niagara River adjacent to and upstream of the Site. The SAP includes the following steps:

- Collection of 36 samples, excluding replicates, from 12 defined transects along the Niagara River. The rationale for the selection of these locations is presented in Chapter 2.0.

- Analytical testing of the sediment samples for SVOCs, PCBs, and inorganic compounds (including cyanide). Six samples from Zone C, one from each transect, will be analyzed for total organic carbon (TOC).

- Data validation for all samples.

- Grain-size analysis of all samples.

- Calculation of background concentrations. The background concentration for each constituent will be the 95th percentile upper confidence limit, as defined in Appendix A.

- If there is no discernible difference between the background concentrations calculated from samples collected upstream and the concentrations in samples collected adjacent to the Site, a Sampling and Analysis Report will be prepared. The report will include a description of the sampling program, laboratory reports, vali-

dation reports, tables of validated data, and the comparison of the detected constituents.

- If the concentrations of constituents in the sediment samples collected from the area adjacent to the site are above NYSDEC sediment criteria, can be attributed to the site and exceed the background (upstream) concentration (95th percentile upper confidence limit) for each constituent, then an evaluation will be made regarding the need for a Phase II SAP. The evaluation will take into consideration the toxicity and concentration of the constituents attributed to the site.

The Phase II SAP, if needed, will include:

- Collection of an estimated 16 samples from defined locations at two depths along the Niagara River. The rationale that will be used for the selection of these areas is presented in Chapter 4.0. These locations cannot be selected until the data from the Phase I sampling has been evaluated and a determination of where, if anywhere, there is a discernible difference.

- Analytical testing of the sediment samples for SVOCs, PCBs, and inorganic compounds that were defined as having a discernible difference in the Phase I evaluation. If, for example, PCBs were not discernibly different in the Phase I sampling and analysis, they will be dropped from the Phase II analytical program.

- Data validation for all samples.

- Preparation of a map showing the locations of samples with constituents exceeding either background or NYSDEC sediment criteria.

- Feasibility study (FS) of sediment remedial action technologies and alternatives. The FS, if required, will follow the U.S. Environmental Protection Agency (EPA) guidance. The short-term impact evaluation required for a FS will include an analysis of ecological impacts and the transport of sediments from upstream locations.

2.0 PHASE I SAP SCOPE OF WORK

The Phase I Scope of Work includes defining the sampling locations, selecting the constituents of interest, sampling protocols, defining the methods for sample identification and handling, and analytical protocols. Following generation of the analytical data, validation and data evaluation techniques will be required. The specific protocols to be followed for data evaluation are defined in the subsequent chapter.

2.1 SAMPLING LOCATIONS

There are three zones (Figure 1) that will be sampled to determine if there is a discernible difference in the Niagara River sediments adjacent to the Site from those found upstream. These zones are as follows:

- Zone A - Upstream in the vicinity of Mid-River Marina, Ltd.
- Zone B - Immediately upstream in the vicinity of Roblin Industries, Inc.
- Zone C - Adjacent to the Site.

Each zone has conditions that are generally indicative of conditions which occur along the Site. Samples from Zone A, upstream in the vicinity of Mid-River Marina, Ltd., will be useful in determining the overall quality of sediments being transported through and/or deposited in the Tonawanda Channel. They will be indicative of the impacts of upstream industries, the City of Buffalo publicly owned treatment works, and Lake Erie. Samples from Zone B, immediately upstream of the Site, will be useful in comparing the sediments from the adjacent river reach and particularly the potential deposition of iron in the river during unloading of lake transport ships.

For Zone A, there will be four sampling transects across the river; for Zone B, there will be two sampling transects across the river; and for Zone C, there will be six sampling transects. The locations of the transects in Zones A and B were evenly distributed at 1,000-foot intervals. The locations of the transects in Zone C are dependent upon the depositional environment of sediments and the desire to collect samples which represent conditions that are appropriate for the evaluation of samples collected adjacent to the Site.

For each sampling transect, there will be three sampling locations. The sampling locations are dependent upon the desire to collect samples that are representative of each area. The exact locations of the samples may be adjusted to adapt to field conditions and/or a fourth sampling location could potentially be added, depending on the characteristics of the recovered samples (e.g., a location that yields only gravel will provide no useful data).

A summary of the proposed sample locations is given in Table 1.

2.2 CONSTITUENTS

The following constituents will be analyzed using NYS analytical services protocol (ASP):

- Base/neutral and acid (gas chromatograph/mass spectrometer) extractables, Method ASP91-2
- PCBs, Method ASP91-3
- Metals, CLP Inorganics
- Total organic carbon.

These groups of constituents were selected for analysis pursuant to the amended ROD for the Cherry Farm Site and the ROD for the River Road Site, and to be consistent with the NYSDEC sampling program.

2.3 SAMPLING PROTOCOLS

The sampling protocols will be in accordance with the following sections.

2.3.1 Sample Identification Scheme

Samples will be identified by a three-field identification number with each field separated by a dash. The first field will designate the sampling zone (A, B, or C); the second field will designate the sampling transect within the sampling zone with the first two digits of the closest river station (i.e., C-26-10 is near Station 26+00); and the third field will designate the distance from the east shore of the Niagara River.

2.3.2 Sample Collection Procedures

At each sampling location, samples will be collected from the surface (0 to 6 inches) of the river bottom using a decontaminated clamshell sampling device (e.g., Ponar sampler) lowered from a floating platform (e.g., pontoon boat). Samples will be placed into a 250-milliliter (mℓ) or 8-ounce glass sample container with a Teflon™-lined cap. After collection of the sample, appropriate information will be recorded in a field notebook and on a chain-of-custody (COC) record, and the samples will be temporarily stored for delivery to the laboratory.

2.3.3 Sampling Equipment Decontamination

Appropriate precautions will be taken to avoid the possibility of cross-contamination of samples. Contact surfaces of sampling equipment will be decontaminated prior to each use as follows:

- Wash with soapy, nonphosphate detergent
- Rinse with tap water
- Rinse with distilled water
- Air dry.

2.3.4 Sample Packaging and Shipping

Samples shipped to a laboratory will be overpacked in appropriately sized shipping containers packed with sorbent material. The exterior of the shipping container will be labeled for restricted article shipment via overnight air courier and will be marked to indicate that the contents are laboratory samples. Samples will be delivered to the laboratory the day after collection. The shipping label will be firmly affixed to the exterior and clearly indicate the receiving laboratory's name and prime contact. The COC record will be placed inside the shipping container.

2.3.5 Sample Documentation

Sampling activities will be recorded in the field sampler's notebook. The field notebook will be bound and have numbered, water-resistant pages. All activities regarding Site conditions and sampling will be recorded in ink. If an incorrect entry is made, the information will be

crossed out with a single strike and initialed. Pertinent information will include, at a minimum, the following:

- Name and location of the Site
- Date and time of all entries
- Name of person keeping the log
- Location of sampling points
- Type of samples collected
- Number of samples collected
- Volume of samples collected
- Method of sample collection
- Date and time of sample collection.

The field sampler may also use the field notebook to record the chronology of sample submittal and receipt of orally reported sampled results, if applicable.

2.3.6 Chain-of-Custody Records

Once samples have been collected, custody of the samples will be maintained and documented using COC records. Custody begins with the collection of samples in the field. The field sampler will be responsible for the care and custody of collected samples until they are properly transferred or dispatched. When transferring custody, the individuals relinquishing and receiving the samples will sign, date, and note the time on the COC record.

In situations where samples leave the originator's immediate control, such as shipment to the destination laboratory by a common carrier, the COC record form will be placed inside the shipping container and a seal will be placed on the container to ensure the integrity of the samples during transportation. Any shipping container that does not arrive at the laboratory with the seal intact will not be considered to have been in valid custody. These samples will not be analyzed by the laboratory.

3.0 DATA EVALUATION

3.1 DATA VALIDATION

Laboratory data will be independently validated prior to use.

3.2 CALCULATION OF BACKGROUND CONCENTRATIONS

The background concentrations for the river sediments present in Zone C are those that are being transported from areas upstream of the Site (i.e., from Zone A and Zone B).

The sediment sampling data will be grouped by constituent in tables that present the data for samples taken from Zones A and B independently from the data for samples taken in Zone C. For each constituent detected in Zone C, the 95th percentile upper confidence limit will be calculated for that constituent using data from samples collected from Zones A and B (see example in Appendix A); this value will be deemed the background concentration for that constituent.

Potentially, there could be over 100 individual constituents that will require the calculation of background concentrations. This would result in an overwhelming quantity of data. To reduce this quantity to a manageable number, the calculation of background concentrations will be performed only for constituents where the analytical results from samples adjacent to the Site (Zone C) exceed NYSDEC Sediment Criteria.

3.3 CONCLUSIONS

If the concentrations of constituents in the sediment samples collected from the area adjacent to the site are above NYSDEC sediment criteria, can be attributed to the site and exceed the background (upstream) concentration (95th percentile upper confidence limit) for each constituent, then an evaluation will be made regarding the need for a Phase II SAP. The 12 samples collected by the NYSDEC will be validated and utilized qualitatively in the evaluations of the need for a Phase II SAP. The evaluation will take into consideration the toxicity and concentration of the constituents attributed to the site.

The Phase II SAP, if needed, will include:

- Collection of an estimated 16 samples from defined locations at two depths along the Niagara River. The rationale that will be used for the selection of these areas is presented in Chapter 4.0. These locations cannot be selected until the data from the Phase I sampling has been evaluated and a determination of where, if anywhere, there is a discernible difference.

- Analytical testing of the sediment samples for SVOCs, PCBs, and inorganic compounds that were defined as having a discernible difference in the Phase I evaluation. If, for example, PCBs were not discernibly different in the Phase I sampling and analysis, they will be dropped from the Phase II analytical program.

- Data validation for all samples.

- Preparation of a map showing the locations of samples with constituents exceeding either background or NYSDEC sediment criteria.

- Feasibility study (FS) of sediment remedial action technologies and alternatives. The FS, if required, will follow the U.S. Environmental Protection Agency (EPA) guidance. The short-term impact evaluation required for a FS will include an analysis of ecological impacts and the transport of sediments from upstream locations.

4.0 PHASE II SAP SCOPE OF WORK

The Phase II Scope of Work will include the activities needed to define the conditions at the Site in sufficient detail to allow a FS to be conducted, if necessary. The Phase II sampling and analysis program will be conducted following the protocols defined for the Phase I sampling and analysis program (Chapter 2.0). Samples will be taken at locations as necessary to define the conditions adjacent to the Site that may influence the FS.

4.1 BACKGROUND CONCENTRATIONS

The background concentration of each detected constituent will be defined by the 95th percentile upper confidence limit of the upstream samples. The samples taken from Zones A and B will have been evaluated to define the background concentration during the Phase I Scope of Work. These values will be used to define those constituents detected in the samples collected adjacent to the Site that will be considered Site related. The samples that have been determined to be discernibly different, if any, will be used to evaluate if a Phase II SAP is required.

4.2 CONSTITUENTS

Only constituents that are detected in more than one sample adjacent to the Site at a concentration exceeding the background concentration will be considered in the Phase II sampling and analysis program and the FS. The analytical results for samples collected during the NYSDEC sampling program and samples from Zone C collected during the Phase I sampling and analysis will be reviewed to define all constituents that are Site-related. If a group of constituents (e.g., PCBs) are not detected at concentrations exceeding the background concentration, they will not be included in the Phase II sampling and analysis program.

4.3 SAMPLING LOCATIONS

The distribution of samples with analytical results in excess of the background concentrations will be evaluated using a drawing similar to Figure 1. The Phase II sampling and analysis program, if required, will be designated to establish the limits of the Site-related constituents,

as defined in Section 4.2, which exceed the background concentrations. These limits will allow an analysis of the extent and feasibility of any remedial action in the river.

5.0 REPORTING

The reporting for this project will clearly define the sampling activities, observations made while sampling, analytical results, data validation, background calculations, and the conclusions.

If the data from the Phase I sampling and analysis program indicate that the sediments adjacent to the Site are not discernibly different from those that lie upstream (background) of the Site, a complete detailed report will be submitted. The report will follow the general outline given below:

I. INTRODUCTION
II. SEDIMENT SAMPLING
    A. PROCEDURES
    B. SAMPLE COLLECTION OBSERVATIONS
III. ANALYTICAL RESULTS
IV. DATA VALIDATION
V. DATA ANALYSIS
    A. GENERAL DESCRIPTION OF DATA
    B. BACKGROUND CONCENTRATION CALCULATIONS
VI. DETERMINATION OF DISCERNABLE DIFFERENCE
VII. CONCLUSIONS
    TABLES
    FIGURES
    APPENDICES
    A. CHAIN-OF-CUSTODY FORMS
    B. LABORATORY ANALYTICAL DATA
    C. DATA VALIDATOR'S REPORT
    D. BACKGROUND CONCENTRATION CALCULATIONS

Following the Phase I data analysis, if there is a discernible difference, a Technical Memorandum will be prepared which provides data tables, calculated background concentrations, and those sample locations that are discernibly different from background. The Phase II sampling and analysis program will be sufficiently described in the Technical Memorandum to allow an understanding of the goals of the Phase II sampling and analysis program, the actions to be taken to delineate any locations with discernibly different sediments, and an outline of the implementation schedule.

Following the implementation of the Phase II sampling and analysis program, an evaluation will be conducted to determine if it is feasible to conduct a remedial action for any areas of sediments that are discernibly different. If it is not feasible, a report will be prepared as outlined for the Phase I sampling, with the addition of a chapter clearly describing the evaluation of sediments in the river that are discernibly different.

If it is feasible to address areas of sediments that are discernibly different, an FS will be conducted that will discuss remedial technologies and remedial alternatives. The FS will be conducted using EPA Guidance and will address, among other criteria:

- Ecological impact
- Permanence of remedial action
- Contamination versus depth
- Short-term impacts
- Thickness of impacted sediments
- Extent of impacted sediment.

6.0 CLOSING

This SAP has been developed to determine if the sediments adjacent to the Cherry Farm/ River Road Site are discernibly different from the sediments found upstream of the Site.

The SAP can be completed in conjunction with the predesign studies needed for remedial design of the Cherry Farm/River Road Site. The entire program may require 18 weeks to complete:

- The sampling and analysis is expected to take one to two weeks (depending on weather and river traffic) to complete.
- The data analysis and data validation are expected to take between six and eight weeks, depending on the laboratory turnaround times.
- The data analysis, background concentration calculations, and sediment analysis are expected to take four weeks to complete.
- The Sampling and Analysis Report is expected to take four weeks.

TABLE 1
PROPOSED SAMPLING LOCATIONS
NIAGARA RIVER
CHERRY FARM/RIVER ROAD SITE
TOWN OF TONAWANDA, NEW YORK

ZONE	RIVER STATION	NYSDEC SAMPLE NO.	SAMPLE NO.	DISTANCE FROM SHORE (Feet)	MEASUREMENTS		SEDIMENT SAMPLE	ANALYTICAL TESTING				COMMENTS/OBSERVATIONS
					WATER DEPTH	SEDIMENT THICKNESS		TOC	SVOCs	PCBs	INORGANICS	
A	70+00		A-70-10	10					SAP	SAP	SAP	
A	70+00		A-70-20	20					SAP	SAP	SAP	
A	70+00		A-70-100	100					SAP	SAP	SAP	
A	80+00		A-80-10	10					SAP	SAP	SAP	
A	80+00		A-80-20	20					SAP	SAP	SAP	
A	80+00		A-80-100	100					SAP	SAP	SAP	
A	90+00		A-90-10	10					SAP	SAP	SAP	
A	90+00		A-90-20	20					SAP	SAP	SAP	
A	90+00		A-90-100	100					SAP	SAP	SAP	
A	100+00		A-100-10	10					SAP	SAP	SAP	
A	100+00		A-100-20	20					SAP	SAP	SAP	
A	100+00		A-100-100	100					SAP	SAP	SAP	
A	70+00		A-70-10-REP	10					SAP	SAP		
B	60+00		B-60-2	2					SAP	SAP	SAP	
B	60+00		B-60-20	20					SAP	SAP	SAP	
B	60+00		B-60-100	100					SAP	SAP	SAP	
B	50+00		B-50-2	2					SAP	SAP	SAP	
B	50+00		B-50-20	20					SAP	SAP	SAP	
B	50+00		B-50-100	100					SAP	SAP	SAP	
B	60+00		B-60-2-REP	2					SAP	SAP		
C	48+00		C-48-10	10					SAP	SAP	SAP	
C	48+00		C-48-20	20				SAP	SAP	SAP	SAP	
C	48+00		C-48-100	100					SAP	SAP	SAP	
C	45+00		C-45-10	10					SAP	SAP	SAP	
C	45+00		C-45-20	20				SAP	SAP	SAP	SAP	
C	45+00		C-45-100	100					SAP	SAP	SAP	
C	43+00		C-43-10	10					SAP	SAP	SAP	
C	43+00		C-43-20	20				SAP	SAP	SAP	SAP	
C	43+00		C-43-100	100					SAP	SAP	SAP	
C	40+00		C-40-10	10					SAP	SAP	SAP	
C	40+00		C-40-20	20				SAP	SAP	SAP	SAP	
C	40+00		C-40-100	100					SAP	SAP	SAP	
C	37+00		C-37-10	10					SAP	SAP	SAP	
C	37+00		C-37-20	20				SAP	SAP	SAP	SAP	
C	37+00		C-37-100	100					SAP	SAP	SAP	
C	26+00		C-26-10	10					SAP	SAP	SAP	
C	26+00		C-26-20	20				SAP	SAP	SAP	SAP	
C	26+00		C-26-100	100					SAP	SAP	SAP	
C	48+00		C-48-10-REP	10					SAP	SAP		

TABLE 1
(CONTINUED)

ZONE	RIVER STATION	NYSDEC SAMPLE NO.	SAMPLE NO.	DISTANCE FROM SHORE (Feet)	MEASUREMENTS		SEDIMENT SAMPLE	ANALYTICAL TESTING				COMMENTS/OBSERVATIONS
					WATER DEPTH	SEDIMENT THICKNESS		TOC	SVOCs	PCBs	INORGANICS	
C	12+00	1		65	NA	NA	YES		X	X	X	GRAY–SILTY
C	12+00	2		35	NA	NA	YES		X	X	X	GRAY–SILTY
C	14+00	3		70	NA	NA	YES		X	X	X	GRAY
C	14+00	4		35	NA	NA	YES		X	X	X	GRAY
C	29+00	5		80	NA	NA	YES		X	X	X	BLACKISH – SILTY
C	29+00	6		40	NA	NA	YES		X	X	X	BLACKISH, SANDY, OIL SHEEN
C	34+00	7		80	NA	NA	YES		X	X	X	BLACKISH, SHEEN PAH ODOR
C	34+00	8		40	NA	NA	YES		X	X	X	BLACKISH
C	39+00	9		40	NA	NA	YES		X	X	X	BLACKISH
C	39+00	10		27	NA	NA	YES		X	X	X	BLACKISH
C	41+00	11		25	NA	NA	YES		X	X	X	BLACKISH
C	41+00	12		10	NA	NA	YES		X	X	X	BLACKISH, OIL SHEEN

NOTES:

SAP – TO BE SAMPLED DURING THE SAMPLING AND ANALYSIS PLAN
NA – NOT ANALYSED OR NOT MEASURED
X – ANALYSED DURING THE NYSDEC SAMPLING PROGRAM

:24042

APPENDIX A

EXAMPLE CALCULATION BACKGROUND CONCENTRATIONS

APPENDIX A

EXAMPLE CALCULATION BACKGROUND CONCENTRATIONS

A population is a very large or infinite number of data points. The population can be statistically described by the population mean (μ) and the population variance (σ^2). If it is assumed that the data points are normally distributed,[1] the population statistics can be estimated using the statistics of a sample of that population. The sample mean is usually symbolized as $\bar{x}$ and the sample variance is usually symbolized as s^2. The population and sample standard deviations are generally taken as the positive square root of the variances. An upper confidence limit (UCL) can be established, at any significance level, using Cochran's student t test.

The following equations can be used to determine sample statistics:

$$\bar{x} = \frac{\sum_{i=1}^{n} x_i}{n}$$

$$s^2 = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n-1}$$

$$UCL_{95} = \bar{x} + t_{95} \frac{s}{\sqrt{n}}$$

[1] Data normality is generally a reasonable assumption.

where:

$\bar{x}$ = sample mean

s^2 = sample variance

x_i = individual values of each data point

n = number of data points

$\sum_{i-1}^{n}$ = mathematical symbol indicating summation of the following argument starting at 1 and ending at n

UCL_{95} = 95th percentile upper confidence limit

t_{95} = student t value at selected level of confidence (95%).

APPENDIX A, ATTACHMENT 1

EXAMPLE STATISTICS

UPSTREAM DATA SET	PHENANTHRENE (parts per billion)		IRON (parts per million)
Sample No. 07	6,900	E[1]	229,000
Sample No. 08	4,300	E	141,000
Sample No. 09	7,100	E	157,000
Sample No. 10	31,000	E	149,000
Sample No. 11	500		32,800
Sample No. 12	1;700		104,000
Number of Samples	6		6
Mean	8,583		135,467
Standard Deviation	11,301		64,740
Degrees of Freedom	5		5
Student t (95%)	2.015		2.015
95th Percentile Upper Confidence Limit	17,879		188,750

DOWNSTREAM DATA SET	PHENANTHRENE (parts per billion)			IRON (parts per million)	
Sample No. 01	80	J[2]	Less than[3]	23,900	Less than
Sample No. 02	85	J	Less than	22,800	Less than
Sample No. 03	25	J	Less than	19,100	Less than
Sample No. 04	440	U[4]	Less than	16,800	Less than
Sample No. 05	1,200[5]		Less than	50,000[6]	Less than
Sample No. 06	2,400[5]		Less than	54,400[6]	Less than

[1]"E" indicates exceeded calibration limits.

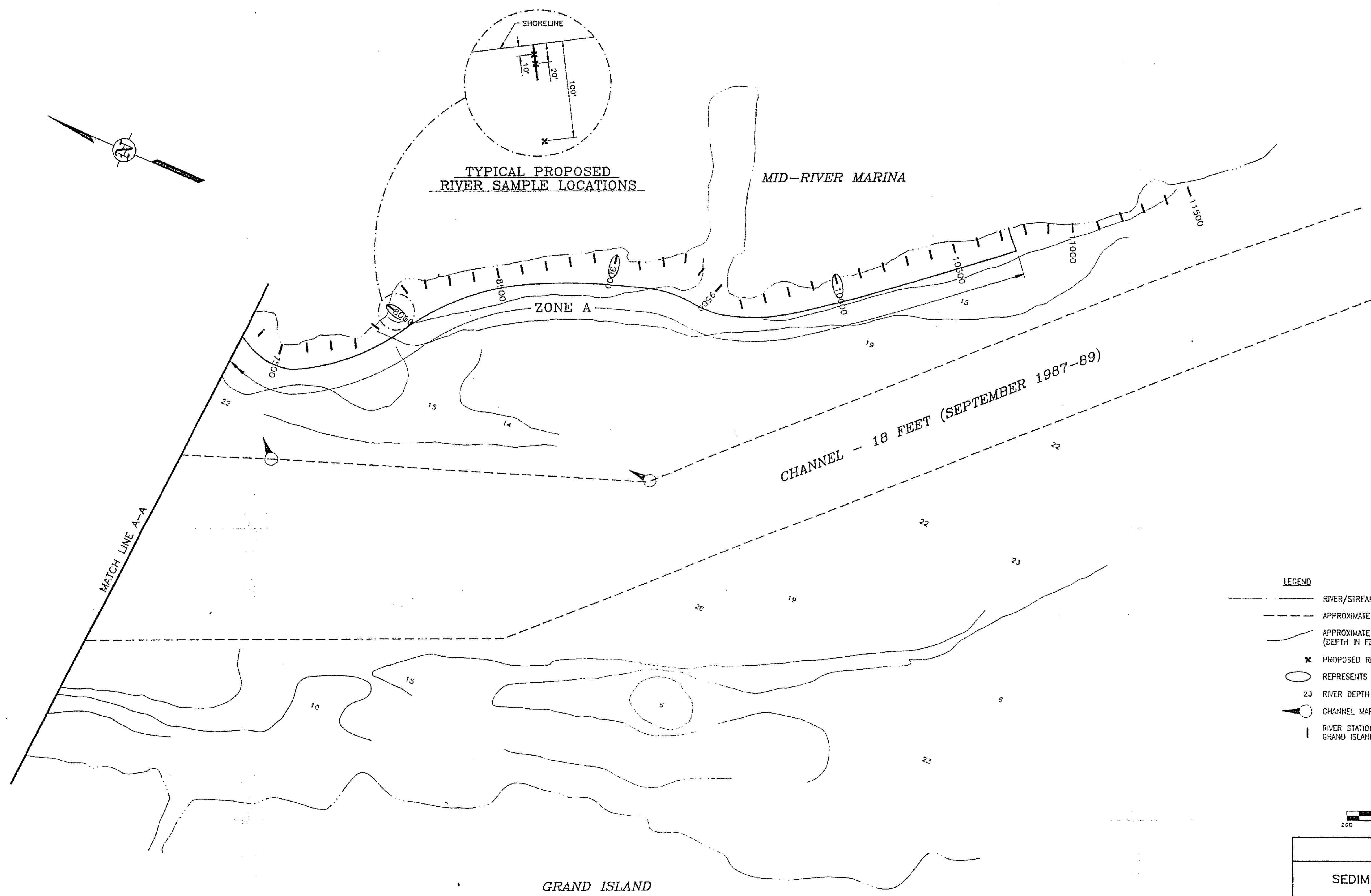
[2]"J" indicates estimated value.

[3]Less than 95th percentile upper confidence limit.

[4]"U" indicates nondetectable at the given detection limit.

[5]Meets or exceeds NYSDEC sediment criteria for phenanthrene (1,200 ppb).

[6]Meets or exceeds NYSDEC sediment criteria for iron (20,000 to 40,000 ppm).



LEGEND

- RIVER/STREAM/POND BOUNDARY
- APPROXIMATE LIMIT OF THE NAVIGATION CHANNEL
- APPROXIMATE RIVER BOTTOM CONTOUR (DEPTH IN FEET BELOW WATER SURFACE)
- × PROPOSED RIVER SAMPLE LOCATION
- REPRESENTS TYPICAL PROPOSED RIVER SAMPLE LOCATIONS
- 23 RIVER DEPTH (FEET)
- CHANNEL MARKER
- RIVER STATIONS (APPROXIMATE DISTANCE ABOVE GRAND ISLAND BRIDGE @ 100' INTERVALS)

SCALE, FEET
200 0 200 400

REFERENCE:
NOAA, FEB 29, 1992, UPPER NIAGARA RIVER, CHART 14832, 31ST EDITION.

REV. | REVISED | CHECKED | APPROVED | DESCRIPTION

FIGURE 2

SEDIMENT SAMPLING PLAN
SHEET 2 OF 2

CHERRY FARM/RIVER ROAD SITE
TOWN OF TONAWANDA, NEW YORK

PREPARED FOR

CHERRY FARM AND
RIVER ROAD PRPs

DRAWN BY	JER 10'11'94	DRAWING NUMBER
CHECKED	10/11/94	93120-E3
APPROVED	JPB 10/11/94	

REMCOR

LEGEND

- PROPERTY BOUNDARY
- RIVER/STREAM/POND BOUNDARY
- APPROXIMATE LIMIT OF THE NAVIGATION CHANNEL
- APPROXIMATE RIVER BOTTOM CONTOUR (DEPTH IN FEET BELOW WATER SURFACE)
- 12 ✕ ACTUAL RIVER SAMPLE LOCATION (NYSDEC, 1994)
- ✕ PROPOSED RIVER SAMPLE LOCATION
- ⬭ REPRESENTS TYPICAL PROPOSED RIVER SAMPLE LOCATIONS
- 13 RIVER DEPTH (FEET)
- CHANNEL MARKER
- | RIVER STATIONS (APPROXIMATE DISTANCE ABOVE GRAND ISLAND BRIDGE @ 100' INTERVALS)

REFERENCES:

1. PHOTOGRAMMETRY BY ERDMAN ANTHONY, ASSOCIATES, ROCHESTER, NEW YORK, DATED APRIL 14, 1989.
2. O'BRIEN & GERE ENGINEERS, INC., DRAWING TITLED, "SITE MAP," FIGURE 2, DATED 6/27/89, NO DWG. NO., SCALE: 1"=200', TAKEN FROM THEIR REPORT TITLED, "REMEDIAL INVESTIGATION, CHERRY FARM SITE," DATED: JUNE 1989.
3. NOAA, FEBRUARY 29, 1992, UPPER NIAGARA RIVER, CHART 14832, 31ST EDITION.

REV.	REVISED	CHECKED	APPROVED	DESCRIPTION:
0	-	-	-	

FIGURE 1

SEDIMENT SAMPLING PLAN
SHEET 1 OF 2

CHERRY FARM/RIVER ROAD SITE
TOWN OF TONAWANDA, NEW YORK

PREPARED FOR

CHERRY FARM AND RIVER ROAD PRPs

DRAWN BY	JER 10'11'94	DRAWING NUMBER 93120–E2
CHECKED	[illegible] 10/11/94	
APPROVED	[illegible] 10/11/94	

24080

REMCOR

JER G:\AUTOCAD\24069_1 10CT11994 1:39PM

APPENDIX B

DATA VALIDATION REPORT

DATA VALIDATION REPORT

OF LABORATORY ANALYSES

FOR THE
CHERRY FARM SITE
TONAWANDA, ERIE COUNTRY, NEW YORK

MARCH 1995

PREPARED BY

PARSONS ENGINEERING-SCIENCE

DESIGN • RESEARCH • PLANNING

30800 TELEGRAPH ROAD, SUITE 3858, BINGHAM FARMS, MICHIGAN 48025

810/433-2700

OFFICES IN PRINCIPAL CITIES

TABLE OF CONTENTS

SECTION 1

DATA VALIDATION SUMMARY

SECTION 1

DATA VALIDATION SUMMARY

The sample results were validated and reviewed for usability with respect to the requirements as stated in the Quality Assurance Project Plan, the National Functional Guidelines for Organic Data Review, 1991, and the National Functional Guidelines for Inorganic Data Review, 1988.

All data was received in EPA level IV deliverable format.

Overall the data were of good quality and are suitable for use in all decision-making processes. While there were QC outliers, none had a significant impact on the usability of the data.

1.1 LABORATORY DATA PACKAGES

The level IV data packages received from NEI were complete after several requests for resubmittals, but overall were of good quality. The resubmittals resulted in several delays of completion of the validation effort. Comments on specific quality control (QC) and other requirements are discussed below. The following lists the data packages by SDG and the analyses performed.

	Analyses					
SDG Number	VOC	BNA	PEST	HERB	MET	CONV
CF1	-	X	X	-	X	X
CF2	-	X	X	-	X	X
CF3 (TCLP)	X	X	X	X	X	X
CF4	X	X	X	-	X	X

1.2 SAMPLING AND CHAIN OF CUSTODY (COC)

Sampling occurred from 13 December to 15 December, 1994. The laboratory received all samples intact within two days of sampling. All samples were properly preserved and shipped under a COC Record. Some COC records were not properly filled out (i.e. incorrect sampling date, no sampling date).

1.3 LABORATORY ANALYTICAL METHODS

Summaries of the problems concerning the laboratory analyses, the qualifications resulting from the data validation procedures, and statements on the laboratory analytical precision, accuracy, representativeness, comparability, and completeness (PARCC) are given for each analytical method in Sections 1.3.1 through 1.3.6.

Data was qualified with the following flags:

U non-detected at value given

UJ estimated non-detected at value given

R unusable value

The laboratory diluted and re-analyzed all required samples.

1.3.1 Volatile Organic Compounds (VOCs)

The following gives the number of VOC results that were qualified by the data validation procedures.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	30	0	25	1	0	100
Water	227	0	0	1	0	100

The estimated values ("J", "UJ") were due to non-compliant holding times and calibrations.

The analyses were compliant and met the 90% completeness requirement.

1.3.2 Semivolatile Organic Compounds (BNAs)

The following gives the number of BNA results that were qualified by the data validation procedures.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	18	0	10	6	0	100
Sediment	2496	30	920	109	9	99.6
Water	198	0	126	0	6	97.0

The unusable results in both water and sediment samples were due to non-compliant calibrations and surrogate recoveries below 10%. The estimated values in the water and sediment samples were due to missed holding times, non-compliant calibrations and non-compliant surrogate recoveries. The non-detect results were due to field blank contamination. Overall the BNA analyses were compliant and met the 90% completeness requirement.

1.3.3 Pesticides/PCBs

The following gives the number of pesticide/PCB results that were qualified by the data validation procedures.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	18	0	10	6	0	100
Sediment	273	0	92	39	0	100
Water	189	0	118	0	0	100

The estimated values were due to non-compliant calibrations, surrogates, holding times and matrix interferences. The pesticides analyses were compliant and met the 90% completeness requirement.

1.3.4 Herbicides

The following gives the number of herbicide results that were qualified by the data validation process.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	6	0	0	0	0	100

The herbicides analyses were compliant and met the 90% completeness requirement.

1.3.5 Metals

The following gives the number of metals results that were qualified by the data validation procedures.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	24	0	4	4	2	91.7
Sediment	936	38	124	314	19	98.0
Water	162	4	26	4	0	100

The unusable values for both oil and sediment were due to low MS recoveries. The estimated values for all three matrices were due to non-compliant MS recoveries, non-compliant MD RPDs, negative blank contamination, non-compliant GFAA QC, non-compliant serial dilution results and non-compliant ICP interference check results. The non-detect values were due to field blank (sodium) contamination. The metals analyses were compliant and met the 90% completeness requirement.

1.3.6 Conventionals (TOC, pH, Sulfide, IGN, CN, CORR, NH_3, BOD, COD, Cl, O & G, Hardness, Phenols, TDS, Phosphate, TSS)

The following gives the number of conventional results that were qualified by the data validation procedures.

Matrix	Total No. Results	Total No. Qualified U	UJ	J	R	% Complete
Oil	15	0	0	3	0	100
Sediment	39	0	0	19	0	100
Water	81	11	5	4	0	100

The estimated values were due to missed holding times and non-compliant MS/MD results. The conventional analyses were compliant and met the 90% completeness requirement.

1.4 CONCLUSIONS

Overall, data for all analyses met all PARCC requirements. While there were QC outliers resulting in some estimated and unusable values, overall usability of the data was not significantly impacted. None of these QC outliers were resultant from systematic errors. The majority of the data points are valid (within any listed qualifiers) and therefore acceptable for their intended use in decision making processes for the Cherry Farm project.

SECTION 2

REPORTS BY SDG

DATA VALIDATION OF

SEMIVOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF1:

Client ID	Sample Location	Matrix
043100	STA 4300/100'	Sediment
043020	STA 4300/20'	Sediment
043010	STA 4300/10'	Sediment
050100	STA 5000/100'	Sediment
050020	STA 5000/20'	Sediment
050002	STA 5000/2'	Sediment
040100	STA 4000/100'	Sediment
040020	STA 4000/20'	Sediment
040010	STA 4000/10'	Sediment
037100	STA 3700/100'	Sediment
037020	STA 3700/20'	Sediment
037021	STA 3700/20'	Sediment
100100	Station 10000/100'	Sediment
100020	Station 10000/20'	Sediment
100010	STA 10000/10'	Sediment
090100	STA 9000/100'	Sediment
090020	STA 9000/20'	Sediment
090010	STA 9000/10'	Sediment
080100	STA 8000/100'	Sediment
090011	STA 9000/10'	Sediment

I. HOLDING TIMES

All samples were extracted within the required five days of validated time of sample receipt (VTSR). All sample extracts were analyzed within forty days of validated time of sample receipt except for:

Sample	Date Sampled	VTSR	Date Extracted	Date Analyzed	# Days From VTSR To Date Analyzed
043100	12-13-94	12-15-94	12-19-94	01-25-95	41
043020	12-13-94	12-15-94	12-19-94	01-25-95	41
043010	12-13-94	12-15-94	12-19-94	01-25-95	41
050100	12-13-94	12-15-94	12-19-94	01-25-95	41
050020	12-13-94	12-15-94	12-19-94	01-25-95	41
050002	12-13-94	12-15-94	12-19-94	01-25-95	41
040020	12-14-94	12-15-94	12-19-94	01-25-95	41
040010	12-14-94	12-15-94	12-19-94	01-25-95	41
037100	12-14-94	12-15-94	12-19-94	01-25-95	41
037020	12-14-94	12-15-94	12-19-94	01-26-95	42
037021	12-14-94	12-15-94	12-19-94	01-26-95	42
100100	12-13-94	12-15-94	12-19-94	01-26-95	42
100020	12-13-94	12-15-94	12-19-94	01-26-95	42
100010	12-13-94	12-15-94	12-19-94	01-26-95	42

Sample	Date Sampled	VTSR	Date Extracted	Date Analyzed	# Days From VTSR To Date Analyzed
090100	12-13-94	12-15-94	12-19-94	01-26-95	42
090010	12-13-94	12-15-94	12-19-94	01-26-95	42
080100	12-13-94	12-15-94	12-19-94	01-26-95	42
090011	12-13-94	12-15-94	12-19-94	01-26-95	42

The results for the samples listed above were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

II. GC/MS TUNE

The GC/MS Tune (DFTPP) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There was one calibration for this SDG. The calibration was compliant for all contractual minimum RRF and maximum % RSD requirements. It was also compliant for all minimum RRF (0.05) and maximum % RSD (30%) according to the National Functional Guidelines except for:

Date	Analyte	% RSD	Samples
01-20-95	4-chloroaniline	53.7	All
	hexachlorocyclopentadiene	64.0	
	3-nitroaniline	39.1	
	2,4-dinitrophenol	52.6	

The results for the analytes with the non-compliant %RSD were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

There were three continuing calibrations for this SDG. They were compliant for all contractual minimum RRF and maximum %D as well as the National Functional Guidelines minimum RRF (0.05) and maximum %D (25%) except for:

Date	Analyte	RRF Actual	RRF Contract	RRF Guideline	Samples Affected
01-26-95	hexachlorocyclopentadiene	0.033	0.01	0.05	037100 DL, 037020, 037021, 100100, 100020, 100010, 090100, 090010, 080100, 090011

Date	Analyte	%D Actual	%D Contract	%D Guideline	Samples Affected
01-20-95	4-chloroaniline	56.7	100	25	040100, 090020
01-25-95	hexachlorocyclopentadiene	29.5	100	25	043100,
	3-nitroaniline	58.8	100	25	043020,
	2,4-dinitrophenol	56.0	100	25	043010,
	4,6-dinitro-2-methylphenol	26.0	100	25	050100, 050020, 050002, 040020, 040010, 037100
01-26-95	phenol	25.2	25	25	037100 DL,
	4-chloroaniline	63.9	100	25	037020,
	*hexachlorocyclopentadiene	79.5	100	25	037021,
	2,4-dinitrophenol	44.7	100	25	100100, 100020, 100010, 090100, 090010, 080100, 090011

* Analyte results considered unusable due to non-compliant RRF.

The non-detected results for the analyte with the non-compliant RRF were considered unusable and flagged "R", while the detected results were considered estimated and flagged "J".

The results for the analytes with the non-compliant %D were considered estimated and flagged "J" ($\geq$IDL) or "UJ" (<IDL).

IV. BLANKS

There was one method blank and three field blanks (SDG-CF2) in association with this SDG. All blanks were found to be free of all analyte contamination except:

Blank	SDG	Analyte	Conc. (µg/L)	Affected Samples
FB002	CF2	bis(2-ethylhexyl)phthalate	44	None
FB003	CF2	bis(2-ethylhexyl)phthalate	200	37020, 27021, 37100, 37100DL, 40010, 40020, 43010, 43020, 50002, 50100, 90011, 90100, 100010, 100020, 100100

All associated sample results with concentrations less than 10X the concentration of bis(2-ethylhexyl)phthalate found in the field blank were flagged "U" and are considered to be non-detect at the value given.

V. SPIKE/SPIKE DUPLICATE (MS/MSD AND BS)

Sample 090020 was analyzed as the MS/MSD.

All %R MS/MSD and RPDs were compliant except:

Analyte	MS %R	MSD %R	QC Limit %R
1,4-dichlorobenzene	22	25	28-104
n-nitroso-di-n-propylamine	26	26	41-126
1,2,4-trichlorobenzene	26	26	38-107
acenaphthene	29	-	31-137
pyrene	30	-	35-142

No action was taken since all RPDs were compliant.

All BS %R were compliant except:

Analyte	BS %R	BS Reanalysis %R	QC Limit
2-chlorophenol	20	21	27-123
1,4-dichlorobenzene	17	15	36-97
n-nitroso-di-n-propylamine	15	15	41-116
1,2,4-trichlorobenzene	15	15	39-98
4-chloro-3-methylphenol	21	21	23-97
acenaphthene	19	19	46-118

No action was taken since the BS was double spiked with internal standards prior to analysis, therefore contributing to the low percent recoveries shown above.

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were four acid (three required and one advisory) and four base/neutral (three required and one advisory) surrogates added to each sample prior to extraction. All surrogate %R were acceptable except:

Sample	Surrogate	Fraction	Req/Adv.	%R	QC Limit
037100	2-fluorobiphenyl	B/N	req.	28	30-115
	1,2-dichlorobenzene-d4	B/N	adv.	19	20-130
037020	phenol-d5	A	req.	20	24-113
	2-fluorobiphenyl	B/N	req.	21	30-115
	1,2-dichlorobenzene-d4	B/N	adv.	17	20-130
100100	2-fluorophenol	A	req.	16	25-121
	nitrobenzene-d5	B/N	req.	20	23-120
	1,2-dichlorobenzene-d4	B/N	adv.	7	20-130
080100	2,4,6-tribromophenol	A	req.	136	19-122
	terphenyl-d14	B/N	req.	146	18-137

No action is required with respect to surrogate recovery unless two or more required semivolatile surrogates, within the same fraction (acid or base/neutral fraction) are non-compliant.

There are six internal standards added to each sample after extraction but prior to analysis. All internal standard %R were compliant.

VII. DUPLICATES

Sample 037021 was a coded duplicate of sample 037020. All positive results less than 5X the reporting limit were within ± 2X the reporting limit. All positive results greater than 5X the reporting limit were within the QC limits except:

	Results			
Analyte	Sample	Duplicate	RPD	QC Limit
naphthalene	4800	14000	97.9	35

The positive results for naphthalene in samples 037020 and 037021 were considered estimated and flagged "J".

Sample 090011 was a coded duplicate of sample 090010. All positive results less than 5X the reporting limit were within ± 2X the reporting limit except for:

	Results		Difference Between Sample	
Analyte	Sample	Duplicate	Result & Duplicate Result	QC Limit
phenanthrene	10000	5000	5000	4800
pyrene	11000	5000	5400	4800

The positive results for phenanthrene and pyrene in samples 090010 and 090011 were considered estimated and flagged "J".

All positive results greater than 5X the reporting limit were within the QC limits except as shown below:

	Results			
Analyte	Sample	Duplicate	RPD	QC Limit
fluoranthene	15000	7600	65.5	35

The positive results for fluoranthene in samples 090010 and 090011 were considered estimated and flagged "J".

VIII. TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc. is 99.2% complete. The percent completeness was adversely affected by non-compliant continuing calibrations (RRF $<$ 0.05). All useable data are valid within listed qualifiers.

DATA VALIDATION OF

POLYCHLORINATED BIPHENYLS

This report contains the validation of samples in SDG CF1.

Client ID	Sample Location	Matrix
043100	STA 4300/100'	Sediment
043020	STA 4300/20'	Sediment
043010	STA 4300/10'	Sediment
050100	STA 5000/100'	Sediment
050020	STA 5000/20'	Sediment
050002	STA 5000/2'	Sediment
040100	STA 4000/100'	Sediment
040020	STA 4000/20'	Sediment
040010	STA 4000/10'	Sediment
037100	STA 3700/100'	Sediment
037020	STA 3700/20'	Sediment
037021	STA 3700/20'	Sediment
100100	Station 10000/100'	Sediment
100020	Station 10000/20'	Sediment
100010	STA 10000/10'	Sediment
090100	STA 9000/100'	Sediment
090020	STA 9000/20'	Sediment
090010	STA 9000/10'	Sediment
080100	STA 8000/100'	Sediment
090011	STA 9000/10'	Sediment

I. HOLDING TIMES

The samples were extracted within five days of VTSR and analyzed within 40 days of VTSR except for sample 050020. The results of sample 050020 were estimated and flagged "J" or "UJ".

II. INSTRUMENT PERFORMANCE

The GC system performance was consistent and acceptable throughout the period of analysis.

III. CALIBRATIONS

The initial calibration sequence and the maximum %RSD (20%) were acceptable.

There were six continuing calibrations. The continuing calibration check frequency and maximum RPD (25%) were acceptable.

IV. BLANKS

Two method blanks and one sulfur blank were analyzed. The blanks were free of all analyte contamination.

V. SURROGATE RECOVERY

The surrogates decachlorobiphenyl (DCB) and tetrachlorometaxylene (TCMX) were spiked into each sample to monitor the extraction and analysis procedures. All surrogate percent recoveries (%R) were within the QC limits (60-150%) except:

Sample	%R (TCMX)	%R (DCB)	Action
043100	58	56	"J", "UJ"
043010	33	39	"J", "UJ"
050100	59	-	"J", "UJ"
050002	51	-	"J", "UJ"
040100	53	-	"J", "UJ"
040020	58	-	"J", "UJ"
040010	54	-	"J", "UJ"
080100	151	195	"J"

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE(MS/MSD)

Sample 090020 was analyzed as the MS/MSD in this sample group. All %R were acceptable.

VII. DUPLICATES

There were two pair of field duplicates analyzed in association with this SDG: samples 037020 and 037021; samples 090010 and 090011. All RPD were acceptable except:

	Sample	Sample	
Analyte	037020	037021	RPD
AR-1248	130	90	36.4

	090010	090011	RPD
AR-1248	170	270	45.5

All associated positive results of AR-1248 in this SDG were considered estimated and flagged "J".

VIII. TARGET COMPOUND IDENTIFICATION

Target compound identification was acceptable in all cases.

IX. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Compound quantitation was acceptable. However, if the differences found between the two GC columns were greater than 25% D, the results were estimated and flagged "J" as follows:

Sample	Analyte	%D
043020	AR-1260	75
050100	AR-1248	38
040020	AR-1260	26
037021	AR-1260	37
100100	AR-1260	30

Reported detection limits were compliant and calculated correctly.

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete as submitted by Nytest Environmental, Inc., and is acceptable for its intended use as analytical results.

DATA VALIDATION OF

TRACE METALS AND TOTAL CYANIDE

This report contains the validation of samples in SDG CF1:

Client ID	Sample Location	Matrix
037020	STA 3700/20'	Soil
037021	STA 3700/20'	Soil
037100	STA 3700/100'	Soil
040010	STA 4000/10'	Soil
040020	STA 4000/20'	Soil
040100	STA 4000/100'	Soil
043010	STA 4300/10'	Soil
043020	STA 4300/20'	Soil
043100	STA 4300/100'	Soil
050002	STA 5000/2'	Soil
050020	STA 5000/20'	Soil
050100	STA 5000/100'	Soil
080100	STA 8000/100'	Soil
090010	STA 9000/10'	Soil
090011	STA 9000/10'	Soil
090020 MS/MD	STA 9000/20'	Soil
090100	STA 9000/100'	Soil
100010	STA 10000/10'	Soil
100020	Station 10000/20'	Soil
100100	Station 10000/100'	Soil

I. HOLDING TIMES

All samples were extracted and analyzed within the required time of VTSR. The mercury limit was 26 days from VTSR, the cyanide limit was 12 days from VTSR and the other metals limit was six months from VTSR.

II. CALIBRATIONS

The correlation factor for the initial calibration was required to be $\geq$0.995. All initial calibrations were compliant.

All continuing calibrations were compliant (90-110 % R for ICP and Graphite Furnace metals, 85-115%R for cyanide, and 80-120 % R for mercury by Cold Vapor).

III. BLANKS

There was one preparation blank and numerous calibration blanks analyzed. All blanks were found to be free of analyte contamination except:

Blank	Analyte	Conc. mg/kg	Affected Samples
PBS	Sb	-9.936	All
	Be	-0.206	037020, 037021, 037100, 040020, 040100, 043010, 043020, 043100, 050020, 050002, 050100, 080100, 090010, 090011, 090020, 090100, 100010, 100020, 100100
	Cd	-0.872	037020, 037021, 037100, 040010, 040020, 040100, 043010, 043020, 050002, 050020, 050100, 080100, 090010, 090011, 090020, 090100, 100020, 100100, 100010
	Cr	-1.186	None
	Mn	-0.564	None
	Zn	2.356	None

All associated sample results with concentrations less than 5X found in the blank are flagged "J" or "UJ" and are considered to be estimated at the values given.

IV. INTERFERENCE CHECK SAMPLES

The ICP interference check sample results were within the 80-120% QC limit. However, antimony, which was analyzed by ICP was not present in the solution. Therefore, all antimony results were estimated and flagged "J".

V. LABORATORY CONTROL SAMPLE (LCS)

All LCS were compliant for soil limits.

There were three field blanks associated with samples within this SDG. The following lists the contamination and affected samples.

Blank	Analyte	Conc (μg/l)	Affected Samples
FB001	sodium	1640	All samples except 090100
FB002	sodium	365	
FB003	sodium	359	

The sodium results with concentrations less than 5X found in the field blank are flagged "U" and are considered to be estimated at the values given.

VI. MATRIX SPIKE/MATRIX DUPLICATE (MS/MD)

Sample 090020 was analyzed as MS/MSD in this SDG. All %R were within 75-125% and RPD were within 20% water and 35% for soil except:

Analyte	MS %RPD	MD %R
antimony	49.5	-
lead (FAA)	61.0	-
silver	-	> 2X CRDL
lead (ICP)	-	62.1

The results in the associated samples were qualified as estimated and flagged with a "J" or "UJ" for non-compliant MS/MD.

VII. FURNACE ATOMIC ABSORPTION ANALYSIS QC

As, Pb, Tl, Se were analyzed by GFAA in this sample. The following GFAA QC limits were not met and the data were qualified accordingly. If the sample concentration was less than 50% of the spike concentration, and the spike recovery <85 or $>115\%$. The analysis were flagged with a "W" by the lab. If the sample concentration was $>50\%$ of spike concentration, and the spike recovery was <85 or $>115\%$ the analysis was quantitated by MSA. If the correlation coefficient (r) of the MSA ≥ 0.995, the analytes were flagged with an "S" by the lab. If r is <0.995, the analytes were flagged "+" by the lab. The following are the conditions and the subsequent qualifiers assigned by this reviewer for the furnace metals:

FLAG	SAMPLE RESULT	QUALIFIER
"W"	$\geq$ IDL	"J"
"W"	< IDL	"UJ"
"S"	ANY	NONE
"+"	$\geq$ IDL	"J"
"+"	< IDL	"UJ"

The following table lists the sample and the analyte(s) qualified due to non-compliant furnace QC results:

Sample	Analyte
040010	arsenic
043010	selenium, thallium
043100	arsenic
080100	arsenic
090020	selenium
090100	selenium

VIII. CODED FIELD DUPLICATES

Samples 090010 and 090011, and sample 037020 and 037021 were analyzed as the field duplicate pairs in this SDG. All RPD results were within QC limits (20% for water and 35% for soil) except those listed below:

Sample 037020 and 037021

Analyte	Results Sample	Duplicate	%RPD
cadmium	22100	40700	59.2
potassium	672	345	64
sodium	95.2	220	79.2

No action was taken as one of the duplicate pairs was complaint.

IX. ICP SERIAL DILUTIONS

ICP serial dilution results were compliant except for Zn (17.9 %D). The associated positive zinc results were estimated and flagged "J".

X. SAMPLE RESULT VERIFICATION

Sample result verification was acceptable.

XI. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All positives were calculated correctly, and the results were correctly transcribed on the Form I.

The reporting limits were acceptable. The laboratory flagged with a "B" all analytes >IDL but <CRDL. All results flagged with a laboratory "B" were assigned the qualifier "J" by the reviewer and the results are considered to be estimated. The following lists the samples and analytes qualified with a "J":

Sample	Analytes
037020	beryllium, potassium, sodium
037021	antimony, beryllium, cobalt, potassium, sodium
037100	beryllium, potassium, sodium
040010	antimony, potassium, sodium
040020	antimony, beryllium, cobalt, potassium, sodium
040100	cobalt, potassium, sodium
043010	cadmium, cobalt, potassium, sodium
043020	barium, beryllium, potassium, sodium
043100	antimony, beryllium, potassium, sodium
050002	beryllium, potassium, sodium
050020	barium, cadmium, cobalt, potassium, sodium
050100	barium, cadmium, cobalt, potassium,sodium
080100	barium, cobalt, potassium, sodium
090010	barium, cobalt, potassium, sodium, vanadium
090011	barium, cobalt, potassium,sodium
090020	barium, cadmium, cobalt, potassium, sodium
090100	barium, cobalt, potassium, silver
100010	beryllium,cobalt, potassium, sodium
100020	cadmium, cobalt, potassium, sodium
100100	cobalt, potassium, sodium

XII. SYSTEM PERFORMANCE

The analytical system performances were consistent and acceptable throughout the period of analysis.

XIII. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. The data package as presented by NEI is 100% complete, and is acceptable for its intended use of analytical results.

DATA VALIDATION OF

CONVENTIONALS
(TOC AND GRAIN SIZE)

This report contains the validation of the following samples in SDG CF1:

Client ID	Sample Location	Matrix
043100	STA 4300/100'	Sediment
043020	STA 4300/20'	Sediment
043010	STA 4300/10'	Sediment
050100	STA 5000/100'	Sediment
050020	STA 5000/20'	Sediment
050002	STA 5000/2'	Sediment
040100	STA 4000/100'	Sediment
040020	STA 4000/20'	Sediment
040010	STA 4000/10'	Sediment
037100	STA 3700/100'	Sediment
037020	STA 3700/20'	Sediment
037021	STA 3700/20'	Sediment
100100	Station 10000/100'	Sediment
100020	Station 10000/20'	Sediment
100010	STA 10000/10'	Sediment
090100	STA 9000/100'	Sediment
090020	STA 9000/20'	Sediment
090010	STA 9000/10'	Sediment
080100	STA 8000/100'	Sediment
090011	STA 9000/10'	Sediment

I. HOLDING TIMES

All samples were analyzed within two days or 28 days from sample collection.

II. CALIBRATIONS

All calibrations were compliant.

III. BLANKS

All blanks were free of contamination.

IV. FIELD DUPLICATES

Samples 037020 and 037021 and 090010 and 090011 are field duplicates. All RPD was within 35% for soil.

IV. DUPLICATES

The laboratory duplicate analyses were within the QC limit of 35% for soil.

VI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc., is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

SEMIVOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF2:

Client ID	Sample Location	Matrix
080020	STA 8000/20'	Sediment
080010	STA 8000/10'	Sediment
070100	STA 7000/100'	Sediment
070020	STA 7000/20'	Sediment
070010	STA 7000/10'	Sediment
060100	STA 6000/100'	Sediment
060020	STA 6000/20'	Sediment
060002	STA 6000/2'	Sediment
060012	STA 6000/2'	Sediment
055100	STA 5500/100'	Sediment
055020	STA 5500/20'	Sediment
055002	STA 5500/2'	Sediment
046100	STA 4600/100'	Sediment
045020	STA 4500/20'	Sediment
045010	STA 4500/10'	Sediment
037010	STA 3700/10'	Sediment
026100	STA 2600/100'	Sediment
026020	STA 2600/20'	Sediment
026010	STA 2600/10'	Sediment
FB001	FIELD BLANK #1	Water
FB002	FIELD BLANK #2	Water
FB003	FIELD BLANK #3	Water

I. HOLDING TIMES

All samples were extracted within the required five days of validated time of sample receipt (VTSR). All sample extracts were analyzed within forty days of validated time of sample receipt (VTSR).

II. GC/MS TUNE

The GC/MS Tune (DFTPP) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There were two initial calibrations for this SDG. They were compliant for all contractual minimum RRF and maximum %RSD as well as the National Functional Guidelines (NFG) minimum RRF (0.05) and maximum % RSD (30%) except for:

Date	Analyte	Actual % RSD	Contract	NFG	Samples
01-13-95	2,4,6-trichlorophenol	32.5	20.5	30	080020,
	2,4-dinitrophenol	30.9	100	30	080010

Date	Analyte	Actual % RSD	Contract	NFG	Samples
01-19-95	hexachlorocylopentadiene	41.2	100	30	080020 DL, 080010 DL, 070100, 070020, 070010, 060100, 060020, 060002, 060012, 055100, 055020, 055002, 046100, 046100 DL, 045020, 045020 DL, 045010, 045010 DL, 037010, 026100, 026020, 026010, FB001, FB002, FB003

The results for the analytes with non-compliant %RSDs were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

There were four continuing calibrations for this SDG. They were compliant for all contractual minimum RRF and maximum %D requirements as well as the minimum RRF (0.05) and maximum %D (25%) according to the National Functional Guidelines (NFG) except for:

Date	Analyte	Actual % RSD	NFG	Samples
01-17-95	hexachlorocyclopentadiene	100	25	080020, 080010
01-19-95	hexachlorocyclopentadiene	55.5	25	080020 DL, 080010 DL, 070100, 070020, 070010, 060100, 060020, 060002, 060012, 055100, 055020, 055002
01-20-95	hexachlorocylopentadiene	65.3	25	046100, 045020,
	2,4-dinitrophenol	64.9	25	045010, 037010,
	4,6-dinitro-2-methylphenol	46.0	25	026100, 026020,
	3,3-dichlorobenzidine	33.8	25	026010, FB001, FB002, FB003
01-21-95	hexachlorocyclopentadiene	68.9	25	046100 DL, 045020 DL, 045010 DL

The results for the analytes with the non-compliant %D were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

IV. BLANKS

There were two method blanks and three field blanks in association with this SDG. All blanks were found to be free of all analyte contamination except:

Blank	Analyte	Conc. (µg/kg).	Affected Samples
FB002	bis(2-ethylhexyl)phthalate	44	None
FB003	bis(2-ethylhexyl)phthalate	200	26010, 26020, 26100, 37010, 46100, 55002, 55020, 60002, 60012, 60020, 70010, 70020, 70100, 80010, 80020

All associated sample results with concentrations less than 10X the concentration of bis(2-ethylhexyl)phthalate found in the field blank were flagged "U" and are considered to be non-detect at the value given.

V. SPIKE/SPIKE DUPLICATE (MS/MSD AND BS)

Sample 055002 was analyzed as the MS/MSD.

All MS/MSD %R and RPDs were compliant except:

Analyte	MS %R	MSD %R	QC Limit %R	RPD	QC Limit RPD
2,4-dinitrotoluene	96	91	28-89	-	-
pentachlorophenol	16	-	28-89	97	47

No action was taken since the BS recoveries for the analytes listed above were compliant.

Analyte	BS %R	QC Limit
1,4-dichlorobenzene	35	36-97
n-nitrosodi-n-propylamine	36	41-116
1,2,4-trichlorobenzene	36	39-98
acenaphthene	42	23-97

No action was taken since the MS/MSD recoveries for the analytes listed above were compliant.

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were four acid (three required and one advisory) and four base/neutral (three required and one advisory) surrogates added to each sample prior to extraction. All surrogate %R were acceptable except:

Sample	Surrogate	Fraction	Req/Adv.	%R	QC Limit
080010	2,4,6-tribromophenol	A	req.	14	19-122
080010 DL	2,4,6-tribromophenol	A	req.	13	19-122

Sample	Surrogate	Fraction	Req/Adv.	%R	QC Limit
045010	phenol-d5	A	req.	163	24-113
	2-fluorophenol	A	req.	159	25-121
	2,4,6-tribromophenol	A	adv.	174	19-122
	2-chlorophenol-d4	A	adv.	168	20-130
	nitrobenzene-d5	B/N	req.	159	23-120
	2-fluorobiphenyl	B/N	req.	184	30-115
	terphenyl-d14	B/N	req.	231	18-137
045010 DL	phenol-d5	A	req.	156	24-113
	2-fluorophenol	A	req.	145	25-121
	2,4,6-tribromophenol	A	req.	176	19-122
	2-chlorophenol-d4	A	adv.	164	20-130
	nitrobenzene-d5	B/N	req.	143	23-120
	2-fluorobiphenyl	B/N	req.	166	30-115
	terphenyl-d14	B/N	req.	206	18-137

No action is required with respect to surrogate recovery unless two or more required surrogates, within the same fraction (acid or base/neutral fraction) are non-complaint. The positive results for the samples with non-compliant acid and base/neutral surrogates, (%R for two surrogates greater than the upper acceptance limit), were considered estimated and flagged "J" ($\geq$IDL).

There are six internal standards added to each sample after extraction but prior to analysis. All internal standard %R were compliant.

VII. DUPLICATES

Sample 060012 was a coded duplicate of sample 060002. All positive results less than 5X the reporting limit were within $\pm$ 2X the reporting limit except for:

	Results		Difference Between Sample	
Analyte	Sample	Duplicate	Result & Duplicate Result	QC Limit
fluoranthene	1000	1900	900	880

The positive results for fluoranthene in samples 060002 and 060012 were considered estimated and flagged "J".

VIII. TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc. is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

POLYCHLORINATED BIPHENYLS

This report contains the validation of samples in SDG CF2:

Client ID	Sample Location	Matrix
080020	STA 8000/20'	Sediment
080010	STA 8000/10'	Sediment
070100	STA 7000/100'	Sediment
070020	STA 7000/20'	Sediment
070010	STA 7000/10'	Sediment
060100	STA 6000/100'	Sediment
060020	STA 6000/20'	Sediment
060002	STA 6000/2'	Sediment
060012	STA 6000/2'	Sediment
055100	STA 5500/100'	Sediment
055020	STA 5500/20'	Sediment
055002	STA 5500/2'	Sediment
046100	STA 4600/100'	Sediment
045020	STA 4500/20'	Sediment
045010	STA 4500/10'	Sediment
037010	STA 3700/10'	Sediment
026100	STA 2600/100'	Sediment
026020	STA 2600/20'	Sediment
026010	STA 2600/10'	Sediment
FB001	FIELD BLANK #1	Water
FB002	FIELD BLANK #2	Water
FB003	FIELD BLANK #3	Water

I. HOLDING TIMES

The samples were extracted within 5 days of VTSR and analyzed within 40 days of VTSR.

II. INSTRUMENT PERFORMANCE

The GC system performance was consistent and acceptable throughout the period of analysis.

III. CALIBRATIONS

All initial calibration sequences and maximum %RSD (20%) were acceptable.

The continuing calibration check frequency and maximum RPD (25%) were acceptable except for the following:

Date	Time	GC Column	Analyte	RPD	Affected Samples
12/28/94	0939	primary	AR1260	>25	045010, 060100
12/28/94	2147	both	AR1016	>25	FB1, FB2, FB3
			AR1260	>25	

All results for the analytes listed for the above samples were considered estimates and flagged "J" or "UJ".

IV. BLANKS

Two method blanks and three field blank were analyzed. The blanks were free of all analyte contamination.

V. SURROGATE RECOVERY

The surrogates decachlorobiphenyl (DCB) and tetrachlorometaxylene (TCMX) were spiked into each sample to monitor the extraction and analysis procedures. All surrogate percent recoveries (%R) were within the QC limits except:

Sample	Surrogate	%R	%R QC Limit	Action
060002	TCMX	51	60-150	"J" or "UJ"
	DCB	18	60-150	"J" or "UJ"
055100	TCMX	46	60-150	"J" or "UJ"
046020	DCB	16	60-150	"J" or "UJ"

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE(MS/MSD)

Sample 055002 was analyzed as the MS/MSD. All %R and RPD were within the QC limits.

VII. FIELD DUPLICATES

Samples 060002 and 060012 were analyzed as a field duplicate pair. All RPD were acceptable except for AR1248 (38%). The associated positive results of AR1248 in this SDG were considered estimated and flagged "J".

VIII. TARGET COMPOUND IDENTIFICATION

Target compound identification was acceptable in all cases. Samples 080020, 070100, 060020 and 055020 exhibit interferences. The results were estimated and flagged "J" or "UJ".

IX. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Compound quantitation was acceptable. However, if the differences found between the GC columns were greater than 25% D the results were estimated and flagged "J" as follows:

Sample	%D	Analyte
080020	38	AR1248
080010	26	AR1248
070100	51	AR1248
070010	47	AR1248
046100	27	AR1248

The quantification of AR1248 for samples 070020, 070010, 060100 and 045010 were calculated using the standard analyzed outside 72 hours of the sample analyses. The results were estimated and flagged "J".

Reported detection limits were compliant and calculated correctly.

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete as submitted by Nytest Environmental, Inc., and is acceptable for its intended use as analytical results.

DATA VALIDATION OF

TRACE METALS AND CYANIDE

This report contains the validation of samples in SDG CF2:

Client ID	Sample Location	Matrix
FB001	FIELD BLANK #1	Water
FB002	FIELD BLANK #2	Water
FB003	FIELD BLANK #3	Water
026010	STA 2600/10'	Sediment
026020	STA 2600/20'	Sediment
026100	STA 2600/100'	Sediment
037010	STA 3700/10'	Sediment
045020	STA 4500/20'	Sediment
046100	STA 4600/100'	Sediment
045010	STA 4500/10'	Sediment
055002 MS/MD	STA 5500/2'	Sediment
055020	STA 5500/20'	Sediment
055100	STA 5500/100'	Sediment
060002	STA 6000/2'	Sediment
060012	STA 6000/2'	Sediment
060020	STA 6000/20'	Sediment
060100	STA 6000/100'	Sediment
070010	STA 7000/10'	Sediment
070020	STA 7000/20'	Sediment
070100	STA 7000/100'	Sediment
080010	STA 8000/10'	Sediment
080020	STA 8000/20'	Sediment

I. HOLDING TIMES

All samples were extracted and analyzed within the required time of VTSR. The mercury limit was 26 days from VTSR, the cyanide limit was 12 days from VTSR and the other metals limit was six months from VTSR. The mercury samples were analyzed three days beyond the holding time. All mercury results were estimated and flagged "J" or "UJ".

II. CALIBRATIONS

The correlation factor for the initial calibration was required to be $\geq$0.995. All initial calibrations were compliant.

All continuing calibrations were compliant (90-110 % R for ICP, Flame AA and Graphite Furnace metals and 80-120 % R for mercury by Cold Vapor and 85-115 %R for cyanide).

III. BLANKS

There were two preparation blanks, numerous calibration blanks and three field blanks analyzed. All blanks were found to be free of analyte contamination except:

Blank	Analyte	Conc. mg/kg	Affected Samples
soil	cadmium	-3.31	All sediment samples

Blank	Analyte	Conc. mg/kg	Affected Samples
	manganese	-1.01	None
	copper	-19.2	026010, 026020, 026100, 037010, 045010, 045020, 046100, 055002, 055020, 055100, 060002, 060012, 060020, 060100, 070010, 070020, 070100, 080010, 080020

All associated sample results with concentrations less than 5X found in the blank are flagged "J" or "UJ" and are considered to be estimated at the values given.

Blank	Analyte	Conc. µg/l	Affected Samples
FB001	sodium	1640	All samples except 026100, 055002, 060002
FB002	sodium	365	
FB003	sodium	359	

All sodium results with concentrations less than 5X found in the field blanks are flagged "U" and are considered to be estimated at the value given.

IV. INTERFERENCE CHECK SAMPLES

The ICP interference check sample results were within the 80-120% QC limit.

V. LABORATORY CONTROL SAMPLE (LCS)

All LCS were compliant for percent recovery (80-120%).

VI. MATRIX SPIKE/MATRIX DUPLICATE (MS/MD)

Sample 055002 was analyzed as MS/MD in this SDG. All %R were within 75-125% and RPD were within 20% (water) or 35% (soil) except:

	MS	MD
Analyte	%R	%RPD
antimony	55.5	-
chromium	47.9	85.1
silver	68.3	-
cyanide	0.0	-

The results in the associated samples were qualified as estimated and flagged with a "J" or "UJ" for non-compliant MS or MD. However in the case of cyanide, the non-detect results were considered unusable and flagged "R".

VII. FURNACE ATOMIC ABSORPTION ANALYSIS QC

As, Pb, Tl, Se were analyzed by GFAA in this sample. The following GFAA QC limits were not met and the data were qualified accordingly. If the sample concentration was less than 50% of the spike concentration, and the spike recovery <85 or $>115\%$. The analysis were flagged with a "W" by the lab. If the sample concentration was $>50\%$ of spike concentration, and the spike recovery was <85 or $>115\%$ the analysis was quantitated by MSA. If the correlation coefficient (r) of the MSA ≥ 0.995, the analytes were flagged with an "S" by the lab. If r is <0.995, the analytes were flagged "+" by the lab. The following are the conditions and the subsequent qualifiers assigned by this reviewer for the furnace metals:

FLAG	SAMPLE RESULT	QUALIFIER
"W"	≥ IDL	"J"
"W"	< IDL	"UJ"
"S"	ANY	NONE
"+"	≥ IDL	"J"
"+"	< IDL	"UJ"

The following table lists the sample and the analyte(s) qualified due to non-compliant furnace QC results:

Sample ID	Analyte
026010	selenium
037010	selenium
045010	thallium
055020	selenium
055100	thallium
060002	selenium
070010	selenium
080010	selenium
080020	selenium

VIII. CODED FIELD DUPLICATES

Samples 060002 and 060012 were analyzed as the field duplicate pair in this SDG. All RPD results were within QC limits (20% for water and 35% for soil) except those listed below:

	Results			
Analyte	Sample	Duplicate	%RPD	QC Limit
calcium	13200	21200	46.5	35
iron	17600	11800	39.5	35

All positive calcium and iron results were considered estimated and flagged "J".

IX. ICP SERIAL DILUTIONS

ICP serial dilution results were compliant except for zinc (13.3%). All zinc results were qualified as estimated ("J" or "UJ").

X. SAMPLE RESULT VERIFICATION

Sample result verification was acceptable.

XI. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All positives were calculated correctly, and the results were correctly transcribed on the Form I.

Detection limits were acceptable. The laboratory flagged with a "B" all analytes >IDL but <CRDL. All results flagged with a laboratory "B" were assigned the qualifier "J" by the reviewer and the results are considered to be estimated. The following lists the samples and analytes qualified with a "J":

Sample	Analytes
FB001	sodium
FB002	sodium
FB003	sodium
026010	cobalt, potassium, sodium
026020	antimony, beryllium, potassium
026100	antimony, barium, cobalt, potassium
037010	antimony, beryllium, cobalt, potassium
045010	antimony, beryllium, cobalt, potassium
045020	beryllium, potassium
046100	barium, beryllium, cadmium, cobalt, copper, potassium, vanadium
055002	barium, beryllium, cobalt, potassium, vanadium
055020	barium, beryllium, cobalt, potassium, vanadium
055100	barium, beryllium, cobalt, copper, potassium, vanadium
060002	barium, beryllium, cadmium, cobalt, nickel, potassium, vanadium
060012	barium, beryllium, cadmium, cobalt, potassium, vanadium
060020	barium, beryllium, cobalt, copper, nickel, potassium, vanadium
060100	barium, beryllium, cobalt, copper potassium
070010	beryllium, cobalt, potassium
070020	barium, beryllium, cobalt, potassium
070100	barium, beryllium, cadmium, cobalt, potassium, vanadium
080010	barium, beryllium, cobalt, copper, potassium
080020	barium, beryllium, cobalt, potassium

XII. SYSTEM PERFORMANCE

The analytical system performances were consistent and acceptable throughout the period of analysis.

XIII. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. The data package as presented by NEI is 95.8% complete due to 0% R for cyanide in the matrix spike analysis. All usable data are valid within listed qualifiers.

DATA VALIDATION OF

CONVENTIONALS
(TOC AND GRAIN SIZE)

This report contains the validation of the following samples in CF2:

Client ID	Sample Location	Matrix
080020	STA 8000/20'	Sediment
080010	STA 8000/10'	Sediment
070100	STA 7000/100'	Sediment
070020	STA 7000/20'	Sediment
070010	STA 7000/10'	Sediment
060100	STA 6000/100'	Sediment
060020	STA 6000/20'	Sediment
060002	STA 6000/2'	Sediment
060012	STA 6000/2'	Sediment
055100	STA 5500/100'	Sediment
055020	STA 5500/20'	Sediment
055002	STA 5500/2'	Sediment
046100	STA 4600/100'	Sediment
045020	STA 4500/20'	Sediment
045010	STA 4500/10'	Sediment
037010	STA 3700/10'	Sediment
026100	STA 2600/100'	Sediment
026020	STA 2600/20'	Sediment
026010	STA 2600/10'	Sediment
FB001	FIELD BLANK #1	Water
FB002	FIELD BLANK #2	Water
FB003	FIELD BLANK #3	Water

I. HOLDING TIMES

All samples were analyzed 12 to 19 days beyond 28 days from sample collection for TOC. The results were estimated and flagged "J" or "UJ".

II. CALIBRATIONS

All calibrations were compliant.

III. BLANKS

All blanks were free of contamination.

IV. FIELD DUPLICATES

Samples 060002 and 060012 were analyzed as a field duplicate pair for TOC analysis and the RPD was acceptable.

V. DUPLICATES

The duplicate analysis was performed on sample 026100 and the RPD was within the limit.

VI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc., is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

VOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF3:

Client ID	Sample Location	Matrix
WA-MW5D	River Road	Oil
WA-MW5S	River Road	Oil
WA-MW8S	River Road	Oil
TB001	Trip Blank	Water

I. HOLDING TIMES

All samples were analyzed within the required seven days of validated time of sample receipt (VTSR) except for:

Sample	Date Samples	VTSR	Date Extracted	# Days From VTSR To Date Extracted
WA-MW5D	12-15-95	12-16-94	12-27-94	11
WA-MW5S	12-15-95	12-16-94	12-27-94	11
WA-MW8S	12-15-95	12-16-94	12-27-94	11

The results for the samples listed above were considered estimated and flagged "J" ($\geq$IDL) or "UJ" (<IDL).

II. GC/MS TUNE

The GC/MS Tune (BFB) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There were two initial calibrations for this SDG. The calibrations were compliant for minimum RRF (0.05) and maximum %RSD (30%).

There were two continuing calibrations and they were compliant for minimum RRF (0.05) and maximum %D (25%) except for:

Date	Analyte	%D	Affected Samples
12-21-94	1,1-dichloroethene	31.1	TB001

The result for the analyte listed for the above sample was considered estimated and flagged "UJ".

IV. BLANKS

There were two method blanks and one trip blank in association with this SDG. All blanks were found to be free of analyte contamination.

V. SPIKE/ SPIKE DUPLICATE (MS/MSD AND BS)

There were no MS/MSD or BS analyzed in this SDG.

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were three surrogates and three internal standards added to each sample. All surrogate %R were acceptable.

All internal standard %R were compliant.

VII. DUPLICATES

There were no coded field duplicates analyzed in this SDG.

VIII. TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc., is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

SEMIVOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF3:

Client ID	Sample Location	Matrix
WA-MW5D	River Road	Oil
WA-MW5S	River Road	Oil
WA-MW8S	River Road	Oil

I. HOLDING TIMES

All samples were extracted within the required five days of validated time of sample receipt (VTSR) except for:

Sample	Date Samples	VTSR	Date Extracted	# Days From VTSR To Date Extracted
WA-MW5D	12-15-95	12-16-94	12-27-94	11
WA-MW5S	12-15-95	12-16-94	12-27-94	11
WA-MW8S	12-15-95	12-16-94	12-27-94	11

The results for the samples listed above were considered estimated and flagged "J" ($\geq$IDL) or "UJ" ($<$IDL).

All sample extracts were analyzed within forty days of validated time of sample receipt (VTSR).

II. GC/MS TUNE

The GC/MS Tune (DFTPP) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There was one initial calibration for this SDG. The calibration was compliant for minimum RRF (0.05) and maximum %RSD (30%).

There were three continuing calibrations and they were compliant for minimum RRF (0.05) and maximum %D (30%) except for:

Date	Analyte	%D	Affected Samples
12-30-94	pentachlorophenol	52.1	WA-MW5D, WA-MW5S, WA-MW8S
01-12-95	nitrobenzene	30.8	WA-MW8S DL

The positive results for the analytes with the non-compliant %D were considered estimated and flagged "J".

IV. BLANKS

There was one method blank in association with this SDG. It was found to be free of all analyte contamination.

V. SPIKE/SPIKE DUPLICATE (MS/MSD AND BS)

Sample WA-MW5D was analyzed as the MS/MSD.

All MS/MSD %R and RPDs were compliant except:

Analyte	MS %R	MSD %R	QC Limit %R	RPD	QC Limit RPD
2-methylphenol	0	0	20-150	-	-
pentachlorophenol	-	0	20-150	200	40

All BS %R were compliant except:

Analyte	BS %R	QC Limits
pentachlorophenol	0	20-150

The 2-methylphenol %R in the blank spike and the pentachlorophenol %R in the matrix spike were compliant, thus, no action was taken.

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were three acid and two base/neutral surrogates added to each sample prior to extraction. All surrogate %R were acceptable except:

Sample	Surrogate	Fraction	%R	QC Limit
WA-MW5D	2-fluorobiphenyl	B/N	157	30-115
WA-MW5DMS	2-fluorobiphenyl	B/N	154	30-115
WA-MW8DMSD	2-fluorobiphenyl	B/N	142	30-115
WA-MW5S	2-fluorobiphenyl	B/N	154	30-115
WA-MW8S	2-fluorobiphenyl	B/N	132	30-115
WA-MW8SDL	nitrobenzene-d5	B/N	125	23-120
	2-fluorobiphenyl	B/N	120	30-115
	2-fluorophenol	A	0	25-121
	phenol-d5	A	7	24-113
	2,4,6-tribromophenol	A	0	19-122

No action is required with respect to surrogate recovery unless two or more semivolatile surrogates, within the same fraction (acid or base/neutral) are non-compliant. However, no action was required for sample WA-MW8SDL since it was previously qualified.

There are four internal standards added to each sample after extraction but prior to analysis. All internal standard %R were compliant except:

Sample	Internal Standard	%R	QC Limit
WA-MW5D	phenanthrene-d10	47	50-200
WA-MW5DMS	phenanthrene-d10	37	50-200
WA-MW5DMSD	phenanthrene-d10	40	50-200
WA-MW5S	phenanthrene-d10	36	50-200
WA-MW8S	phenanthrene-d10	37	50-200

The analytes associated with the non-compliant internal standard for the above samples were considered estimated and flagged "J" ($\geq$IDL) or "UJ" ($<$IDL).

VII. DUPLICATES

There were no coded duplicates analyzed in this SDG.

VIII. TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc., is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

TCLP PESTICIDES

This report contains the validation of the following samples in SDG CF3:

Client ID	Sample Location	Matrix
WA-MW5D	River Road	Oil
WA-MW5S	River Road	Oil
WA-MW8S	River Road	Oil

I. HOLDING TIMES

The samples were extracted beyond the seven days of VTSR holding time limits and analyzed within 40 days of VTSR. All results were estimated and flagged "J" or "UJ".

II. INSTRUMENT PERFORMANCE

The GC system performance was consistent and acceptable throughout the period of analysis.

III. CALIBRATIONS

The initial calibration sequence and the maximum %RSD (20%) were acceptable.

The continuing calibration check frequency and maximum %D (15%) were acceptable except for the following:

Date	Time	GC Column	Analyte	%D	Affected Samples
1-13-95	21:34	Primary	methoxychlor	17.2	All
		Secondary	g-BHC	29.8	
			heptachlor	26.2	
			heptachlor epoxide	16.1	
			methoxychlor	18.1	
1-14-95	08:38	Primary	methoxychlor	17.3	All
		Secondary	g-BHC	37.2	
			heptachlor	22.6	
			heptachlor epoxide	18.1	
			methoxychlor	17.9	

No further action was taken as all results were estimated due to missed holding times.

IV. BLANKS

One method blank was analyzed. The blank was free of all analyte contamination.

V. SURROGATE RECOVERY

The surrogates decachlorobiphenyl (DCB) and tetrachlorometaxylene (TCMX) were spiked into each sample to monitor the extraction and analysis procedures. All surrogate percent recoveries (%R) were within the QC limits.

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE(MS/MSD)

There was no MS/MSD analyzed in this sample group.

VII. DUPLICATES

There were no duplicates analyzed in this SDG.

VIII. TARGET COMPOUND IDENTIFICATION

Target compound identification was acceptable in all cases.

IX. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Compound quantitation was acceptable.

Reported detection limits were compliant and calculated correctly.

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete as submitted by Nytest Environmental, Inc., and is acceptable for its intended use as analytical results.

DATA VALIDATION OF

HERBICIDES

This report contains the validation of the following samples in SDG CF3:

Sample ID	Matrix
WA-MW5D	Oil
WA-MW5S	Oil
WA-MW8S	Oil

I. HOLDING TIMES

The samples were extracted within five days of VTSR and analyzed within 40 days of VTSR.

II. INSTRUMENT PERFORMANCE

The GC system performance was consistent and acceptable throughout the period of analysis.

III. CALIBRATIONS

The initial calibration sequence and the maximum %RSD (20%) were acceptable.

The continuing calibration check frequency and maximum %D (15%) were acceptable.

IV. BLANKS

One method blank was analyzed. The blank was free of all analyte contamination.

V. SURROGATE RECOVERY

The surrogate 2,4-DCPAA was spiked into each sample to monitor the extraction and analysis procedures. All surrogate percent recoveries (%R) were within the QC limits.

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE(MS/MSD)

There was no MS/MSD analyzed in this SDG.

VII. DUPLICATES

There were no duplicates analyzed in this SDG.

VIII. TARGET COMPOUND IDENTIFICATION

Target compound identification was acceptable in all cases. There were no compounds of interest detected.

IX. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Compound quantitation was acceptable.

Reported detection limits were compliant and calculated correctly.

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete as submitted by Nytest Environmental, Inc., and is acceptable for its intended use as analytical results.

DATA VALIDATION OF

TRACE METALS

This report contains the validation of samples in SDG CF3:

Sample ID	Matrix
WA-MW5D	Oil
WA-MW5S	Oil
WA-MW8S	Oil

I. HOLDING TIMES

All samples were extracted and analyzed within the required time of VTSR. The mercury limit was 26 days from VTSR and the other metals limit was six months from VTSR.

II. CALIBRATIONS

The correlation factor for the initial calibration was required to be $\geq$0.995. All initial calibrations were compliant.

All continuing calibrations were compliant (90-110 % R for ICP, Flame AA and Graphite Furnace metals and 80-120 % R for mercury by Cold Vapor).

III. BLANKS

There was one preparation blank, numerous calibration blanks and one field blank analyzed. All blanks were found to be free of analyte contamination except:

Blank	Analyte	Conc. µg/kg	Affected Samples
Prep blank	cadmium	-2.2	All

The associated sample results were qualified as etimated and flagged "UJ".

IV. INTERFERENCE CHECK SAMPLES

The ICP interference check sample results were within the 80-120% QC limit.

V. LABORATORY CONTROL SAMPLE (LCS)

All LCS were compliant for percent recovery (80-120%).

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD)

Sample WA-MW5D was analyzed as MS/MSD in this SDG. All %R were within 75-125% and RPD were within 20% water except:

Analyte	MS %R
silver	21.7

The associated positive results were qualified as estimated and flagged "J". The associated non-detects were considered unusable and flagged "R".

VII. FURNACE ATOMIC ABSORPTION ANALYSIS QC

Selenium was analyzed by GFAA in this sample. The following GFAA QC limits were not met and the data were qualified accordingly. If the sample concentration was less than 50% of the spike concentration, and the spike recovery <85 or >115%. The analysis were flagged with a "W" by the lab. If the sample concentration was >50% of spike concentration, and the spike recovery was <85 or >115% the analysis was quantitated by MSA. If the correlation coefficient (r) of the MSA $\geq$0.995, the analytes were flagged with an "S" by the lab. If r is <0.995, the analytes were flagged "+" by the lab. The following are the conditions and the subsequent qualifiers assigned by this reviewer for the furnace metals:

FLAG	SAMPLE RESULT	QUALIFIER
"W"	$\geq$ IDL	"J"
"W"	< IDL	"UJ"
"S"	ANY	NONE
"+"	$\geq$ IDL	"J"
"+"	< IDL	"UJ"

The following table lists the sample and the analyte(s) qualified due to non-compliant furnace QC results:

Sample	Analyte
WA-MW5D	selenium

VIII. CODED FIELD DUPLICATES

There was no field duplicate analyzed within this SDG.

IX. ICP SERIAL DILUTIONS

ICP serial dilution results were compliant.

X. SAMPLE RESULT VERIFICATION

Sample result verification was acceptable.

XI. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All positives were calculated correctly, and the results were correctly transcribed on the Form I.

Detection limits were acceptable. The laboratory flagged with a "B" all analytes >IDL but <CRDL. All results flagged with a laboratory "B" were assigned the qualifier "J" by the reviewer and the results are considered to be estimated. The following lists the samples and analytes qualified with a "J":

Sample	Analytes
WA-MW5D	barium
WA-MW5S	barium
WA-MW8S	barium

XII. SYSTEM PERFORMANCE

The analytical system performances were consistent and acceptable throughout the period of analysis.

XIII. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. The data package as presented by NEI is 92% complete due to a low MS recovery, and all usable data are acceptable for their intended use as analytical results.

DATA VALIDATION OF

CONVENTIONALS

This report contains the validation of corrosivity, ignitability, reactive cyanide and sulfide in the following samples in SDG CF3:

Sample ID	Matrix
WA-MW5D	Oil
WA-MW5S	Oil
WA-MW8S	Oil

I. HOLDING TIMES

All samples were extracted within the required holding time limits except for pH.

All pH analyses were performed 11 days from VTSR using pH paper. These pH results were considered estimated and flagged "J".

II. CALIBRATIONS

All calibrations were compliant.

III BLANKS

All blanks were free of analyte contamination.

IV. FIELD DUPLICATES

No field duplicates were analyzed within this SDG.

V. DUPLICATES

Sample WA-MW8S was analyzed as the duplicate in this SDG. The duplicate analyses were within the $\pm$ 20% RPD limit.

VI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by NEI is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

VOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF4:

Client ID	Sample Location	Matrix
XXTP1	Trip Blank	Water
GWWB-001	Groundwater Wash Blank	Water
GWRR-MW8S	River Road Site Monitoring Well - 8S	Water
GWRR-MW5I	River Road Site Monitoring Well - 5I	Water
GWCF-MW7D	Cherry Farm Site Monitoring Well - 7D	Water
GWCF-MW17D	Cherry Farm Site Monitoring Well - 17D	Water
GWCF-MW5S	Cherry Farm Site Monitoring Well - 5S	Water

I. HOLDING TIMES

All samples were analyzed within the required seven days of validated time of sample receipt (VTSR).

II. GC/MS TUNE

The GC/MS Tune (BFB) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There was one initial calibration for this SDG. The calibration was compliant for minimum RRF (0.05) and maximum %RSD (35%).

IV. BLANKS

There was one method blank, one trip blank and one wash blank in association with this SDG. All blanks were found to be free of all analyte contamination.

V. SPIKE/ SPIKE DUPLICATE (MS/MSD AND BS)

Sample GWRR-MW5I was analyzed as the MS/MSD.

All MS/MSD and BS %R were compliant.

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were three surrogates and three internal standards added to each sample. All surrogate %R were compliant.

All internal standard %R were compliant.

VII. DUPLICATES

Sample GWCF-MW17D was a coded field duplicate of sample GWCF-MW7D. The RPD could not be evaluated since neither sample contained positive hits. The precision was acceptable.

VIII TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc. is 100% complete and all data are valid within listed qualifiers.

DATA VALIDATION OF

SEMIVOLATILE ORGANIC COMPOUNDS

This report contains the validation of the following samples in SDG CF4:

Client ID	Sample Location	Matrix
GWWB-001	Groundwater Wash Blank	Water
GWRR-MW8S	River Road Site Monitoring Well - 8S	Water
GWRR-MW5I	River Road Site Monitoring Well - 5I	Water
GWCF-MW7D	Cherry Farm Site Monitoring Well - 7D	Water
GWCF-MW17D	Cherry Farm Site Monitoring Well - 17D	Water
GWCF-MW5S	Cherry Farm Site Monitoring Well - 5S	Water

I. HOLDING TIMES

All samples were extracted within the required five days of validated time of sample receipt (VTSR) except for:

Sample	Date Sampled	VTSR	Date Extracted	# Days From VTSR To Date Extracted
GWWB-001 RE	12-15-94	12-17-94	01-17-95	31
GWRR-MW5I RE	12-15-94	12-17-94	01-17-95	31
GWCF-MW7D RE	12-15-94	12-19-94	01-17-95	29
GWCF-MW17D RE	12-15-94	12-19-94	01-17-95	29
GWCF-MW5S RE	12-15-94	12-17-94	01-17-95	31

The results for the samples listed above were considered estimated and flagged "J" ($\geq$IDL) or "UJ" (<IDL). All original and re-extracted samples were analyzed within forty days of validated time of sample receipt (VTSR).

II. GC/MS TUNE

The GC/MS Tune (DFTPP) requirements were met in all cases and were performed at the correct frequency.

III. CALIBRATIONS

There were three initial calibrations for this SDG. The calibrations were compliant for minimum RRF (0.05) and maximum %RSD (35%) except for:

Date	Analyte	Avg. RRF	% RSD	Affected Samples
01-06-95	hexachlorocyclopentadiene	0.046	83.59	GWWB-001,
	2,4-dinitrophenol	-	43.21	GWRR-MW8S,
	pentachlorophenol	0.039	46.58	GWRR-MW5I,
				GWCF-MW7D
01-09-95	hexachlorocyclopentadiene	-	67.32	GWCF-MW17D,
	2,4-dinitrophenol	*	112.65	GWCF-MW5S
	pentachlorophenol	0.034	41.62	
	benzidine	0.043	-	

Date	Analyte	Avg. RRF	% RSD	Affected Samples
01-24-95	hexachlorocyclopentadiene	*	143.51	GWWB-001 RE,
	2,4-dinitrophenol	-	44.56	GWRR-MW5I RE,
				GWCF-MW7D RE,
				GWCF-MW17D RE,
				GWCF-MW5S RE

* Compounds analyzed at two different concentrations instead of the required three.

The non-detected results for the analyte with non-compliant average RRF were considered unusable and flagged "R", while the positive results were considered estimated and flagged "J".

The results for the analytes with non-compliant %RSD were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

All results (positive and non-detect) for the analytes calibrated at only two different concentration levels were considered unusable and flagged "R".

IV. BLANKS

There were two method blanks and one wash blank in association with this SDG. All blanks were found to be free of all analyte contamination.

V. SPIKE/SPIKE DUPLICATE (MS/MSD AND BS)

Sample GWRR-MW5I was analyzed as the MS/MSD.

All MS/MSD %R were compliant except:

	Original Extract		Re-Extract		
Analyte	MS %R	MSD %R	MS %R	MSD %R	QC Limit
phenol	0	0	-	0	17-100
2-chlorophenol	23.29	-	267.12	21.62	36-120
1,4-dichlorobenzene	-	-	186.61	-	37-106
n-nitroso-di-n-propylamine	-	-	244.34	-	14-198
1,2,4-trichlorobenzene	47.90	49.43	207.54	-	57-129
4-chloro-3-methylphenol	24.82	39.63	187.67	8.4	41-128
acenaphthene	49.97	59.62	256.43	172.45	60-132
4-nitrophenol	-	-	252.02	192.18	13-106
2,4-dinitrotoluene	-	-	281.10	222.86	48-127
pentachlorophenol	-	-	399.23	-	38-152
pyrene	62.50	-	283.68	233.84	70-100

The following actions were taken for non-compliant MS and/or MSD %R:

- the phenol (%R < 10%) results for sample GWRR-MW5I were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).
- the results for phenol and 4-chloro-3-methylphenol in sample GWRR-MW5I RE were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

All BS %R were compliant except:

Analyte	Original Extract BS %R	Re-Extract BS %R	QC Limit
1,4-dichlorobenzene	35.44	-	37-106
1,2,4-trichlorobenzene	32.81	47.89	57-129
4-chloro-3-methylphenol	0	-	41-128
acenaphthene	47.53	-	60-132
4-nitrophenol	6.44	9.84	13-106
pentachlorophenol	-	2.03	38-152
pyrene	63.26	-	70-100

The following actions were taken for non-compliant BS %R:

- the 4-chloro-3-methylphenol and 4-nitrophenol (%R <10%) results in the original extracts were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL);
- the 4-nitrophenol and pentachlorophenol (%R < 10%) results in the re-extracts were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

VI. SURROGATE AND INTERNAL STANDARD RECOVERY

There were three acid (A) and three base/neutral (B/N) surrogates added to each sample prior to extraction. All surrogate %R were acceptable except:

Sample	Surrogate	Fraction	%R	QC Limit	Action Taken
GWWB-001	nitrobenzene-d5	B/N	33	35-114	"J", "UJ"
	2-fluorobiphenyl	B/N	32	43-116	"J", "UJ"
	2-fluorophenol	A	16	21-110	None
GWRR-MW5I	nitrobenzene-d5	B/N	12	35-114	"J", "UJ"
	2-fluorobiphenyl	B/N	37	43-116	"J", "UJ"
	2-fluorophenol	A	16	21-110	None
GWCF-MW7D	2-fluorobiphenyl	B/A	38	43-116	None
	2-fluorophenol	A	18	21-110	None
GWCF-MW17D	2-fluorobiphenyl	B/N	33	43-116	None
GWCF-MW5S	2-fluorobiphenyl	B/N	42	43-116	None
GWRR-MW5I RE	phenol-d5	A	0	10-94	"J", "R"
	2-fluorophenol	A	1	21-110	"J", "R"
	2,4,6-tribromophenol	A	4	10-123	"J", "R"

No action is required with respect to surrogate recovery unless two or more semivolatile surrogates, within the same fraction (acid or base/neutral fraction), are non-compliant.

The base/neutral fraction analytes for the samples with two non-compliant base/neutral surrogates, (%R less than the lower acceptance limit), were considered estimated and flagged "J" (≥IDL) or "UJ" (<IDL).

The non-detected acid fraction results for the sample with non-compliant acid surrogates, (%R less than 10%), were considered unusable and flagged "R", while the positive acid fraction results were considered estimated and flagged "J".

There are six internal standards added to each sample after extraction but prior to analysis. All internal standard %R were compliant.

VII. DUPLICATES

Sample GWCF-MW17D was a coded duplicate of sample GWCF-MW7. The RPD could not be evaluated since neither sample contained positive hits (original or re-extracted). The precision was acceptable.

VIII. TARGET COMPOUND IDENTIFICATION

All target compound identification was acceptable.

IX. COMPOUND QUANTITATION AND PROJECT REPORTING LIMITS

All compound quantitation was acceptable.

All reported detection limits were compliant.

X. SYSTEM PERFORMANCE

The GC/MS system performance was consistent and acceptable throughout the period of analysis.

XI. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by Nytest Environmental, Inc. is 98.2% complete. All useable data are valid within listed qualifiers.

The percent completeness for the original extracts were adversely affected by non-complaint initial calibrations. The percent completeness for the re-extracts were adversely affected by non-compliant initial calibrations and non-compliant surrogate recoveries (GWRR-MW5I RE).

DATA VALIDATION OF

PESTICIDES AND POLYCHLORINATED BIPHENYLS

This report contains the validation of samples in SDG CF4:

Client ID	Sample Location	Matrix
GWWB-001	Groundwater Wash Blank	
GWRR-MW8S	River Road Site Monitoring Well - 8S	Water
GWRR-MW5I	River Road Site Monitoring Well - 5I	Water
GWCF-MW7D	Cherry Farm Site Monitoring Well - 7D	Water
GWCF-MW17D	Cherry Farm Site Monitoring Well - 17D	Water
GWCF-MW5S	Cherry Farm Site Monitoring Well - 5S	Water

I. HOLDING TIMES

The samples were extracted within 5 days of VTSR and analyzed within 40 days of VTSR.

II. INSTRUMENT PERFORMANCE

The GC system performance was consistent and acceptable throughout the period of analysis.

III. CALIBRATIONS

The initial calibration sequence and the maximum %RSD (20%) was acceptable.

The continuing calibration check frequency and maximum %D (15%) was acceptable except for the following:

Date	Time	GC Column	Analyte	%D	Affected Samples
1/15/95	2:20	Primary	DDT	45.5	All except GWRR-MW8S
			methoxychlor	30.1	
1/15/95	2:59	Primary	endosulfan sulfate	23.8	All except GWRR-MW8-S

The results for the analytes listed for the above samples were considered estimates and flagged "J" or "UJ".

IV. BLANKS

Two method blanks and one field blank were analyzed. The blanks were free of all analyte contamination.

V. SURROGATE RECOVERY

The surrogates decachlorobiphenyl (DCB) and tetrachlorometaxylene (TCMX) were spiked into each sample to monitor the extraction and analysis procedures. All surrogate percent recoveries (%R) were within the QC Limits (60-150%) except:

Sample	%R (TCMX)	%R DCB	Action
GWWB-001	35	51	"J", "UJ"
GWRR-MW5I	31	26	"J", "UJ"
GWCF-MW7D	40	59	"J", "UJ"
GWCF-MW17D	30	42	"J", "UJ"
GWCF-MW5S	28	55	"J", "UJ"

VI. MATRIX SPIKE/MATRIX SPIKE DUPLICATE(MS/MSD)

Sample GWRR-MW5I was analyzed as MS/MSD. All %R were acceptable accept:

	MS (%R)	MSD (%R)	QC Limits
lindane	37	43	56-123
heptachlor	28	30	40-131
aldrin	30	30	40-120
dieldrin	51	51	52-126

No action was taken as BS/BSD results were acceptable.

VII. DUPLICATES

Samples GWCF-MW7D and GWCF-MW17D were analyzed as a field duplicate pair. There were no positive results in either sample and precision is considered acceptable.

VIII. TARGET COMPOUND IDENTIFICATION

Target compound identification was acceptable in all cases.

IX. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Compound quantitation was acceptable.

Reported detection limits were compliant and calculated correctly.

X. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. This data package is 100% complete as submitted by NYTEST ENVIRONMENTAL, INC., and is acceptable for its intended use as analytical results.

DATA VALIDATION OF

TRACE METALS AND CYANIDE

This report contains the validation of samples in SDG CF4:

Client ID	Sample Location	Matrix
GWWB-001	Groundwater Wash Blank	
GWRR-MW8S	River Road Site Monitoring Well - 8S	Water
GWRR-MW5I	River Road Site Monitoring Well - 5I	Water
GWCF-MW7D	Cherry Farm Site Monitoring Well - 7D	Water
GWCF-MW17D	Cherry Farm Site Monitoring Well - 17D	Water
GWCF-MW5S	Cherry Farm Site Monitoring Well - 5S	Water

I. HOLDING TIMES

All samples were extracted and analyzed within the required time of VTSR. The mercury limit was 26 days from VTSR and the other metals limit was six months from VTSR.

II. CALIBRATIONS

The correlation factor for initial calibrations was required to be ≥ 0.995. All initial calibrations were compliant.

All continuing calibrations were compliant (90-110 % R for ICP, Flame AA and Graphite Furnace metals 85-115% R for cyanide and 80-120 % R for mercury by Cold Vapor.

III. BLANKS

There was one preparation blank, numerous calibration blanks and one equipment rinseate analyzed. All blanks were found to be free of analyte contamination except:

Blank	Analyte	Conc. µg/kg	Affected Samples
PBW	iron	49.02	None
	zinc	13.86	GWRR-MW8S

All associated sample results with concentrations less than 5X found in the blank are flagged "U" and are considered to be non-detect at the value given.

IV. INTERFERENCE CHECK SAMPLES

The ICP interference check sample results were within the 80-120% QC limit. However, antimony was not present in the ICS solution. Therefore all antimony results were considered estimated and flagged "J" or "UJ".

V. LABORATORY CONTROL SAMPLE (LCS)

All LCS were compliant for percent recovery (80-120%).

VI. MATRIX SPIKE/MATRIX DUPLICATE (MS/MD)

Sample GWRR-MW5I was analyzed as MS/MD in this SDG. All %R were within 75-125% and RPD were within 20% except:

Analyte	MS %R	MD %RPD
silver	74.2	-
thallium	47.0	-

The results in the associated samples were qualified as estimated and flagged with a "J" or "UJ" for non-compliant MS % recoveries.

VII. FURNACE ATOMIC ABSORPTION ANALYSIS QC

As, Pb, Tl, Se were analyzed by GFAA in this sample. The following GFAA QC limits were not met and the data were qualified accordingly. If the sample concentration was less than 50% of the spike concentration, and the spike recovery <85 or $>115\%$. The analysis were flagged with a "W" by the lab. If the sample concentration was $>50\%$ of spike concentration, and the spike recovery was <85 or $>115\%$ the analysis was quantitated by MSA. If the correlation coefficient (r) of the MSA ≥ 0.995, the analytes were flagged with an "S" by the lab. If r is <0.995, the analytes were flagged "+" by the lab. The following are the conditions and the subsequent qualifiers assigned by this reviewer for the furnace metals:

FLAG	SAMPLE RESULT	QUALIFIER
"W"	$\geq$ IDL	"J"
"W"	< IDL	"UJ"
"S"	ANY	NONE
"+"	$\geq$ IDL	"J"
"+"	< IDL	"UJ"

The following table lists the sample and the analyte(s) qualified due to non-compliant furnace QC results:

Sample	Analyte
GWCF-MW7D	selenium, thallium
GWCF-MW17D	selenium, thallium
GWCF-MW5S	thallium
GWCF-RRW5I	selenium, thallium
GWRR-MW8S	selenium, thallium
GWWB-001	selenium

VIII. CODED FIELD DUPLICATES

Samples CFM-W7D and FMW17D were analyzed as the field duplicate pair in this SDG. All RPD results were within QC limits (20% for water).

IX. ICP SERIAL DILUTIONS

ICP serial dilution results were compliant.

X. SAMPLE RESULT VERIFICATION

Sample result verification was acceptable.

XI. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All positives were calculated correctly, and the results were correctly transcribed on the Form I.

Detection limits were acceptable. The laboratory flagged with a "B" all analytes >IDL but <CRDL. All results flagged with a laboratory "B" were assigned the qualifier "J" by the reviewer and the results are considered to be estimated. The following lists the samples and analytes qualified with a "J":

Sample	Analytes
GWCF-MW5S	nickel
GWRR-MW5I	antimony
GWRR-MW8S	arsenic, chromium

XII. SYSTEM PERFORMANCE

The analytical system performances were consistent and acceptable throughout the period of analysis.

XIII. OVERALL ASSESSMENT OF DATA FOR THE CASE

The quality assurance objectives for measurement data include considerations for precision, accuracy, completeness, representativeness and comparability. The data package as presented by NYTEST ENVIRONMENTAL, INC. is 100% complete, and is acceptable for its intended use of analytical results.

DATA VALIDATION OF

CONVENTIONALS

This report contains the validation of acidity, nitrogen ammonia, BOD, COD, chloride, hardness, oil and grease, phenols, TDS, TSS, TOC, pH and total phosphate in the following samples in SDG CF4:

Client ID	Sample Location	Matrix
GWWB-001	Groundwater Wash Blank	
GWRR-MW8S	River Road Site Monitoring Well - 8S	Water
GWRR-MW5I	River Road Site Monitoring Well - 5I	Water
GWCF-MW7D	Cherry Farm Site Monitoring Well - 7D	Water
GWCF-MW17D	Cherry Farm Site Monitoring Well - 17D	Water
GWCF-MW5S	Cherry Farm Site Monitoring Well - 5S	Water

I. HOLDING TIMES

All samples were analyzed within the holding times required except for the pH and BOD analyses in both samples GWCF-MW7D and GWCF-MW17D. These results were considered estimated and flagged "J" or "UJ".

II. CALIBRATIONS

All calibrations were compliant.

III BLANKS

All method blanks were free of contamination. The field blank (WB-001) contained the following:

Analyte	Conc.	Affected Samples
BOD	5	GWCF-MW7D, GWCF-MW17D
COD	10	GWCF-MW17D
O & G	6	GWRR-MW5I, GWRR-MW5S, GWCF-MW7D, GWCF-MW17D

IV. DUPLICATES

All laboratory duplicate analyses were compliant

V. FIELD DUPLICATES

Samples GWCF-MW7D and GWCF-MS17D were analyzed as a field duplicate pair. Duplicate analyses were within the required acceptance limits (20%).

VI. MATRIX SPIKE/MATRIX DUPLICATE (MS/MD)

Sample GWRR-MW5I was analyzed as the MS/MD. All MS and MD analyses were within acceptable limits except for BOD (47%). All BOD results were considered estimated and flagged "J" or "UJ".

VII. OVERALL ASSESSMENT OF DATA FOR THE CASE

The data quality objectives for measurement data include considerations for precision, accuracy, completeness, representativeness, and comparability. The data package as presented by NYTEST ENVIRONMENTAL, INC. is 100% complete and all data are valid within listed qualifiers.

SECTION 3

QUALIFIED DATA TABLES

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	37020		37021		37100		037100D		40010		40020		40100		43010	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
bis(2-Chloroethyl)Ether	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2-Chlorophenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
1,3-Dichlorobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
1,4-Dichlorobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
1,2-Dichlorobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2-Methylphenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2,2'-oxybis(1-Chloropropane)	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
4-Methylphenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
N-Nitroso-di-n-propylamine	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Hexachloroethane	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Nitrobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Isophorone	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2-Nitrophenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2,4-Dimethylphenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2,4-Dichlorophenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
1,2,4-Trichlorobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
N[illegible]hthalene	4800	J	14000	J	650	J	9700	UJ	420	UJ	310	J	3600	J	180	J
[illegible]loroaniline	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	UJ	400	UJ
Hexachlorobutadiene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
bis(2-Chloroethoxy)methane	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
4-Chloro-3-Methylphenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2-Methylnaphthalene	1900	UJ	360	J	4800	UJ	9700	UJ	420	UJ	850	UJ	1400	J	400	UJ
Hexachlorocyclopentadiene	1900	R	2000	R	4800	UJ	9700	R	420	UJ	850	UJ	5100	UJ	400	UJ
2,4,6-Trichlorophenol	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2,4,5-Trichlorophenol	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
2-Chloronaphthalene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
2-Nitroaniline	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
Dimethylphthalate	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Acenaphthylene	1900	UJ	260	J	1500	J	1700	J	420	UJ	850	UJ	3100	J	58	J
2,6-Dinitrotoluene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
3-Nitroaniline	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	UJ	2000	UJ
Acenaphthene	1900	UJ	2000	UJ	540	J	9700	UJ	420	UJ	850	UJ	1400	J	400	UJ
2,4-Dinitrophenol	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	UJ	2000	UJ
4-Nitrophenol	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
Dibenzofuran	1900	UJ	270	J	870	J	1000	J	420	UJ	850	UJ	1500	J	400	UJ
2,4-Dinitrotoluene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Diethylphthalate	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
4-Chlorophenyl-phenylether	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Fluorene	1900	UJ	520	J	2900	J	3200	J	420	UJ	130	J	5200		43	J
4-Nitroaniline	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
4,6-Dinitro-2-methylphenol	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
N-Nitrosodiphenylamine	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	37020		37021		37100		037100D		40010		40020		40100		43010	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
4-Bromophenyl-phenylether	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Hexachlorobenzene	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Pentachlorophenol	9700	UJ	9800	UJ	24000	UJ	48000	UJ	2100	UJ	4300	UJ	26000	U	2000	UJ
Phenanthrene	1000	J	2600	J	35000	J	40000	J	82	J	560	J	28000		340	J
Anthracene	380	J	780	J	14000	J	14000	J	420	UJ	170	J	10000		110	J
Carbazole	1900	UJ	2000	UJ	780	J	9700	UJ	420	UJ	86	J	570	J	49	J
Di-n-butylphthalate	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Fluoranthene	2600	J	5500	J	43000	J	56000	J	130	J	1100	J	29000		950	J
Pyrene	1800	J	4200	J	32000	J	39000	J	100	J	890	J	28000		780	J
Butylbenzylphthalate	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
3,3'-Dichlorobenzidine	3900	UJ	3900	UJ	9700	UJ	19000	UJ	830	UJ	1700	UJ	10000	U	790	UJ
Benzo(a)anthracene	1300	J	2600	J	14000	J	15000	J	48	J	580	J	14000		450	J
Chrysene	1400	J	2600	J	14000	J	16000	J	68	J	670	J	15000		500	J
bis(2-Ethylhexyl)phthalate	1900	U	2000	U	4800	U	9700	U	1400	U	850	U	2400	J	400	U
Di-n-octylphthalate	1900	UJ	2000	UJ	4800	UJ	9700	UJ	420	UJ	850	UJ	5100	U	400	UJ
Benzo(b)fluoranthene	1300	J	2300	J	11000	J	13000	J	46	J	360	J	11000		370	J
Benzo(k)fluoranthene	840	J	1600	J	9300	J	9800	J	48	J	480	J	6800		430	J
Benzo(a)pyrene	1100	J	2100	J	14000	J	15000	J	46	J	460	J	12000		460	J
Indeno(1,2,3-cd)pyrene	540	J	960	J	7000	J	6300	J	420	UJ	200	J	5000	J	260	J
Dibenz(a,h)anthracene	1900	UJ	2000	UJ	540	J	9700	UJ	420	UJ	850	UJ	520	J	400	UJ
Benzo(g,h,i)perylene	560	J	950	J	7900	J	7200	J	42	J	220	J	5200		290	J

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	43020		43100		50002		50020		50100		80100		90010		90011	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
bis(2-Chloroethyl)Ether	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2-Chlorophenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
1,3-Dichlorobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
1,4-Dichlorobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
1,2-Dichlorobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2-Methylphenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2,2'-oxybis(1-Chloropropane)	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
4-Methylphenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
N-Nitroso-di-n-propylamine	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Hexachloroethane	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Nitrobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Isophorone	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2-Nitrophenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2,4-Dimethylphenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2,4-Dichlorophenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
1,2,4-Trichlorobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Naphthalene	910	J	54000	J	1000	UJ	100	J	430	UJ	24000	UJ	4800	UJ	2400	UJ
[illegible]loroaniline	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
[illegible]achlorobutadiene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
bis(2-Chloroethoxy)methane	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
4-Chloro-3-Methylphenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2-Methylnaphthalene	2200	UJ	55000	J	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Hexachlorocyclopentadiene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	R	4800	R	2400	R
2,4,6-Trichlorophenol	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2,4,5-Trichlorophenol	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
2-Chloronaphthalene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2-Nitroaniline	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
Dimethylphthalate	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Acenaphthylene	300	J	52000	J	1000	UJ	920	UJ	430	UJ	2400	J	4800	UJ	2400	UJ
2,6-Dinitrotoluene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
3-Nitroaniline	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
Acenaphthene	2200	UJ	14000	J	100	J	920	UJ	430	UJ	24000	UJ	620	J	310	J
2,4-Dinitrophenol	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
4-Nitrophenol	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
Dibenzofuran	2200	UJ	19000	J	130	J	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
2,4-Dinitrotoluene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Diethylphthalate	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
4-Chlorophenyl-phenylether	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Fluorene	350	J	100000	J	140	J	120	J	430	UJ	4200	J	650	J	330	J
4-Nitroaniline	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
4,6-Dinitro-2-methylphenol	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ
N-Nitrosodiphenylamine	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
4-Bromophenyl-phenylether	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
[illegible]chlorobenzene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Pentachlorophenol	11000	UJ	270000	UJ	5000	UJ	4600	UJ	2100	UJ	120000	UJ	24000	UJ	12000	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	43020		43100		50002		50020		50100		80100		90010		90011	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	2500	J	390000	J	2500	J	1200	J	380	J	39000	J	10000	J	5000	J
Anthracene	730	J	74000	J	160	J	240	J	87	J	7200	J	1600	J	730	J
Carbazole	250	J	55000	UJ	230	J	200	J	430	UJ	24000	UJ	2000	J	970	J
Di-n-butylphthalate	2200	UJ	55000	UJ	140	J	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Fluoranthene	4400	J	150000	J	3300	J	1900	J	810	J	45000	J	15000	J	7600	J
Pyrene	3400	J	220000	J	2000	J	1500	J	670	J	30000	J	11000	J	5600	J
Butylbenzylphthalate	2200	UJ	55000	UJ	170	J	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
3,3'-Dichlorobenzidine	4500	UJ	110000	UJ	2000	UJ	1800	UJ	850	UJ	48000	UJ	9500	UJ	4900	UJ
Benzo(a)anthracene	2000	J	82000	J	500	J	730	J	320	J	14000	J	4500	J	2400	J
Chrysene	1900	J	94000	J	970	J	850	J	350	J	15000	J	5200	J	2900	J
bis(2-Ethylhexyl)phthalate	2200	U	55000	UJ	2000	U	2100	J	430	U	3100	J	4800	UJ	2400	U
Di-n-octylphthalate	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Benzo(b)fluoranthene	1600	J	34000	J	380	J	650	J	240	J	13000	J	3500	J	1900	J
Benzo(k)fluoranthene	1600	J	40000	J	420	J	550	J	310	J	9300	J	3500	J	1900	J
Benzo(a)pyrene	1900	J	71000	J	250	J	630	J	310	J	12000	J	3400	J	1900	J
Indeno(1,2,3-cd)pyrene	1000	J	23000	J	130	J	300	J	160	J	5800	J	1500	J	780	J
Dibenz(a,h)anthracene	2200	UJ	55000	UJ	1000	UJ	920	UJ	430	UJ	24000	UJ	4800	UJ	2400	UJ
Benzo(g,h,i)perylene	1200	J	29000	J	140	J	300	J	170	J	6400	J	1500	J	780	J

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	90020		90100		100010		100020		100100	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
bis(2-Chloroethyl)Ether	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2-Chlorophenol	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
1,3-Dichlorobenzene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
1,4-Dichlorobenzene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
1,2-Dichlorobenzene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2-Methylphenol	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2,2'-oxybis(1-Chloropropane)	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
4-Methylphenol	310	J	560	J	3700	UJ	1200	UJ	500	J
N-Nitroso-di-n-propylamine	760	U	3300	U	3700	UJ	1200	UJ	1100	U
Hexachloroethane	760	U	3300	U	3700	UJ	1200	UJ	1100	U
Nitrobenzene	760	U	3300	U	3700	UJ	1200	UJ	1100	U
Isophorone	760	U	3300	U	3700	UJ	1200	UJ	1100	U
2-Nitrophenol	760	U	3300	U	3700	UJ	1200	UJ	1100	U
2,4-Dimethylphenol	760	U	3300	U	3700	UJ	1200	UJ	1100	U
2,4-Dichlorophenol	760	U	3300	U	3700	UJ	1200	UJ	1100	U
1,2,4-Trichlorobenzene	760	U	3300	U	3700	UJ	1200	UJ	1100	U
Naphthalene	760	U	3300	U	3700	UJ	1200	UJ	1100	U
[illegible]oroaniline	760	UJ	3300	U	3700	UJ	1200	UJ	1100	U
Hexachlorobutadiene	760	U	3300	U	3700	UJ	1200	UJ	1100	U
bis(2-Chloroethoxy)methane	760	U	3300	U	3700	UJ	1200	UJ	1100	U
4-Chloro-3-Methylphenol	760	U	3300	U	3700	UJ	1200	UJ	1100	U
2-Methylnaphthalene	760	U	3300	U	3700	UJ	1200	UJ	1100	U
Hexachlorocyclopentadiene	760	UJ	3300	R	3700	R	1200	R	1100	R
2,4,6-Trichlorophenol	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2,4,5-Trichlorophenol	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ
2-Chloronaphthalene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2-Nitroaniline	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ
Dimethylphthalate	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Acenaphthylene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2,6-Dinitrotoluene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
3-Nitroaniline	3800	UJ	17000	UJ	18000	UJ	6100	UJ	5600	UJ
Acenaphthene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2,4-Dinitrophenol	3800	UJ	17000	UJ	18000	UJ	6100	UJ	5600	UJ
4-Nitrophenol	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ
Dibenzofuran	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
2,4-Dinitrotoluene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Diethylphthalate	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
4-Chlorophenyl-phenylether	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Fluorene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
4-Nitroaniline	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ
4,6-Dinitro-2-methylphenol	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ
N-Nitrosodiphenylamine	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
4[illegible]omophenyl-phenylether	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
[illegible]chlorobenzene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Pentachlorophenol	3800	U	17000	UJ	18000	UJ	6100	UJ	5600	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF1

Sample ID	90020		90100		100010		100020		100100	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	230	J	470	J	1600	J	850	J	1200	J
Anthracene	760	U	3300	UJ	3700	UJ	170	J	340	J
Carbazole	760	U	3300	UJ	400	J	150	J	120	J
Di-n-butylphthalate	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Fluoranthene	340	J	720	J	3800	J	1500	J	1800	J
Pyrene	260	J	540	J	2600	J	1100	J	1300	J
Butylbenzylphthalate	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
3,3'-Dichlorobenzidine	1500	U	6700	UJ	7400	UJ	2400	UJ	2200	UJ
Benzo(a)anthracene	760	U	3300	UJ	1200	J	520	J	730	J
Chrysene	86	J	3300	UJ	1700	J	690	J	840	J
bis(2-Ethylhexyl)phthalate	6000		3300	U	3700	U	1200	U	1100	U
Di-n-octylphthalate	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Benzo(b)fluoranthene	760	U	3300	UJ	1600	J	580	J	540	J
Benzo(k)fluoranthene	760	U	3300	UJ	1300	J	400	J	570	J
Benzo(a)pyrene	760	U	3300	UJ	1300	J	430	J	590	J
Indeno(1,2,3-cd)pyrene	760	U	3300	UJ	640	J	210	J	280	J
Dibenz(a,h)anthracene	760	U	3300	UJ	3700	UJ	1200	UJ	1100	UJ
Benzo(g,h,i)perylene	760	U	3300	UJ	720	J	230	J	300	J

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	26010		26020		26100		37010		45010		045010D		45020		045020D	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
bis(2-Chloroethyl)Ether	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2-Chlorophenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
1,3-Dichlorobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
1,4-Dichlorobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
1,2-Dichlorobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2-Methylphenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2,2'-oxybis(1-Chloropropane)	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
4-Methylphenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
N-Nitroso-di-n-propylamine	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Hexachloroethane	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Nitrobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Isophorone	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2-Nitrophenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2,4-Dimethylphenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2,4-Dichlorophenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
1,2,4-Trichlorobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Naphthalene	1900		720		650	J	1000		840	J	11000	U	2600	J	2700	J
[illegible]loroaniline	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
[illegible]achlorobutadiene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
bis(2-Chloroethoxy)methane	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
4-Chloro-3-Methylphenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2-Methylnaphthalene	200	J	87	J	910	U	69	J	2200	U	11000	U	750	J	19000	U
Hexachlorocyclopentadiene	890	UJ	460	UJ	910	UJ	510	UJ	2200	UJ	11000	UJ	3900	UJ	19000	UJ
2,4,6-Trichlorophenol	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2,4,5-Trichlorophenol	4400	U	2300	U	4600	U	2600	U	11000	U	56000	U	19000	U	97000	U
2-Chloronaphthalene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
2-Nitroaniline	4400	U	2300	U	4600	U	2600	U	11000	U	56000	U	19000	U	97000	U
Dimethylphthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Acenaphthylene	180	J	110	J	380	J	63	J	3500	J	2900	J	9900		8900	J
2,6-Dinitrotoluene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
3-Nitroaniline	4400	U	2300	U	4600	U	2600	U	11000	U	56000	U	19000	U	97000	U
Acenaphthene	94	J	460	U	910	U	93	J	230	J	11000	U	1400	J	19000	U
2,4-Dinitrophenol	4400	UJ	2300	UJ	4600	UJ	2600	UJ	11000	UJ	56000	U	19000	UJ	97000	U
4-Nitrophenol	4400	U	2300	U	4600	U	2600	U	11000	U	56000	U	19000	U	97000	U
Dibenzofuran	140	J	72	J	910	U	95	J	1200	J	11000	U	6400		6100	J
2,4-Dinitrotoluene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Diethylphthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
4-Chlorophenyl-phenylether	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Fluorene	240	J	100	J	180	J	130	J	4000	J	3500	J	15000		14000	J
4-Nitroaniline	4400	U	2300	U	4600	U	2600	U	11000	U	56000	U	19000	U	97000	U
4,6-Dinitro-2-methylphenol	4400	UJ	2300	UJ	4600	UJ	2600	UJ	11000	UJ	56000	U	19000	UJ	97000	U
N-Nitrosodiphenylamine	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
4-Bromophenyl-phenylether	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
[illegible]chlorobenzene	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Pentachlorophenol	4400	U	2300	U	4600	U	2600	U	11000	UJ	56000	UJ	19000	U	97000	U

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	26010		26020		26100		37010		45010		045010D		45020		045020D	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	830	J	530		1200		490	J	26000	J	29000	J	64000	J	83000	
Anthracene	300	J	420	J	630	J	170	J	15000	J	18000	J	31000	J	37000	
Carbazole	890	U	460	U	910	U	510	U	240	J	11000	U	950	J	19000	U
Di-n-butylphthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Fluoranthene	2000		1600		3300		900		35000	J	63000	J	61000	J	110000	
Pyrene	1700		1400		2600		760		35000	J	49000	J	58000	J	87000	
Butylbenzylphthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
3,3'-Dichlorobenzidine	1800	UJ	910	UJ	1800	UJ	1000	UJ	4500	U	22000	U	7800	UJ	39000	U
Benzo(a)anthracene	1200		920		2100		450	J	22000	J	25000	J	31000	J	36000	
Chrysene	1200		1000		2300		500	J	22000	J	25000	J	32000	J	37000	
bis(2-Ethylhexyl)phthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Di-n-octylphthalate	890	U	460	U	910	U	510	U	2200	U	11000	U	3900	U	19000	U
Benzo(b)fluoranthene	560	J	450	J	970		270	J	13000	J	13000	J	18000		19000	J
Benzo(k)fluoranthene	600	J	490		1100		230	J	5100	J	11000	J	9000		15000	J
Benzo(a)pyrene	660	J	570		1300		260	J	14000	J	16000	J	21000		24000	
Indeno(1,2,3-cd)pyrene	260	J	240	J	580	J	130	J	7400	J	8400	J	11000		13000	J
Dibenz(a,h)anthracene	890	U	460	U	910	U	510	U	640	J	11000	U	800	J	19000	U
Benzo(g,h,i)perylene	260	J	240	J	550	J	130	J	7900	J	9400	J	13000		16000	J

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	46100		046100D		55002		55020		55100		60002		60012		60020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
bis(2-Chloroethyl)Ether	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2-Chlorophenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
1,3-Dichlorobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
1,4-Dichlorobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
1,2-Dichlorobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2-Methylphenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2,2'-oxybis(1-Chloropropane)	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
4-Methylphenol	140	J	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
N-Nitroso-di-n-propylamine	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Hexachloroethane	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Nitrobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Isophorone	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2-Nitrophenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2,4-Dimethylphenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2,4-Dichlorophenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
1,2,4-Trichlorobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Naphthalene	1300		1300	J	210	J	140	J	880	U	89	J	220	J	95	J
loroaniline	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Hexachlorobutadiene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
bis(2-Chloroethoxy)methane	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
4-Chloro-3-Methylphenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2-Methylnaphthalene	580	J	570	J	97	J	920	U	880	U	440	U	890	U	440	U
Hexachlorocyclopentadiene	900	UJ	1800	UJ	940	UJ	920	UJ	880	UJ	440	UJ	890	UJ	440	UJ
2,4,6-Trichlorophenol	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2,4,5-Trichlorophenol	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
2-Chloronaphthalene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
2-Nitroaniline	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
Dimethylphthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Acenaphthylene	1100		760	J	200	J	160	J	880	U	440	U	890	U	140	J
2,6-Dinitrotoluene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
3-Nitroaniline	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
Acenaphthene	1500		1300	J	130	J	160	J	880	U	54	J	150	J	190	J
2,4-Dinitrophenol	4500	UJ	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
4-Nitrophenol	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
Dibenzofuran	1200		1200	J	190	J	150	J	880	U	64	J	130	J	110	J
2,4-Dinitrotoluene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Diethylphthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
4-Chlorophenyl-phenylether	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Fluorene	2000		1800	J	420	J	340	J	880	U	110	J	240	J	280	J
4-Nitroaniline	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
4,6-Dinitro-2-methylphenol	4500	UJ	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U
N-Nitrosodiphenylamine	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
omophenyl-phenylether	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
achlorobenzene	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Pentachlorophenol	4500	U	9000	U	4700	U	4600	U	4400	U	2200	U	4400	U	2200	U

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	46100		046100D		55002		55020		55100		60002		60012		60020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	5800		6100		1800		2100		880	U	730		1500		1400	
Anthracene	2200		2100		400	J	470	J	880	U	180	J	410	J	290	J
Carbazole	620	J	630	J	940	U	920	U	880	U	440	U	120	J	54	J
Di-n-butylphthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Fluoranthene	8700	J	10000		2200		2800		97	J	1000	J	1900	J	1600	
Pyrene	7400	J	8400		1700		2100		880	U	800		1500		1300	
Butylbenzylphthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
3,3'-Dichlorobenzidine	1800	UJ	3600	U	1900	U	1800	U	1800	U	880	U	1800	U	880	U
Benzo(a)anthracene	6300		6300		840	J	1100		880	U	450		900		700	
Chrysene	6100		6300		910	J	1100		880	U	490		1000		700	
bis(2-Ethylhexyl)phthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Di-n-octylphthalate	900	U	1800	U	940	U	920	U	880	U	440	U	890	U	440	U
Benzo(b)fluoranthene	3400		3800		540	J	700	J	880	U	260	J	550	J	400	J
Benzo(k)fluoranthene	2300		2600		440	J	680	J	880	U	260	J	400	J	360	J
Benzo(a)pyrene	3400		3700		540	J	740	J	880	U	280	J	510	J	440	
Indeno(1,2,3-cd)pyrene	1700		1900		240	J	330	J	880	U	140	J	210	J	220	J
Dibenz(a,h)anthracene	220	J	200	J	940	U	920	U	880	U	440	U	890	U	440	U
Benzo(g,h,i)perylene	1800		1900		230	J	320	J	880	U	140	J	190	J	210	J

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	60100		70010		70020		70100		80010		080010D		80020		080020D	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
bis(2-Chloroethyl)Ether	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2-Chlorophenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
1,3-Dichlorobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
1,4-Dichlorobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
1,2-Dichlorobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2-Methylphenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2,2'-oxybis(1-Chloropropane)	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
4-Methylphenol	400	U	920	U	2500	U	74	J	890	U	4400	U	900	U	1800	U
N-Nitroso-di-n-propylamine	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Hexachloroethane	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Nitrobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Isophorone	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2-Nitrophenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2,4-Dimethylphenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2,4-Dichlorophenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
1,2,4-Trichlorobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Naphthalene	400	U	100	J	450	J	58	J	750	J	830	J	770	J	800	J
4-Chloroaniline	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Hexachlorobutadiene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
bis(2-Chloroethoxy)methane	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
4-Chloro-3-Methylphenol	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2-Methylnaphthalene	400	U	920	U	2500	U	440	U	230	J	4400	U	180	J	200	J
Hexachlorocyclopentadiene	400	UJ	920	UJ	2500	UJ	440	UJ	890	UJ	4400	UJ	900	UJ	1800	UJ
2,4,6-Trichlorophenol	400	U	920	U	2500	U	440	U	890	UJ	4400	U	900	UJ	1800	U
2,4,5-Trichlorophenol	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
2-Chloronaphthalene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
2-Nitroaniline	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
Dimethylphthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Acenaphthylene	400	U	920	U	2500	U	440	U	1600		1400	J	1200		1000	J
2,6-Dinitrotoluene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
3-Nitroaniline	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
Acenaphthene	400	U	920	U	2500	U	45	J	860	J	920	J	900	J	900	J
2,4-Dinitrophenol	2000	U	4600	U	12000	U	2200	U	4400	UJ	22000	U	4500	UJ	9000	U
4-Nitrophenol	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
Dibenzofuran	400	U	920	U	2500	U	440	U	1300		1400	J	1100		1100	J
2,4-Dinitrotoluene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Diethylphthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
4-Chlorophenyl-phenylether	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Fluorene	400	U	920	U	360	J	74	J	2800		3200	J	2300		2300	
4-Nitroaniline	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
4,6-Dinitro-2-methylphenol	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U
N-Nitrosodiphenylamine	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
4-Bromophenyl-phenylether	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Hexachlorobenzene	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Pentachlorophenol	2000	U	4600	U	12000	U	2200	U	4400	U	22000	U	4500	U	9000	U

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	60100		70010		70020		70100		80010		080010D		80020		080020D	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	400	U	530	J	1400	J	400	J	9000	J	14000		7200		8500	
Anthracene	400	U	100	J	400	J	90	J	2700		2700	J	2100		1900	
Carbazole	400	U	920	U	2500	U	440	U	280	J	4400	U	220	J	200	J
Di-n-butylphthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Fluoranthene	400	U	780	J	2300	J	480		12000	J	17000		9300	J	10000	
Pyrene	400	U	580	J	1700	J	340	J	8900	J	12000		6500		7400	
Butylbenzylphthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
3,3'-Dichlorobenzidine	790	U	1800	U	4900	U	880	U	1800	U	8900	U	1800	U	3600	U
Benzo(a)anthracene	400	U	310	J	970	J	180	J	5000		5800		3700		3800	
Chrysene	400	U	340	J	1000	J	180	J	5000		5800		3600		3600	
bis(2-Ethylhexyl)phthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Di-n-octylphthalate	400	U	920	U	2500	U	440	U	890	U	4400	U	900	U	1800	U
Benzo(b)fluoranthene	400	U	200	J	610	J	130	J	3200		3900	J	2400		2500	
Benzo(k)fluoranthene	400	U	220	J	580	J	92	J	1800		2500	J	1600		1600	J
Benzo(a)pyrene	400	U	200	J	650	J	120	J	3300		4100	J	2600		2700	
Indeno(1,2,3-cd)pyrene	400	U	130	J	340	J	67	J	1700		2200	J	1400		1500	J
Dibenz(a,h)anthracene	400	U	920	U	2500	U	440	U	160	J	4400	U	110	J	1800	U
Benzo(g,h,i)perylene	400	U	130	J	380	J	72	J	1800		2600	J	1400		1700	J

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	FB001		FB002		FB003	
Matrix	Water		Water		Water	
Units	ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	10	U	10	U	10	U
bis(2-Chloroethyl)Ether	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U
[illegible]oroaniline	10	U	10	U	10	U
[illegible]achlorobutadiene	10	U	10	U	10	U
bis(2-Chloroethoxy)methane	10	U	10	U	10	U
4-Chloro-3-Methylphenol	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	UJ	10	UJ	10	UJ
2,4,6-Trichlorophenol	10	U	10	U	10	U
2,4,5-Trichlorophenol	50	U	50	U	50	U
2-Chloronaphthalene	10	U	10	U	10	U
2-Nitroaniline	50	U	50	U	50	U
Dimethylphthalate	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U
3-Nitroaniline	50	U	50	U	50	U
Acenaphthene	10	U	10	U	10	U
2,4-Dinitrophenol	50	UJ	50	UJ	50	UJ
4-Nitrophenol	50	U	50	U	50	U
Dibenzofuran	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U
4-Nitroaniline	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol	50	UJ	50	UJ	50	UJ
N-Nitrosodiphenylamine	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U
[illegible]hlorobenzene	10	U	10	U	10	U
Pentachlorophenol	50	U	50	U	50	U

Cherry Farm
Semivolatile Data Tables

SDG: CF2

Sample ID	FB001		FB002		FB003	
Matrix	Water		Water		Water	
Units	ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenanthrene	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U
Di-n-butylphthalate	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U
3,3'-Dichlorobenzidine	20	UJ	20	UJ	20	UJ
Benzo(a)anthracene	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	1	J	6	J
Di-n-octylphthalate	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U
Dibenz(a,h)anthracene	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U

Cherry Farm
TCLP Semivolatile Data Tables

SDG: CF3

Sample ID	WAMW5D		WAMW5DD		WAMW5S		WAMW5SD		WAMW8S		WAMW8SD	
Matrix	Oil (TCLP)		Oil (TCLP)		Oil (TCLP)		Oil (TCLP)		Oil (TCLP)		Oil (TCLP)	
Units	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
2-Methylphenol	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
3+4-Methylphenol	460	UJ	4600	UJ	450	UJ	4500	UJ	440	UJ	4400	UJ
2,4-Dinitrotoluene	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
Hexachlorobenzene	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
Hexachlorobutadiene	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
Hexachloroethane	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
Nitrobenzene	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
Pentachlorophenol	920	UJ	9200	UJ	910	UJ	9100	UJ	870	UJ	8700	UJ
Pyridine	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
2,4,5-Trichlorophenol	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
2,4,6-Trichlorophenol	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ
1,4-Dichlorobenzene	230	UJ	2300	UJ	230	UJ	2300	UJ	220	UJ	2200	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF4

Sample ID	CFMW7D		CFMW7DRE		CFMW17D		CFMW17DR		CFMW5S		CFMW5SRE		RRMW5I		RRMW5IRE	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	R
bis(2-Chloroethyl)Ether	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
2-Chlorophenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	U	2	R
1,3-Dichlorobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
1,4-Dichlorobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
1,2-Dichlorobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
2,2'-oxybis(1-Chloropropane)	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
N-Nitroso-di-n-propylamine	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Hexachloroethane	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Nitrobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Isophorone	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
2-Nitrophenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	U	2	R
2,4-Dimethylphenol	2	U	2	UJ	2	U	2	UJ	2	U	2	UJ	2	U	5	R
2,4-Dichlorophenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	U	2	R
1,2,4-Trichlorobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Naphthalene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Hexachlorobutadiene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
bis(2-Chloroethoxy)methane	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
4-Chloro-3-Methylphenol	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2	R
Hexachlorocyclopentadiene	1	R	1	R	1	UJ	1	R	1	UJ	1	R	1	U	2	R
2,4,6-Trichlorophenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	U	2	R
2-Chloronaphthalene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Dimethylphthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Acenaphthylene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
2,6-Dinitrotoluene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Acenaphthene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
2,4-Dinitrophenol	1	UJ	1	UJ	1	R	1	UJ	1	R	1	UJ	1	UJ	2	R
4-Nitrophenol	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	2	R
2,4-Dinitrotoluene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Diethylphthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
4-Chlorophenyl-phenylether	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Fluorene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
4,6-Dinitro-2-methylphenol	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	U	2	R
N-Nitrosodiphenylamine	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
4-Bromophenyl-phenylether	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Hexachlorobenzene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Pentachlorophenol	1	R	1	UJ	1	R	1	UJ	1	R	1	UJ	1	R	2	R
Phenanthrene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Anthracene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Di-n-butylphthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Fluoranthene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Pyrene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Butylbenzylphthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
3,3'-Dichlorobenzidine	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzo(a)anthracene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Chrysene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF4

Sample ID	CFMW7D		CFMW7DRE		CFMW17D		CFMW17DR		CFMW5S		CFMW5SRE		RRMW5I		RRMW5IRE	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
bis(2-Ethylhexyl)phthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Di-n-octylphthalate	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzo(b)fluoranthene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzo(k)fluoranthene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzo(a)pyrene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Indeno(1,2,3-cd)pyrene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Dibenz(a,h)anthracene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzo(g,h,i)perylene	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
N-Nitrosodimethylamine	1	U	1	UJ	1	U	1	UJ	1	U	1	UJ	1	UJ	2	UJ
Benzidine	100	U	100	UJ	100	R	100	UJ	100	R	100	UJ	100	UJ	250	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF4

Sample ID	RRMW8S		WB-001		WB-001RE	
Matrix	Water		Water		Water	
Units	ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Phenol	50	U	1	U	1	UJ
bis(2-Chloroethyl)Ether	50	U	1	UJ	1	UJ
2-Chlorophenol	50	U	1	U	1	UJ
1,3-Dichlorobenzene	50	U	1	UJ	1	UJ
1,4-Dichlorobenzene	50	U	1	UJ	1	UJ
1,2-Dichlorobenzene	50	U	1	UJ	1	UJ
2,2'-oxybis(1-Chloropropane)	50	U	1	UJ	1	UJ
N-Nitroso-di-n-propylamine	50	U	1	UJ	1	UJ
Hexachloroethane	50	U	1	UJ	1	UJ
Nitrobenzene	50	U	1	UJ	1	UJ
Isophorone	50	U	1	UJ	1	UJ
2-Nitrophenol	50	U	1	U	1	UJ
2,4-Dimethylphenol	100	U	2	U	2	UJ
2,4-Dichlorophenol	50	U	1	U	1	UJ
1,2,4-Trichlorobenzene	50	U	1	UJ	1	UJ
Naphthalene	70		1	UJ	1	UJ
Hexachlorobutadiene	50	U	1	UJ	1	UJ
bis(2-Chloroethoxy)methane	50	U	1	UJ	1	UJ
4-Chloro-3-Methylphenol	50	UJ	1	UJ	1	UJ
Hexachlorocyclopentadiene	50	R	1	R	1	R
2,4,6-Trichlorophenol	50	U	1	U	1	UJ
2-Chloronaphthalene	50	U	1	UJ	1	UJ
Dimethylphthalate	50	U	1	UJ	1	UJ
Acenaphthylene	50	U	1	UJ	1	UJ
2,6-Dinitrotoluene	50	U	1	UJ	1	UJ
Acenaphthene	56		1	UJ	1	UJ
2,4-Dinitrophenol	50	UJ	1	UJ	1	UJ
4-Nitrophenol	50	UJ	1	UJ	1	UJ
2,4-Dinitrotoluene	50	U	1	UJ	1	UJ
Diethylphthalate	50	U	1	UJ	1	UJ
4-Chlorophenyl-phenylether	50	U	1	UJ	1	UJ
Fluorene	63		1	UJ	1	UJ
4,6-Dinitro-2-methylphenol	50	U	1	U	1	UJ
N-Nitrosodiphenylamine	50	U	1	UJ	1	UJ
4-Bromophenyl-phenylether	50	U	1	UJ	1	UJ
Hexachlorobenzene	50	U	1	UJ	1	UJ
Pentachlorophenol	50	R	1	R	1	UJ
Phenanthrene	250		1	UJ	1	UJ
Anthracene	50	U	1	UJ	1	UJ
Di-n-butylphthalate	50	U	1	UJ	1	UJ
Fluoranthene	280		1	UJ	1	UJ
Pyrene	150		1	UJ	1	UJ
Butylbenzylphthalate	50	U	1	UJ	1	UJ
3,3'-Dichlorobenzidine	50	U	1	UJ	1	UJ
Benzo(a)anthracene	53		1	UJ	1	UJ
Chrysene	65		1	UJ	1	UJ

Cherry Farm
Semivolatile Data Tables

SDG: CF4

Sample ID	RRMW8S		WB-001		WB-001RE	
Matrix	Water		Water		Water	
Units	ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
bis(2-Ethylhexyl)phthalate	110		1	UJ	1	UJ
Di-n-octylphthalate	50	U	1	UJ	1	UJ
Benzo(b)fluoranthene	50	U	1	UJ	1	UJ
Benzo(k)fluoranthene	50	U	1	UJ	1	UJ
Benzo(a)pyrene	50	U	1	UJ	1	UJ
Indeno(1,2,3-cd)pyrene	50	U	1	UJ	1	UJ
Dibenz(a,h)anthracene	50	U	1	UJ	1	UJ
Benzo(g,h,i)perylene	50	U	1	UJ	1	UJ
N-Nitrosodimethylamine	50	U	1	UJ	1	UJ
Benzidine	5000	U	100	UJ	100	UJ

Cherry Farm
Metal Data Tables

SDG: CF1

Sample ID	37020		37021		37100		40010		40020		40100		43010		43020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	6230		5290		5980		8980		4850		5090		7150		4410	
Antimony	19	J	12.1	J	27.4	J	11.9	J	11.3	J	11.5	UJ	8.4	UJ	9.4	UJ
Arsenic	18.7		15.8		13.4		6	J	11.6		21.2		7.2		7.2	
Barium	97.8		102		68.6		163		54.3		64.4		141		42.3	J
Beryllium	0.86	J	0.83	J	1.1	J	1.4		0.78	J	0.3	UJ	1.1	J	0.7	J
Cadmium	2.1		2.8		3.7		2.6		2.4		2.7		0.52	J	3.1	
Calcium	22100		40700		24500		130000		30700		45400		122000		26600	
Chromium	42.4		36.3		134		717		85.3		43.8		593		48.7	
Cobalt	13.9		11.8	J	19.2		12.1		9.5	J	12.2	J	7.8	J	12.8	
Copper	41.9		40.6		88.7		45.6		54.3		57.5		63		60.1	
Iron	118000		105000		152000		117000		76300		90900		67500		86700	
Lead	109	J	113	J	249	J	86.7	J	102	J	109	J	131	J	114	J
Magnesium	4840		4640		5680		23500		5040		4300		27100		5030	
Manganese	2590		2410		4810		25200		2670		1550		18100		1480	
Mercury	0.4		0.55		0.3		0.12	U	0.13	U	0.38		0.12	U	0.13	U
Nickel	29		23.7		37.2		13.7		19.3		23.3		19.1		24.9	
Potassium	672	J	345	J	444	J	644	J	345	J	618	J	550	J	530	J
Selenium	1.2	U	1.3	U	1.4	U	1	U	1.2	U	1.4	U	1.1	UJ	1.3	U
Silver	1.5	UJ	1.5	UJ	1.7	UJ	1.2	UJ	1.4	UJ	1.8	UJ	1.3	UJ	1.5	UJ
Sodium	95.2	U	220	U	189	U	241	U	152	U	400	U	240	U	143	U
Thallium	1.4	U	1.3	U	1.3	U	1.1	U	1.1	U	1.5	U	1.1	UJ	1.2	U
Vanadium	50.3		43.9		74.2		190		49.1		39.6		158		44.4	
Zinc	311	J	316	J	399	J	164	J	291	J	334	J	136	J	333	J
Cyanide	0.63	UJ	0.76	UJ	0.69	UJ	0.5	UJ	0.67	UJ	0.76	UJ	0.43	UJ	0.72	UJ

Cherry Farm
Metal Data Tables

SDG: CF1

Sample ID	43100		50002		50020		50100		80100		90010		90011		90020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	3800		6600		4540		2340		4220		5370		5460		15700	
Antimony	10.6	J	9.7	UJ	9.7	UJ	8.1	UJ	9.9	UJ	10.2	UJ	9.7	UJ	16.4	UJ
Arsenic	20.7	J	12.2		6.7		4.2		5.3	J	5.7		4.3		8.4	
Barium	65.6		143		43.7	J	21.3	J	37.6	J	26.9	J	28.4	J	46.5	J
Beryllium	0.8	J	1	J	0.26	UJ	0.21	UJ	0.26	UJ	0.27	UJ	0.25	UJ	0.43	UJ
Cadmium	5.3		2.3	J	0.56	J	0.51	J	0.52	UJ	0.53	UJ	2	J	1.4	J
Calcium	19700		40500		15200		44900		8970		10400		16000		12700	
Chromium	61.1		64.5		16.6		6.9		14.1		13.7		16.8		27.6	
Cobalt	20.2		30.2		4.5	J	2.7	J	5.3	J	4.7	J	5.4	J	4.9	J
Copper	47		257		34.5		7.9		22.2		20.2		23.6		32.1	
Iron	187000		86000		18600		8220		11000		10600		13000		15900	
Lead	94.7	J	70.7	J	28.4	J	8.7	J	22.6	J	11.2	J	18.2	J	16.4	J
Magnesium	6980		5410		5280		5900		3610		4570		5140		5750	
Manganese	2890		46300		864		369		157		227		291		370	
Mercury	0.18		0.15	U	0.14	U	0.13	U	0.14	U	0.31		0.35		0.37	
Nickel	36.8		57.7		14.5		12.9		16.5		13.8		17.6		17.7	
Potassium	416	J	739	J	777	J	401	J	690	J	534	J	681	J	1060	J
Selenium	1.1	U	1.2	U	1.3	U	1.2	U	1.4	U	1.3	U	1.3	U	2	UJ
Silver	1.3	UJ	1.5	UJ	1.5	UJ	1.3	UJ	1.6	UJ	1.6	UJ	1.5	UJ	2.6	UJ
Sodium	110	U	302	U	148	U	220	U	95	U	114	U	98.8	U	212	U
Thallium	1.3	U	1.5	U	1.2	U	1.1	U	1.2	U	1.3	U	1.4	U	2	U
Vanadium	67.8		33.7		16.3		11.6		14.1		13	J	16.6		22.8	
Zinc	312	J	84.2	J	100	J	46.5	J	132	J	84.3	J	120	J	123	J
Cyanide	0.59	UJ	0.71	UJ	0.69	UJ	0.6	UJ	0.61	UJ	0.7	UJ	0.67	UJ	1.1	UJ

Cherry Farm
Metal Data Tables

SDG: CF1

Sample ID	90100		100010		100020		100100	
Matrix	Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	12200		18400		7100		5330	
Antimony	17.9	UJ	16.9	UJ	13	UJ	17.6	J
Arsenic	9.6		16.1		6.4		7.5	
Barium	79.5	J	166		91.5		71.4	
Beryllium	0.47	UJ	1.8	J	0.34	UJ	0.28	UJ
Cadmium	3.3	J	0.89	UJ	1.5	J	0.57	UJ
Calcium	19200		37400		26800		62500	
Chromium	38.5		54.3		23.9		15.3	
Cobalt	11.8	J	11.7	J	8.2	J	4.6	J
Copper	81.4		61.9		45.6		17.5	
Iron	25400		36800		20500		14600	
Lead	73.8	J	75	J	34.1	J	23.3	J
Magnesium	8430		6850		6410		3780	
Manganese	578		350		317		225	
Mercury	0.38		0.47		0.25		0.17	U
Nickel	34.8		27.9		16.2		12.5	
Potassium	1430	J	1840	J	975	J	496	J
Selenium	2.4	UJ	2.2	U	1.7	U	1.6	U
Silver	3.8	J	2.7	UJ	2.1	UJ	1.7	UJ
Sodium	165	U	710	U	235	U	496	U
Thallium	2.4	U	1.9	U	1.7	U	1.6	U
Vanadium	24.7		44.5		22.4		14.6	
Zinc	238	J	189	J	138	J	74	J
Cyanide	1.3	UJ	1	UJ	0.91	UJ	0.73	UJ

Cherry Farm
Metal Data Tables

SDG: CF2

Sample ID	FB001		FB002		FB003		26010		26020		26100		37010		45010	
Matrix	Water		Water		Water		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/L		ug/L		ug/L		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	24	U	24	U	24	U	4120		4780		4320		7420		5430	
Antimony	38	U	38	U	38	U	10	UJ	12	J	12.3	J	16.4	J	11.8	J
Arsenic	5	U	5	U	5	U	10.9		14		9.4		9.1		9.2	
Barium	8	U	8	U	8	U	58.6		73.6		42.3	J	85.7		167	
Beryllium	1	U	1	U	1	U	0.26	U	0.85	J	0.24	U	0.94	J	0.8	J
Cadmium	2	U	2	U	2	U	2.4	J	3.8	J	3.4	J	2.7	J	3.1	J
Calcium	649	U	649	U	649	U	19900	J	17100	J	14600	J	36200	J	174000	J
Chromium	5	U	5	U	5	U	55.4	J	51.3	J	28.4	J	72	J	535	J
Cobalt	7	U	7	U	7	U	11.5	J	15.3		10.2	J	10.8	J	6.5	J
Copper	4	U	4	U	4	U	39.4	J	44.7	J	29.3	J	27.3	J	20.9	J
Iron	13	U	13	U	13	U	82400	J	126000	J	65400	J	54400	J	52800	J
Lead	3	U	3	U	3	U	73.1		103		60.7		71.3		73.3	
Magnesium	431	U	431	U	431	U	3780		3610		4900		5290		15900	
Manganese	1	U	1	U	7.3	J	1430		1640		889		2090		17400	
Mercury	0.2	UJ	0.2	UJ	0.2	UJ	0.2	J	0.15	J	0.19	J	0.17	J	0.44	J
Nickel	27	U	27	U	27	U	23.6		32.8		25.8		29.5		14.8	
Potassium	661	U	661	U	661	U	600	J	475	J	583	J	1120	J	758	J
Selenium	5	U	5	U	5	U	1.1	UJ	1.2	U	1.3	U	1.5	UJ	1.3	U
Silver	6	U	6	U	6	U	1.6	UJ	1.6	UJ	1.4	UJ	1.7	UJ	1.4	UJ
Sodium	1640	U	365	U	359	U	107	U	177	U	83.9	U	210	U	420	U
Thallium	5	U	5	U	5	U	1.1	U	1.2	U	1.3	U	1.5	U	1.3	UJ
Vanadium	15	U	15	U	15	U	37.5		52.3		31		34.8		167	
Zinc	5	U	5	U	5	U	279	J	470	J	246	J	208	J	118	J
Cyanide	10	U	10	U	10	U	0.63	R	0.63	R	0.54	R	0.68	R	0.56	R

Cherry Farm
Metal Data Tables

SDG: CF2

Sample ID	45020		46100		55002		55020		55100		60002		60012		60020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	3960		3160		4100		3650		3100		2630		2660		2580	
Antimony	15	J	8.8	UJ	9.6	UJ	9.3	UJ	9	UJ	9.9	UJ	8	UJ	9.2	UJ
Arsenic	13		3.6		4.8		4.7		4.5		4.4		4		3	
Barium	72.3		24.1	J	30	J	32.7	J	24.1	J	27.5	J	32.5	J	20.1	J
Beryllium	0.83	J	0.25	J	0.27	J	0.26	J	0.25	J	0.28	J	0.23	J	0.26	J
Cadmium	4.4	J	0.81	J	0.51	UJ	0.49	UJ	0.47	UJ	0.72	J	0.6	J	0.48	UJ
Calcium	35500	J	29100	J	16100	J	16000	J	24000	J	13200	J	21200	J	16800	J
Chromium	73.6	J	8	J	42.3	J	14	J	9.5	J	15.1	J	12.8	J	14.2	J
Cobalt	13.4		2.6	J	4.1	J	4	J	4.1	J	3.6	J	2.9	J	3	J
Copper	43.8	J	5	J	21.5	J	22.6	J	5.1	J	12.5	J	14.4	J	3.8	J
Iron	119000	J	9000	J	13000	J	11800	J	10300	J	17600	J	11800	J	8140	J
Lead	81		10.4		22		21.8		10.6		44.3		53.5		12.9	
Magnesium	3500		4530		5390		5090		6250		3870		3560		4220	
Manganese	2990		260		287		333		285		321		252		222	
Mercury	0.12	J	0.14	UJ	0.14	UJ	0.14	UJ	0.13	UJ	0.13	UJ	0.13	UJ	0.13	UJ
Nickel	21.1		11.6		26.9		11.5		9.4		10	J	10.2	J	8.1	J
Potassium	264	J	554	J	586	J	539	J	458	J	198	J	409	J	403	J
Selenium	1	U	1.2	U	1.2	U	1.3	UJ	1.1	U	1.3	UJ	1.2	U	1.3	U
Silver	1.2	UJ	2.8	J	1.5	UJ	1.5	UJ	1.4	UJ	1.6	UJ	1.3	UJ	1.4	UJ
Sodium	164	U	223	U	88.4	U	86.6	U	143	U	91	U	132	U	140	U
Thallium	1	U	1.2	U	1.2	U	1.3	U	1.1	UJ	1.3	U	1.2	U	1.3	U
Vanadium	51.5		10.3	J	12.2	J	11.4	J	10.5	J	10.4	J	9.3	J	8.1	J
Zinc	366	J	52.8	J	97.2	J	88.8	J	50.5	J	74.4	J	75	J	52	J
Cyanide	0.54	R	0.59	R	0.7	R	0.59	R	0.65	R	0.66	R	0.61	R	0.65	R

Cherry Farm
Metal Data Tables

SDG: CF2

Sample ID	60100		70010		70020		70100		80010		80020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aluminum	3710		6600		5750		3630		3140		3250	
Antimony	7.3	UJ	8.6	UJ	12.7	UJ	9.8	UJ	9.9	UJ	9.5	UJ
Arsenic	6.6		7		5.6		3.1		5.3		5	
Barium	25.6	J	135		44.6	J	24	J	22.4	J	21.7	J
Beryllium	0.2	J	0.95	J	0.35	J	0.28	J	0.27	J	0.26	J
Cadmium	0.38	UJ	3.3	J	0.67	UJ	0.57	J	0.52	UJ	0.5	UJ
Calcium	14200	J	33500	J	15600	J	40200	J	4700	J	4270	J
Chromium	7.7	J	239	J	24.6	J	6.9	J	13.1	J	12.9	J
Cobalt	3.4	J	7.3	J	8.8	J	4.5	J	3.9	J	5.3	J
Copper	3.2	J	49.9	J	45.2	J	8.7	J	5.7	J	6.3	J
Iron	9540	J	42400	J	17000	J	12700	J	18700	J	15900	J
Lead	16.5		156		71		7.5		12.8		14.2	
Magnesium	3750		13200		5270		8380		2320		2170	
Manganese	199		6070		452		230		247		232	
Mercury	0.12	UJ	0.23	J	0.21	J	0.13	UJ	0.13	UJ	0.14	UJ
Nickel	8.9		23.9		21.2		20.6		11.9		15.4	
Potassium	436	J	654	J	1050	J	384	J	249	J	426	J
Selenium	0.97	U	1.3	UJ	1.7	U	1.2	U	1.3	UJ	1.3	UJ
Silver	1.1	UJ	1.4	UJ	2	UJ	1.6	UJ	1.6	UJ	4.2	J
Sodium	116	U	168	U	138	U	152	U	92.8	U	116	U
Thallium	0.97	U	1.3	U	1.7	U	1.2	U	1.3	U	1.3	U
Vanadium	9.6		52.9		17.8		10.1	J	18.4		16.9	
Zinc	47	J	213	J	162	J	67.3	J	111	J	99.8	J
Cyanide	0.44	R	0.7	R	0.73	R	0.7	R	0.61	R	0.65	R

Cherry Farm
TCLP Metal Data Tables

SDG: CF3

Sample ID	WAMW5D		WAMW5S		WAMW8S	
Matrix	Oil (TCLP)		Oil (TCLP)		Oil (TCLP)	
Units	ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Arsenic	4510	U	4600	U	4600	U
Barium	1460	J	1480	J	1480	J
Cadmium	196	UJ	200	UJ	200	UJ
Chromium	3760		3660		1020	
Lead	2940	U	3000	U	7360	
Mercury	100	U	100	U	627	
Selenium	490	UJ	500	U	500	U
Silver	588	R	600	R	1330	J

Cherry Farm
Metal Data Tables

SDG: CF4

Sample ID	CFMW7D		FMW17D		FMW5S		RRMW5I		RRMW8S		WB-001	
Matrix	Water		Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Antimony	38	UJ	38	UJ	38	UJ	45.7	J	38	UJ	38	UJ
Arsenic	5	U	5	U	5	U	5	U	7.2	J	5	U
Beryllium	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	2	U	2	U	2	U	2	U	2	U	2	U
Chromium	5	U	5	U	14.4		5	U	5.3	J	5	U
Copper	4	U	4	U	4	U	4	U	4	U	4	U
Iron	32500		32500		341		129000		5350		13	U
Lead	3	U	3	U	4.2		3	U	56.3		3	U
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel	27	U	27	U	31.8	J	27	U	27	U	27	U
Selenium	5	UJ	5	UJ	5	U	50	UJ	50	UJ	5	UJ
Silver	6	UJ	6	UJ	6	UJ	6	UJ	6	UJ	6	UJ
Thallium	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Zinc	5	U	5	U	5	U	5	U	36	U	5	U
Cyanide	50		50		10	U	25		254		10	U

Cherry Farm
Polychlorinated Biphenyls Data Tables

SDG: CF1

Sample ID	43100		43020		43010		50100		50020		50002		40100		40020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	110	UJ	110	U	95	UJ	100	UJ	110	UJ	120	UJ	120	UJ	100	UJ
Aroclor-1221	110	UJ	110	U	95	UJ	100	UJ	110	UJ	120	UJ	120	UJ	100	UJ
Aroclor-1232	110	UJ	110	U	95	UJ	100	UJ	110	UJ	120	UJ	120	UJ	100	UJ
Aroclor-1242	110	UJ	110	U	95	UJ	100	UJ	110	UJ	120	UJ	120	UJ	100	UJ
Aroclor-1248	90	J	240	J	95	UJ	470	J	440	J	300	J	320	J	120	J
Aroclor-1254	110	UJ	110	U	95	UJ	100	UJ	110	UJ	120	UJ	120	UJ	100	UJ
Aroclor-1260	110	UJ	140		95	UJ	100	UJ	2300	J	120	UJ	120	UJ	340	J

Sample ID	40010		37100		37020		37021		100100		100020		100010		90100	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	100	UJ	120	U	120	U	120	U	130	U	150	U	180	U	200	U
Aroclor-1221	100	UJ	120	U	120	U	120	U	130	U	150	U	180	U	200	U
Aroclor-1232	100	UJ	120	U	120	U	120	U	130	U	150	U	180	U	200	U
Aroclor-1242	100	UJ	120	U	120	U	120	U	130	U	150	U	180	U	200	U
Aroclor-1248	100	UJ	200	J	130	J	90	J	2000	J	600	J	360	J	850	J
Aroclor-1254	100	UJ	120	U	120	U	120	U	130	U	150	U	180	U	200	U
Aroclor-1260	100	UJ	120	U	120	U	62	J	200		150	U	260		210	

Sample ID	90020		90010		80100		90011	
Matrix	Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	180	U	110	U	570	U	120	U
Aroclor-1221	180	U	110	U	570	U	120	U
Aroclor-1232	180	U	110	U	570	U	120	U
Aroclor-1242	180	U	110	U	570	U	120	U
Aroclor-1248	260	J	170	J	1200	J	270	J
Aroclor-1254	180	U	110	U	570	U	120	U
Aroclor-1260	180	U	110	U	570	U	120	U

Cherry Farm
Polychlorinated Biphenyls Data Tables

SDG: CF2

Sample ID	80020		80010		70100		70020		70010		60100		60020		60002	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	110	UJ	110	U	110	UJ	150	U	110	U	100	U	110	UJ	110	UJ
Aroclor-1221	110	UJ	110	U	110	UJ	150	U	110	U	100	U	110	UJ	110	UJ
Aroclor-1232	110	UJ	110	U	110	UJ	150	U	110	U	100	U	110	UJ	110	UJ
Aroclor-1242	110	UJ	110	U	110	UJ	150	U	110	U	100	U	110	UJ	110	UJ
Aroclor-1248	140	J	150	J	180	J	960	J	120	J	620	J	840	J	750	J
Aroclor-1254	110	UJ	110	U	110	UJ	150	U	110	U	100	U	110	UJ	110	UJ
Aroclor-1260	110	UJ	110	U	110	UJ	150	U	110	U	100	UJ	110	UJ	110	UJ

Sample ID	60012		55100		55020		55002		46100		46020		45010		37010	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	U	120	U
Aroclor-1221	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	U	120	U
Aroclor-1232	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	U	120	U
Aroclor-1242	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	U	120	U
Aroclor-1248	1100	J	400	J	1100	J	1100	J	710	J	210	J	50	J	340	J
Aroclor-1254	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	U	120	U
Aroclor-1260	110	U	110	UJ	110	UJ	110	U	110	U	90	UJ	110	UJ	120	U

Sample ID	26100		26020		26010		FB001		FB002		FB003	
Matrix	Sediment		Sediment		Sediment		Water		Water		Water	
Units	ug/Kg		ug/Kg		ug/Kg		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Aroclor-1016	110	U	110	U	110	U	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1221	110	U	110	U	110	U	0.5	U	0.5	U	0.5	U
Aroclor-1232	110	U	110	U	110	U	0.5	U	0.5	U	0.5	U
Aroclor-1242	110	U	110	U	110	U	0.5	U	0.5	U	0.5	U
Aroclor-1248	150	J	260	J	340	J	0.5	U	0.5	U	0.5	U
Aroclor-1254	110	U	110	U	110	U	0.5	U	0.5	U	0.5	U
Aroclor-1260	110	U	110	U	110	U	0.5	UJ	0.5	UJ	0.5	UJ

Cherry Farm

TCLP Herbicides and Pesticides Data Tables

SDG: CF3

Sample ID	WAMW5D		WAMW5S		WAMW8S	
Matrix	Oil (TCLP)		Oil (TCLP)		Oil (TCLP)	
Units	mg/L		mg/L		mg/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
TCLP Herbicides						
2,4-D	27	U	28	U	29	U
2,4,5-TP (Silvex)	2.7	U	2.8	U	2.9	U
TCLP Pesticides						
Chlordane	14	UJ	14	UJ	14	UJ
Endrin	2.9	J	2.8	J	3.8	J
Heptachlor & Heptachlor Epoxide	8.2	J	9.4	J	9.3	J
gamma-BHC(Lindane)	1.1	J	1.2	J	1.4	UJ
Methoxychlor	14	UJ	14	UJ	14	UJ
Toxaphene	140	UJ	140	UJ	140	UJ

Cherry Farm
Pesticides and PCBs Data Tables

SDG: CF4

Sample ID	WB-001		RRMW8S		RRMW5I		CFMW7D		CFMW17D		CFMW5S	
Matrix	Water		Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
alpha-BHC	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
beta-BHC	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
delta-BHC	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
gamma-BHC(Lindane)	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Heptachlor	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Aldrin	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Heptachlor Epoxide	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Endosulfan I	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Dieldrin	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
4,4'-DDE	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Endrin	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Endosulfan II	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
4,4'-DDD	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Endosulfan Sulfate	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
4,4'-DDT	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Methoxychlor	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Endrin Ketone	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Endrin Aldehyde	0.1	UJ	65	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
alpha-Chlordane	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
gamma-Chlordane	0.05	UJ	33	U	0.05	UJ	0.05	UJ	0.05	UJ	0.05	UJ
Toxaphene	1	UJ	650	U	1	UJ	1	UJ	1	UJ	1	UJ
Aroclor-1016	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1221	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1232	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1242	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1248	0.5	UJ	2800		0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1254	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Aroclor-1260	0.5	UJ	330	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ

Cherry Farm
Wet Chemistry Data Tables

SDG: CF1

Sample ID	43100		43020		43010		50100		50020		50002		40100		40020	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	34858		55345		40210		9558		64355		61046		76222		46883	

Sample ID	40010		37100		37020		37021		100100		100020		100010		90100	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	45177		38127		59264		49817		12472		84238		91433		123933	

Sample ID	90020		90010		80100		90011	
Matrix	Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	83359		35509		43214		34571	

Cherry Farm
Wet Chemistry Data Tables

SDG: CF2

Sample ID	80020		80010		70100		70020		70010		60100		60020		60002	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	4472	J	7188	J	6838	J	48296	J	26517	J	15552	J	7719	J	12520	J

Sample ID	60012		55100		55020		55002		46100		45020		45010		37010	
Matrix	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	23540	J	16349	J	29283	J	23070	J	11819	J	22597	J	20207	J	23167	J

Sample ID	26100		26020		26010		FB001		FB002		FB003	
Matrix	Sediment		Sediment		Sediment		Water		Water		Water	
Units	mg/Kg		mg/Kg		mg/Kg		mg/L		mg/L		mg/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon	35862	J	31580	J	41786	J	1.0	UJ	1.0	UJ	1.0	UJ

Cherry Farm
Wet Chemistry Data Tables

SDG: CF3

Sample ID	WAMW5D		WAMW5S		WAMW8S	
Matrix	Oil		Oil		Oil	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Corrosivity (inch/Yr)	0.01	U	0.01	U	0.01	U
Cyanide, Reactive (ppm)	1	U	1	U	1	U
Ignitability (Degrees F)	212	J	212	J	158	
Sulfide, Reactive (ppm)	1	U	1	U	1	U
pH	6	J	6	J	6	J

Cherry Farm
Wet Chemistry Data Tables

SDG: CF4

Sample ID	WB-001		RRMW8S		RRMW5I		CFMW7D		CFMW17D		CFMW5S	
Matrix	Water		Water		Water		Water		Water		Water	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Total Organic Carbon (mg/L)	3.2		113		27.4		25.7		27.5		14.8	
Acidity (mg/L)	1	U	1	U	1	U	1	U	1	U	1	U
Ammonia, Nitrogen (mg/L)	0.05	U	14.5		12.4		2.27		2.18		1.13	
Biochemical Oxygen Demand (mg	5	J	133	J	3	UJ	5	U	5	U	3	UJ
Chemical Oxygen Demand (mg/L)	10		4960		76		65		44	U	52	
Chloride (for TOC check) (mg/L)	1	U	36		104		49		50		6	
Hardness (mg/L)	1	U	1020		1090		794		842		136	
Oil & Grease (mg/L)	6		2660		10	U	5	U	4	U	11	U
Phenols (mg/L)	0.01	U	4.76		0.01	U	0.01	U	0.01	U	0.01	U
Total Dissolved Solid (mg/L)	10	U	2020		1960		1170		1160		252	
Total Phosphate as P (mg/L)	0.1		0.7		0.32	U	0.41	U	0.39	U	0.18	U
Total Suspended Solids (mg/L)	1	U	188		132		112		130		29	
pH	5.49		10.03		6.4		7.24	J	7.22	J	10.6	

Cherry Farm
TCLP Volatiles Data Tables

SDG: CF3

Sample ID	TRPBLK		WAMW5D		WAMW5S		WAMW8S	
Matrix	Water		Oil(TCLP)		Oil(TCLP)		Oil(TCLP)	
Units	mg/L		mg/L		mg/L		mg/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Vinyl Chloride	0.01	U	2	UJ	2	UJ	2	UJ
1,1-Dichloroethene	0.01	UJ	2	UJ	2	UJ	2	UJ
Chloroform	0.01	U	2	UJ	2	UJ	2	UJ
1,2-Dichloroethane	0.01	U	2	UJ	2	UJ	2	UJ
2-Butanone	0.01	U	2	UJ	2	UJ	2	UJ
Carbon Tetrachloride	0.01	U	2	UJ	2	UJ	2	UJ
Trichloroethene	0.01	U	2	UJ	2	UJ	1.9	J
Benzene	0.01	U	0.41	J	0.35	J	0.63	J
Tetrachloroethene	0.01	U	2	UJ	2	UJ	8.2	J
Chlorobenzene	0.01	U	2	UJ	2	UJ	2	UJ

Cherry Farm
TCLP Volatiles Data Tables

SDG: CF4

Sample ID	CFMW17D		CFMW5S		CFMW7D		RRMW5I		RRMW8S		WB-001		XXTP1	
Matrix	Water		Water		Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Analyte	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Chloromethane	2	U	2	U	2	U	2	U	20	U	2	U	2	U
Bromomethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Vinyl Chloride	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Chloroethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Methylene Chloride	3	U	3	U	3	U	3	U	33		3	U	3	U
1,1-Dichloroethene	2	U	2	U	2	U	2	U	20	U	2	U	2	U
1,1-Dichloroethane	1	U	1	U	1	U	1	U	460		1	U	1	U
Chloroform	1	U	1	U	1	U	1	U	10	U	1	U	1	U
1,2-Dichloroethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
1,1,1-Trichloroethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Carbon Tetrachloride	2	U	2	U	2	U	2	U	20	U	2	U	2	U
Bromodichloromethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
1,2-Dichloropropane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
cis-1,3-Dichloropropene	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Trichloroethene	2	U	5		2	U	2	U	20	U	2	U	2	U
Dibromochloromethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
1,1,2-Trichloroethane	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Benzene	1	U	1	U	1	U	1	U	10	U	1	U	1	U
trans-1,3-Dichloropropene	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Bromoform	1	U	1	U	1	U	1	U	10	U	1	U	1	U
Tetrachloroethene	3	U	3	U	3	U	3	U	30	U	3	U	3	U
1,1,2,2-Tetrachloroethane	2	U	2	U	2	U	2	U	20	U	2	U	2	U
Toluene	2	U	2	U	2	U	2	U	530		2	U	2	U
Chlorobenzene	2	U	2	U	2	U	2	U	20	U	2	U	2	U
Ethylbenzene	2	U	2	U	2	U	2	U	110		2	U	2	U
Trichloromonofluoromethane	2	U	2	U	2	U	2	U	20	U	2	U	2	U
1,3-Dichlorobenzene	2	U	2	U	2	U	2	U	20	U	2	U	2	U
1,4-Dichlorobenzene	2	U	2	U	2	U	2	U	20	U	2	U	2	U
1,2-Dichlorobenzene	2	U	2	U	2	U	2	U	20	U	2	U	2	U
2-Chloroethylvinyl Ether	4	U	4	U	4	U	4	U	40	U	4	U	4	U
Trans, 1,2-Dichloroethene	1	U	1	U	1	U	1	U	10	U	1	U	1	U