INSTALLATION RESTORATION PROGRAM

FINAL
REMEDIAL INVESTIGATION REPORT

VOLUME IV: APPENDICES J - O

ALPENA COMBAT READINESS TRAINING CENTER
ALPENA COUNTY REGIONAL AIRPORT, MICHIGAN AIR NATIONAL GUARD
ALPENA, MICHIGAN

JUNE 1995



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HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Environmental Restoration and Waste Management Programs
Oak Ridge, Tennessee 37831-7606
managed by MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-84OR21400

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13. ABSTRACT *(Maximum 200 words)*

Remedial Investigation Report of Sites 1-9 at Alpens CRTC, Alpena MI. Volume IV Appendicies J-O. A remedial investigation was performed on 9 sites at the Alpena CRTC to determine the extent of contamination at the sites. The sites involved in this investigation include: Site 1 POL Storage Area; Site 2 Motor Pool Area; Site 3 Former Garage; Site 4 Third Fire Training Area; Site 5 Second Fire Training Area; Site 6 Former Landfill; Site 7 First Fire Training Area; Site 8 Former Hanger 9; Site 10 Hazardous Waste Storage Area. Soil and groundwater contamination above state action levels was found at the sites. An FS has been initiated.

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REMEDIAL INVESTIGATION REPORT
ALPENA COMBAT READINESS TRAINING CENTER
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Volume IV

Appendix

J PARCC QA/QC Analysis

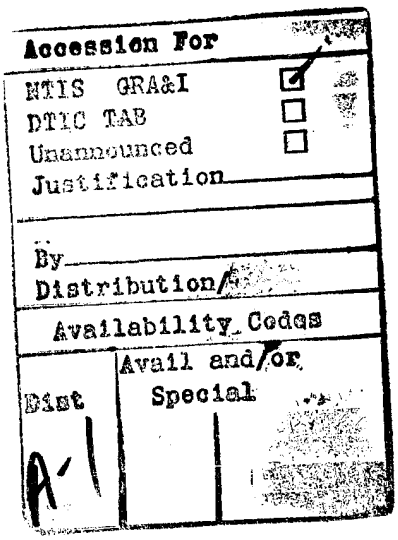
K Laboratory Data Validation

L Analytical Results; Site 5 Soils Data (Collected 1991 and 1993) and RI Laboratory Data

M Facility-wide Soil and Groundwater Background Determination Data

N Analytical Results; Round 3 Groundwater and Background Soil Sampling Fixed Base Laboratory Data Summary

O Analytical Results; SI Fixed Base Laboratory Data Summary



Appendix J: PARCC QA/QC Analysis

Appendix

APPENDIX J MENT

J.1 Introduction

A standardized QA/QC program was followed during the RI at the Alpena CRTC to ensure that analytical results accurately represent the environmental conditions at the sites. The RI was conducted using the HAZWRAP Level C (i.e., U.S. EPA Level III) QC requirements described in Requirements For Quality Control Of Analytical Data (DOE/HWP-65/R1, July 1990) and the guidelines and specifications described in the RI Work Plan.

The numbers of soil samples collected and selected laboratory QC (i.e., matrix spikes and duplicates) samples analyzed are summarized in Table J-1. The QC checks and results are summarized below.

J.1.1 Data Quality Objectives

Data Quality Objectives are qualitative and quantitative statements developed by data users to specify the quality of data obtained form field and laboratory data collection activities to support specific decisions or regulatory actions. DQOs also establish numeric limits for the data to allow the data user to determine if the data collected are of sufficient quality for use in their intended application. The data collected during the RI field effort will be used to develop a risk evaluation and recommendations for (1) developing and implementing an immediate response plan if required, (2) taking no further action and preparing a Decision Document, (3) initiating focused feasibility study and remedial measure, or (4) proceeding with the feasibility study. The following sections summarize the DQOs for PARCC obtained during the RI.

J.1.1.1 Precision

Precision refers to the level of agreement among repeated measurements of the same characteristic, under a given set of conditions. Precision is expressed quantitatively as the measure of the variability of a group of measurements compared to their average value. Precision was defined as the reproduciblity, or degree of agreement, among replicate measurements of the same quantity. For this project, the precision of the analytical and instrument measurement system was assessed through the collection and analysis of field duplicate samples and the performance of analytical replicates. The closer the numerical values of the measurements are to each other, the more precise the measurement. Analytical precision was expressed as the percentage of the difference between results of duplicate samples for a given compound or element. Relative percent difference (RPD) was calculated as:

$$RPD = \frac{Abs(C_1 - C_2)}{\frac{C_1 + C_2}{2}} X\ 100$$

Table J-1 Summary of Analytical Program
MIANG, Alpena CRTC, Alpena, Michigan

Sample Source	VOC SW5030/8010 & 8020[1]	SVOC CLP 3/90 (10/92)[2]	Priority Pollutant Metals SW-846	Hexavalent Chromium SW-846-7196 A	TPH 418.1
Soil	72	72	72	69	72
Sediment	37	37	37	9	37
Water	75	75	75	0	75
Total	184	184	184	78	184
Field Duplicates	9_{soil}	9	9	9	9
	5_{Sed}	5	5	5	1
	7_{Water}	7	7	0	7
Trip Blanks	27				
Equipment Rinseates	19	20	19	0	19
Field Blanks	7	7	7	0	7

NOTES: 1. Second column confirmation was performed for those samples containing compounds greater than detection levels.
2. Groundwater samples analyzed under CLP 10/92 statement of work for low concentration water.
3. Filtered and unfiltered water samples were collected

Where;

C_1 = Concentration of the compound or element in the sample
C_2 = Concentration of the compound or element in the duplicate/replicate.

Precision was determined using MS/MSD and duplicate sample analyses conducted on samples collected for VOC, SVOC, PPM, and TPH analysis during the Alpena CRTC RI. The laboratory selected 1 sample in 20 and split the sample into 2 additional aliquots. MS/MSD samples were prepared by routinely screening the first aliquot for the parameters of interest before analysis, while the remaining two aliquots were spiked with known quantities of parameters of interest before analysis. The RPD between the spike results was calculated and used as an indication of the analytical precision for the VOC, SVOC, and TPH analyses performed. Duplicate samples for PPM analyses were prepared by subdividing 1 sample of every 20 samples received and analyzing both samples of the duplicate pair. The RPD between the two detected concentrations was calculated and used as an indication of the analytical precision for the analyses performed. The objectives for precision are to have 90 percent of the values calculated within the specified RPD range of 20 percent.

Ten of 416 RPD water and 20 of 329 soil values calculated from the VOC analyses exceeded control limits of 20% for analytical precision. Control limits for VOC matrix spike and matrix spike duplicates are detailed in Table J-2 and J-3. Seventeen of 77 soil RPD values calculated from the SVOC analyses exceeded control limits of ±20% for analytical precision. Control limits for SVOC MS/MSD are detailed in Table J-4 and J-5. The 10/92 CLP SVOC SOW for low level waters does not require a MS/MSD and therefore no values are presented in Table J-2. Seventeen of 95 RPD soil and 14 of 143 RPD water values calculated from the PPM analyses were outside advisory control limits of ±20%. Zero of 6 RPD soil values calculated from hexavalent chromium were outside advisory control limits of ±20%. Control limits for metals MS/MSD are detailed in Table J-6 and J-7. One of 25 RPD values calculated from the TPH analyses exceeded control limits of ±20% for analytical precision. Control limits for TPH MS/MSD are detailed in Table J-8.

The majority of the RPD values which exceeded control limits for metals were close to the instrument detection limit where larger percent differences are expected. These results for soil are considered to have little impact on the environmental data quality and considered more likely to be the result of the regional matrix variability that could not be overcome by the sample mixing prior to the analysis of the samples. Water RPD values which exceeded control limits are most likely due to the unequal distribution of suspended minute particulates that could not be evenly distributed by well development procedures and mixing procedures since the analytical QC results do not indicate a systemic laboratory problem. Based on an overall 94% of the RPD results meeting control limits and the acceptable laboratory QC results, the sample collection DQO for precision has been met. No corrective action was taken based on RPD values. A complete discussion of all replicate samples is presented in section J.2.4.

J.1.1.2 Accuracy

Accuracy was defined as the degree of difference between measured or calculated values and the true value. The closer the numerical value of the measurement approaches the true value, or actual concentration, the more accurate the measurement. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at a known concentration before analysis. Analytical accuracy was determined using MS/MSD and surrogate recovery data. The following equation was used to calculate percent recovery:

$$\%R = \frac{A_r - A_0}{A_f} X\ 100$$

Where:

A_r = Total compound or element concentration detected in the spiked sample
A_o = Concentration of the compound or element detected in the unspiked sample
A_f = Concentration of the compound or element added to the sample

Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
Bromodichloromethane	18	89-110	42-172	18	0	9	4-6	20	9	0
Bromobenzene	18	91-100	60-90	18	0	9	2-5	20	9	0
Bromoform	18	100-111	13-159	18	0	9	9-23	20	8	0
Bromomethane	18	88-119	1-144	18	0	9	17-18	20	9	0
Bromochloromethane	18	91-99	4-133	18	0	9	1-4	20	9	0
Carbon tetrachloride	18	102-113	43-143	18	0	9	3-11	20	9	0
2-Chloroethlyvinyl ether	18	0-125	14-186	14	4	9	5-100	20	5	4
Chlorobenzene	18	100-116	38-150	14	0	9	15-20	20	9	0
Chloroethane	18	100-119	46-137	18	0	9	5-13	20	9	0
Chloroform	18	99-104	49-133	18	0	9	4-7	20	9	0
Chloromethane	18	81-119	1-193	18	0	9	5-15	20	9	0
2-Chlorotoluene	18	72-93	60-140	18	0	9	4-11	20	9	0
4-Chlorotoluene	18	74-91	60-140	18	0	9	3-6	20	9	0
1,2-Dibromoethane	18	70-97	24-191	18	0	9	2-5	20	9	0
Dibromochloromethane	18	65-118	24-191	18	0	9	2-9	20	9	0
1,2-Dichlorobenzene	18	75-102	1-208	18	0	9	7-45	20	7	2
1,3-Dichlorobenzene	18	83-102	7-187	18	0	9	7-17	20	9	0
1,4-Dichlorobenzene	18	84-109	42-143	18	0	9	7-22	20	7	2
1,1-Dichloroethane	18	104-106	47-132	18	0	9	2-7	20	9	0

Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
1,2-Dichloroethane	18	101-108	51-147	18	0	9	2-12	20	9	0
1,1-Dichloroethene	18	106-125	28-167	18	0	9	4-9	20	9	0
trans-1,2-Dichloroethene	18	106-110	38-155	18	0	9	4-6	20	9	0
1,2-Dichloropropane	18	99-109	44-156	18	0	9	2-7	20	9	0
cis-1,3,Dichloropropene	18	94-110	22-178	18	0	9	4-6	20	9	0
trans-1,3,-Dichloropropene	18	90-111	22-17	18	0	9	4-6	20	9	0
Methylene Chloride	18	38-117	25-162	18	0	9	5-14	20	9	0
1,1,2,2-Tetrachloroethane	18	79-105	8-184	18	0	9	10-70	20	8	1
1,1,1,2-Tetrachloroethane	18	70-99	38-150	18	0	9	1-6	20	9	0
Tetrachloroethene	18	90-113	26-162	18	0	9	3-11	20	9	0
1,1,1-Trichloroethane	18	102-104	41-138	18	0	9	5-9	20	9	0
1,1,2-Trichloroethane	18	91-106	39-136	18	0	9	8-9	20	9	0
Trichloroethene	18	100-112	35-146	18	0	9	1-8	20	9	0
1,2,3,-Trichloropropane	18	79-110	60-140	18	0	9	1-27	20	8	1
Vinyl Chloride	18	100-113	26-163	18	0	9	0-6	20	9	0

Table J-2 Laboratory Quality Control Summary: MS/MSD Volatile Orginic Compounds Water Samples
MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8020										
Benzene	18	76-104	39-150	18	0	9	5-19	20	9	0
Ethyl benzene	18	70-101	37-162	18	0	9	5-12	20	9	0
Chlorobenzene	18	64-100	38-150	18	0	9	4-8	20	9	0
Methyl-tert-butyl-ether	18	73-148	28-167	18	0	9	3-18	20	9	0
Toluene	18	70-100	46-148	18	0	9	5-14	20	9	0
1,4-Dimethylbenzene	18	79-101	55-135	18	0	9	6-14	20	9	0
1,3-Dimethylbenzene	18	86-101	55-135	18	0	9	8-12	20	9	0
1,2-Dimethylbenzene	18	88-104	55-135	18	0	9	8-12	20	9	0
1,2-Dichlorobenzene	18	68-84	1-208	18	0	9	10-12	20	9	0
1,3-Dichlorobenzene	18	83-93	7-187	18	0	9	1-16	20	9	0
Styrene	18	90-101	32-160	18	0	9	7-12	20	9	0
1,4-Dichlorobenzene	18	85-94	42-143	18	0	9	6-10	20	9	0

Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
Bromodichloromethane	14	93-146	42-172	14	0	7	0-20	20	7	0
Bromobenzene	14	81-97	60-140	14	0	7	2-18	20	7	0
Bromoform	14	81-146	13-159	14	0	7	21-40	20	6	1
Bromomethane	14	94-104	1-144	14	0	7	0-10	20	7	0
Bromochloromethane	14	100-128	4-133	14	0	7	3-7	20	7	0
Carbon tetrachloride	14	87-108	43-143	14	0	7	0-11	20	7	0
2-Chloroethlyvinyl ether	14	64-108	14-186	14	0	7	7-29	20	6	1
Chlorobenzene	14	89-100	38-150	14	0	7	9-12	20	7	0
Chloroethane	14	100-111	46-137	14	0	7	8-15	20	7	0
Chloroform	14	95-100	49-133	14	0	7	0-12	20	7	0
Chloromethane	14	93-113	1-193	14	0	7	4-56	20	6	1
2-Chlorotoluene	14	80-100	60-140	14	0	7	8-12	20	7	0
4-Chlorotoluene	14	81-100	60-140	14	0	7	5-16	20	7	0
Dibromomethane	14	50-170	42-172	14	0	7	0-25	20	6	1
1,2-Dibromoethane	14	81-121	24-191	14	0	7	7-19	20	7	0
Dibromochloromethane	14	108-113	24-191	14	0	7	15-26	20	6	1
1,2-Dichlorobenzene	14	81-110	1-208	14	0	7	3-31	20	6	1
1,3-Dichlorobenzene	14	27-92	42-143	13	1	7	3-27	20	5	2

Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
1,4-Dichlorobenzene	14	89-95	42-143	14	0	7	3-31	20	6	1
1,1-Dichloroethane	14	69-100	47-132	14	0	7	3-10	20	7	0
1,2-Dichloroethane	14	100-128	51-147	14	0	7	3-16	20	7	0
1,1-Dichloroethene	14	68-111	28-167	14	0	7	7-15	20	7	0
trans-1,2-Dichloroethene	14	89-100	38-155	14	0	7	0-15	20	7	0
1,2-Dichloropropane	14	100-113	44-156	14	0	7	7-12	20	7	0
Methylene Chloride	14	28-282	46-148	8	6	7	3-26	20	6	1
cis-1,3-Dichloropropene	14	84-110	22-178	14	0	7	7-20	20	7	0
trans-1,3-Dichloropropene	14	98-112	22-178	14	0	7	6-21	20	7	0
1,1,2,2-Tetrachloroethane	14	85-129	8-184	14	0	7	5-21	20	6	1
1,1,1,2-Tetrachloroethane	14	89-100	38-150	14	0	7	9-12	20	7	0
Tetrachloroethene	14	77-100	26-162	14	0	7	3-12	20	7	0
1,1,1-Trichloroethane	14	85-111	41-138	14	0	7	5-8	20	7	0
1,1,2-Trichloroethane	14	108-129	39-136	14	0	7	5-28	20	7	0

Table J-3 Laboratory Quality Control Summary: MS/MSD Volatile Organic Compounds Soil Samples MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
8010										
Trichloroethene	14	97-105	35-146	14	0	7	0-12	20	7	0
1,2,3,-Trichloropropane	14	78-100	60-140	14	0	7	25-40	20	5	2
Vinyl Chloride	14	104-113	26-163	14	0	7	0-5	20	7	0
8020										
Benzene	14	76-100	37-162	14	0	7	8-12	20	7	0
Ethyl benzene	14	76-89	38-150	14	0	7	5-16	20	7	0
Chlorobenzene	14	70-82	28-167	14	0	7	8-22	20	6	1
Methyl-tert-butyl-ether	14	100-136	25-162	14	0	7	5-28	20	5	2
Toluene	14	70-102	55-135	14	0	7	1-22	20	6	1
1,4-Dimethylbenzene	14	64-76	55-135	14	0	7	3-17	20	7	0
1,3-Dimethylbenzene	14	64-76	55-135	14	0	7	3-17	20	7	0
1,2-Dimethylbenzene	14	64-76	1-208	14	0	7	3-17	20	7	0
1,2-Dichlorobenzene	14	49-60	7-187	14	0	7	3-27	20	6	1
1,4-Dichlorobenzene	14	47-60	42-123	14	0	7	5-31	20	6	1
1,3-Dichlorobenzene	14	39-64	42-143	13	1	7	3-31	20	6	1
Styrene	14	50-75	32-160	14	0	7	10-25	20	6	1

Table J-4 Laboratory Control Summary: MS/MSD Semivolatile Organic Compounds, Water Samples, MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits[1]	Number Outside Limits
Phenol	6	61-83	40-120	6	0	0		20		
bis(2-chloroethyl)ether	6	64-80	50-110	6	0	0		20		
2-Chlorophenol	6	61-81	50-110	6	0	0		20		
n-Nitroso-di-n-propylamine	6	60-84	50-110	6	0	0		20		
Hexachloroethane	6	58-64	20-110	6	0	0		20		
Isophorone	6	66-86	50-110	6	0	0		20		
1,2,4-Trichlorobenzene	6	57-73	40-100	6	0	0		20		
Naphthalene	6	66-80	30-110	6	0	0		20		
4-Chloroaniline	6	10-135	10-120	5	1	0		20		
2,4,6-Trichlorophenol	6	54-72	40-120	6	0	0		20		
2,4-Dinitrophenol	6	40-46	30-120	6	0	0		20		
Diethlyphthalate	6	62-78	50-120	6	0	0		20		
n-Nitrosodiphenylamine	6	49-102	30-110	6	0	0		20		
Hexachlorobenzene	6	66-86	40-120	6	0	0		20		
Benzo(a)pyrene	6	52-74	50-120	6	0	0		20		

Note:
1) The 10/92 SOW for low-level semi-volatiles does not require matrix spike/matrix spike duplicat analysis and, therefore no data is presented in this table.

Table J-5 Laboratory Control Summary: MS/MSD Semivolatile Organic Compounds, Soil Samples, MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
Phenol	14	32-97	26-90	12	2	7	11-41	35	5	2
2-Chlorophenol	14	31-94	25-102	14	0	7	12-43	50	7	0
1,4-Dichlorobenzene	14	27-94	28-104	14	0	7	12-43	27	5	2
n-Nitroso-di-n-propylamine	14	34-86	41-126	12	2	7	12-41	38	6	1
1,2,4-Trichlorobenzene	14	38-99	38-107	14	0	7	8-48	23	5	2
4-Chloro-3-methylphenol	14	35-109	26-103	13	1	7	10-46	33	5	2
Ancenapthene	14	32-85	31-137	14	0	7	8-45	19	5	2
4-Nitrophenol	14	35-133	11-114	13	1	7	16-35	50	7	0
2,4-Dinitrotoluene	14	32-92	28-890	13	1	7	11-45	47	7	0
Pentachlorophenol	14	14-87	17-109	13	1	7	0-70	47	6	1
Pyrene	14	21-102	35-142	11	3	7	0-47	36	6	1

Table J-6 Laboratory Control Summary: MS/MSD Metals, Water Samples
MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
Antimony	22	86-124	75-125	22	0	11	8-200	20	10	1
Arsenic	22	81-106	75-125	22	0	11	21.1-200	20	8	3
Beryllim	22	89-107	75-125	22	0	11	0	20	11	0
Cadmium	22	88-108	75-125	22	0	11	0	20	11	0
Chromium	22	90-107	75-125	22	0	11	0	20	11	0
Copper	22	90-105	75-125	22	0	11	0-200	20	10	1
Mercury	22	96-102	75-125	22	0	11	0	20	11	0
Nickel	22	96-101	75-125	22	0	11	0	20	11	0
Lead	22	73-120	75-125	21	1	11	0	20	11	0
Selenium	22	28-149	75-125	17	5	11	0-200	20	9	2
Silver	22	89-102	75-125	22	0	11	0-200	20	10	1
Thallium	22	54-101	75-125	13	9	11	0-200	20	10	1
Zinc	22	84-105	75-125	22	0	11	44-200	20	6	5

Table J-7 Laboratory Control Summary: MS/MSD Metals, Soil Samples
MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
Antimony	14	52-102	75-125	7	7	7	0	20	7	0
Arsenic	14	97-128	75-125	13	1	7	0-72	20	3	4
Beryllim	14	76-116	75-125	14	0	7	0	20	7	0
Cadmium	14	65-85	75-125	9	5	7	0	20	7	0
Cobalt	1	85	75-125	1	0	1	200	20	0	1
Hexavalent chromium	12	102-124	75-125	12	0	6	2-20	20	6	0
Chromium	14	62-108	75-125	13	1	7	0-60	20	4	3
Copper	14	87-100	75-125	14	0	7	0-56	20	4	3
Mercury	14	93-111	75-125	14	0	7	0	20	7	0
Nickel	14	73-103	75-125	13	1	7	0-200	20	5	2
Lead	14	65-390	75-125	12	2	7	0-200	20	3	4
Selenium	14	77-117	75-125	14	0	7	0	20	7	0
Silver	14	78-102	75-125	14	0	7	0	20	7	0
Thallium	14	66-104	75-125	13	1	7	0	20	7	0
Zinc	14	14-105	75-125	13	1	7	0-47	20	6	1

Table J-8 Laboratory Control Summary: MS/MSD TPH
MIANG, Alpena CRTC, Alpena, Michigan

	Accuracy					Precision				
	Total No. Analyses	Percent Recovery Ranges	Percent Recovery Limits	Number Within Control Limits	Number Outside Control Limits	MSD Total No. Analyses	Range RPD	RPD Limits	Number Within Limits	Number Outside Limits
TPH	50	43-116	80-120	43	7	25	1-24	20	24	1

Objectives for accuracy were to have 90% of the data within the specified percent recovery levels for that compound or element. Laboratory accuracy was qualitatively assessed by evaluating the following laboratory QC information: sample holding times, method blank, tuning and mass calibration (GC/MS only), internal standard (GC/MS only), LCS and method blank spike recovery, and initial and continuing calibration results calculated from all analyses conducted on environmental samples.

Percent Recoveries

Four of 832 water and 8 of 658 soil percent recoveries were outside the control limits for MS/MSD analyses conducted on the samples collected and analyzed for VOCs. Established control limits for VOC percent recovery values are presented in Table J-2 and J-3. Twenty-five of 611 water and 90 of 439 surrogate percent recoveries were outside the control limits for surrogate analysis. Established control limits for VOC percent recovery values are presented in Table J-9. All supporting VOC QC information cited above was also qualitatively evaluated with respect to the analytical accuracy DQOs. Two hundred-thirty-eight VOC data points were rejected for use because the data was qualified "R" indicating unreliable results due to surrogate or internal standard recoveries. Fifty-eight samples analyzed for VOCs were analyzed out of holding times. The majority of the samples were only 1 to 2 days out of holding times. A number of second column conformation analysis were analyzed outside holding times. In the cases when second column conformation analysis were outside holding times the data was qualified accordingly. These results are not considered to have any adverse impact on the environmental data quality.

Eleven of 154 soil and 1 of 105 water percent recovery values calculated were outside the control limits for the MS/MSD analyses conducted on the samples collected and analyzed for SVOCs. Established control limits for SVOC percent recovery values are presented in Table J-4 and J-5. Twenty-one of 738 water and five of 896 soil percent recovery values calculated were outside the control limits for the surrogate analysis conducted on the samples collected and analyzed for SVOCs. Established control limits for SVOC percent recovery values are presented in Table J-10. All supporting SVOC QC information cited above was also qualitatively evaluated with respect to the analytical accuracy DQOs. None of the SVOC data points were rejected for use because the data was qualified "R" indicating unreliable results due to surrogate or internal standard recoveries. Numerous samples analyzed for SVOCs indicated detectable levels of common laboratory contaminants; these samples have been qualified "B" for blank contamination. These results are considered to have some impact on the environmental data quality.

Fourteen of 143 water and 16 of 95 soil PPM percent recovery values from the matrix spike analysis conducted on the samples exceeded recovery limits of 75- to 125- percent. Zero of 6 hexavalent chromium soil percent recovery values from the matrix spike analyses conducted on the water samples exceeded recovery limits of 75- to 125- percent. Established control limits for metals percent recovery values are presented in Table J-6 and J-7. All supporting target analyte metals QA information cited above were also qualitatively evaluated with respect to the analytical accuracy DQO. These results are not considered to have any adverse impact on the environmental data quality.

Table J-9 Laboratory Control Summary: Surrogate Recovery Semivolatile Organic Compounds
MIANG, Alpena CRTC, Alpena, Michigan

Surrogate	WATER					SOIL				
	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Wuthin Control Limits	Number Outside Control Limits	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Within Control Limits	Number Outside Control Limits
Nitrobenzene	123	0-22	40-110	121	2	112		23-120	112	0
2-Fluorobiphenyl	123	0-27	42-110	120	3	112	27	30-115	111	1
Terphenyl-d14	123	3-22	24-140	121	2	112	138-141	18-137	110	2
Phenol-d5	123	0	17-113	118	5	112		24-113	112	0
2-Fluorophenol	123	0-15	16-110	118	5	112		25-121	112	0
2,4,6-Tribromophenol	123	0-15	18-126	119	4	112	14-015	19-122	110	2
2-Chlorophenol-d4						112		20-130	112	0
1,2-Dichlorobenzene-d4						112		20-130	112	0

Table J-10 Laboratory Control Summary: Surrogate Recovery Volatile Organic Compounds
MIANG, Alpena CRTC, Alpena, Michigan

Surrogate	WATER					SOIL				
	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Wuthin Control Limits	Number Outside Control Limits	Total No of Surrogate Analysis	Range of Outliers	Recovery Limits	Number Within Control Limits	Number Outside Control Limits
TCFM 1	127	70-160	75-135	119	8	77	23-160	76-135	62	15
TCFM 2	81	150	75-135	80	1	79	42-160	76-135	64	15
BFB 1 (halogenated)	127	49-130	69-123	121	6	82	16-130	69-123	62	20
BFB 2 (halogenated)	81	56-130	69-123	77	4	79	33-68	69-123	60	19
BFB 1 (aromatic)	125	55-130	69-123	121	4	71	41-130	69-123	62	9
BFB 2 (aromatic)	70	58-65	69-123	68	2	51	43-67	69-123	39	12

* TCFM - Trichlorofluoromethane
BFB - Bromofluorobenzene

Seven of 25 percent recovery values for MS/MSD values obtained for TPH analysis were outside control limits listed in Table J-8. All supporting TPH QA information cited above also was qualitatively evaluated with respect to the analytical accuracy DQO. All other QC criteria for TPH analysis were met.

A total of 61 of all 4,702 calculated percent recovery values exceeded control limits indicating that on average 96% accuracy was achieved. As a result of 96% of all percent recoveries meeting control limits, the DQO for accuracy was met. The outliers noted for VOC analysis ranged between 0- to 238- percent recovery. The SVOC outliers ranged from 33- to 133- percent exceeding the range of 10- to 140- percent recovery. All TPH outliers noted were mixed high and low with a range from 43- to 120- percent recovery. The outliers noted for PPM analysis were mixed high and low. The range of outliers noted for PPM were 14- to 390- percent exceeding control limits of 75- to 125- percent recovery. The above results are not considered to have any adverse impact on the environmental data quality.

Sampling accuracy was maximized by adherence to the strict QA program presented in the RI QAPP. All procedures (i.e., soil boring installation, soil samples collection procedures, and health monitoring equipment calibration and operation) used during the RI were documented as standard operating procedures (SOPs). Field QA blanks (i.e., trip blanks, field blanks, and equipment blanks) were prepared such that all samples represented the particular site from which they were collected, and assessed any cross-contamination that may have occurred. The environmental samples associated with the appropriate field QA samples were qualified based on the potential contaminants contained in the field QA samples.

Trip blanks

Twenty-seven trip blanks were shipped and analyzed with the environmental samples analyzed for VOCS. Trip blanks with detectable concentrations of contaminants are detailed in section J.2.1 These concentrations could not be attributed to the laboratory environment, and as a result, all concentrations of methylene chloride detected in the associated environmental samples at levels less than 10 times the trip blank concentration were considered blank contamination and were qualified accordingly.

Field Blanks

Seven field blanks were obtained and analyzed along with the environmental samples. The field blanks consisted of potable water sources used in the steam cleaner for decontamination of equipment, and ASTM Type II water produced in the field. Levels of chloroform, bromenated compounds, methylene chloride, acetone, ethylbenzene, phenol, bis(2-ethylhexyl)phthalate, diethylphthalate, lead, arsenic, and copper were detected in selected field blanks collected during the RI. The bromenated compounds are attributed to the potable water source. Since these compounds and elements were also detected in associated environmental samples the

concentrations detected which were less than five time that detected in the blank were considered as estimates and were qualified "B" accordingly. Detected compounds for the field blanks are detailed in section J.2.2. The low levels detected in the field blanks are not considered to have contributed to any levels in the associated environmental samples.

Equipment Rinseates.

Twenty-one equipment rinseates consisting of ASTM Type II water run through the sampling equipment were analyzed with the environmental to document the effectiveness of the decontamination efforts. Equipment rinseates contained levels of chloroform, methylene chloride, chlororbenzene, ethylbenzene, phenol, bis(2-ethylhexyl)phthalate, diethylphthalate, lead, arsenic, copper,and zinc. The majority of the compounds and elements detected in the equipment rinseates were below the CRQL or were the result of laboratory contamination. All compounds and elements detected in the equipment rinseates are detailed in section J.2.3.

Based on an evaluation of the compounds detected in the field QC blanks overall field accuracy is deemed acceptable, except where noted. A complete discussion of field QC results is presented in section J.2.

J.1.1.3 Representativeness

Representativeness was defined as the degree to which the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling location, a process condition, or an environmental condition. Sample representativeness was ensured during the RI by collecting sufficient samples of a population medium, properly distributed with respect to location and time. Representativeness was assessed by reviewing the drilling and sample collection methods used during the Alpena CRTC RI and evaluating the RPD values calculated from the duplicate samples and the concentrations of interferents detected in the field and laboratory QC blanks. The reproducibility of a representative set of samples reflects the degree of heterogeneity of the sampled medium, as well as the effectiveness of the sampling techniques.

Soil samples were collected from nine sites. All borings were advanced with a truck-mounted drilling rig using continuous-flight hollow stem augers. A minimum of two soil samples were collected for laboratory analysis from each soil boring. One sample was collected from just below the ground surface and the second from unsaturated soils just above the water table. A third and fourth sample were sometimes collected based on PID results and/or lithology. Samples were obtained using a split-spoon sampler equipped with stainless steel liners. Blow counts recording relative soil density were noted. Split-spoon samples were field-logged according to the USCS and field-screened with a PID meter and field GC for VOC concentrations. The boring was backfilled with a cement/bentonite slurry. The borings were marked at the surface and surveyed. Soil cuttings were placed on plastic sheeting for later analysis as required for disposal and the MDNR. Surface water samples were collected by directly filling the sample containers with water. Filtered samples for metals analyses were collected using a decontaminated Teflon® bailer and a disposable, 0.45 µm filter. Groundwater samples were obtained after development of each well.

The monitoring wells were allowed to recharge, purged, and then sampled. The volume of water in each well casing was calculated prior to purging. As required, 4 to 5 casing volumes were removed from each well during the purging process. A decontaminated Teflon® bailer was used to remove the stagnant groundwater from each well. Color, degree of turbidity, odor and other physical properties of the water were recorded during development. Additionally, measurement of the pH, temperature, and conductivity of the groundwater were obtained before and after purging, and prior to sampling. These data were collected to ensure a representative groundwater sample was collected.

Based on the evaluation of the factors described above and summarized in section J.3 the samples collected during the RI are considered to be representative of the environmental conditions at the Alpena CRTC.

J.1.1.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another and is limited to the other PARCC parameters, because only when precision and accuracy are know can one data set be compared to another. To optimize comparability, only the specific methods and protocols that were specified in the RI QAPP were used to collect and analyze samples during the RI. By using consistent sampling and analysis procedures, all data sets are comparable within the nine sites at Alpena CRTC, between the nine sites, or among ANG facilities nationwide. This consistency ensures that remedial action decision and priorities are based on a consistent data base.

All samples collected for VOC and SVOC analysis were analyzed using the SW-846 8010/8020 (aqueous, soils), 3/90 CLP SOW (soils) and 10/92 Low Concentration SOW (water) respectively. Samples collected for PPM were analyzed using SW-846 3rd edition methods. TPH samples were analyzed by 418.1

Based on the precision and accuracy assessment presented above, the data collected during the RI are considered to be comparable with the data collected during previous investigations.

J.1.1.5 Completeness

Completeness was defined as the percentage of useable data obtained from a measurement system. Data may be considered valid and useable even though all QC criteria have not been met. In these cases, data are valid within the constraints identified by data qualifiers. Project completeness was defined as the percentage of data points used to prepare the baseline risk assessment and upon which recommendations for site remediation are based. Objectives for project completeness were set at 90 percent. Values and concentrations reported for analysis conducted that are labeled with the qualifier "R" or "B" are excluded from use in the risk evaluation and remedial recommendations due to increased risk of indicating false positives or omitting compounds or elements that are present.

Based on the evaluation of the laboratory QC results for the 23,761 data points presented in appendix L, these data were considered equal to 93.6 percent complete, and as such, were used as the basis of all recommendations presented in this report. A total of 1,513 data points were rejected for use because the data was qualified "R" indicating unreliable results or "B" indicating possible contamination from an outside source. The data points which were qualified "R" are presented in Table J-11. The data points qualified "B" are presented in Table J-12.

J.2 Field Quality Control Assessment

Twenty-seven trip blanks, 7 field blanks, 20 equipment blanks, 14 duplicate soil and sediment samples, and 7 replicates for groundwater were collected and analyzed by the same SOPs and methods used for the 184 environmental samples. Table J-13 contains a cross-reference of the associated field QC blank samples.

J.2.1 Trip Blanks

Twenty-seven trip blanks were prepared and analyzed by Compuchem Environmental Corporation in North Carolina. The blanks were prepared in the labs using ASTM Type II water. Trip blanks were used to check for cross-contamination during sample handling and shipping of VOC samples. The trip blanks were stored with the unused sample bottles and returned to the laboratory with each cooler containing environmental samples to be analyzed for VOCs. Table J-14 summarizes the concentrations of the VOCs detected in the trip blanks collected during the RI field effort. The contamination detected in the trip blanks can be attributed to several possible causes. Methylene chloride is a common laboratory contaminant and is frequently detected. The other contamination could be attributed to contamination from samples stored with the trip blanks at the laboratory.

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-MW1-GW4	577704	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-P1-MW11-GW4	577639	Selenium, Dissolved	0.00	3.00	R	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577477	Selenium, Dissolved	0.00	3.00	R	ug/l	09/14/93	COMPUCHEM
PC-P1-MW14-GW4	577709	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578093	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-MP2-MW1-GW4	569872	Thallium, Dissolved	0.00	3.00	R	ug/l	08/10/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,1,2-Tetrachloroethane	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,1-Trichloroethane	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,2,2-Tetrachloroethane	0.00	0.40	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1,2-Trichloroethane	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1-Dichloroethane	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,1-Dichloroethylene	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2,3-Trichloropropane	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dibromoethane	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichlorobenzene	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichloroethane	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichloropropane	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-trans-Dichloroethylene	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-Dichlorobenzene	0.00	0.20	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-cis-Dichloropropylene	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-trans-Dichloropropylene	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,4-Dichlorobenzene	0.00	0.20	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	2-Chloroethylvinyl ether	0.00	0.40	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	2-Chlorotoluene	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	4-Chlorotoluene	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromobenzene	0.00	0.85	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromochloromethane	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromodichloromethane	0.00	0.40	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Bromoform	0.00	0.50	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Carbon Tetrachloride	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-MW5-GW4	571574	Chlorobenzene	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Chloroethane	0.00	0.50	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Chloroform	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Dibromochloromethane	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Dibromomethane	0.00	0.40	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Methyl bromide	0.00	0.45	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Methyl chloride	0.00	0.50	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Methylene chloride	0.54	0.00	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Tetrachloroethylene	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Trichloroethylene	0.00	0.30	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Vinyl chloride	0.00	0.55	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dichlorobenzene	0.00	0.15	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,2-Dimethylbenzene	0.00	0.20	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3-Dichlorobenzene	0.00	0.20	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,3/1,4-Dimethylbenzene	0.00	0.50	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	1,4-Dichlorobenzene	0.00	0.15	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Benzene	0.00	0.35	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Chlorobenzene	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Ethylbenzene	0.00	0.20	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Methyl-t-Butyl Ether	0.00	5.00	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Styrene	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571574	Toluene	0.00	0.25	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571800	Thallium, Dissolved	0.00	3.00	R	ug/l	08/12/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571387	Thallium	0.00	0.31	R	mg/kg	08/15/93	COMPUCHEM
PC-CG3-MW7-GW4	577021	Selenium, Dissolved	0.00	3.00	R	ug/l	09/13/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,1,1,2-Tetrachloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,1,1-Trichloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,1,2,2-Tetrachloroethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,1,2-Trichloroethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,1-Dichloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW1-GW4	571667	1,1-Dichloroethylene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2,3-Trichloropropane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dibromoethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dichlorobenzene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dichloroethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dichloropropane	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-trans-Dichloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-Dichlorobenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-cis-Dichloropropylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-trans-Dichloropropylene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,4-Dichlorobenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	2-Chloroethylvinyl ether	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	2-Chlorotoluene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	4-Chlorotoluene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Bromobenzene	0.00	0.85	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Bromochloromethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Bromodichloromethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Bromoform	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Carbon Tetrachloride	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chlorobenzene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chloroethane	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chloroform	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Dibromochloromethane	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Dibromomethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methyl bromide	0.00	0.45	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methyl chloride	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methylene chloride	0.23	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Tetrachloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Trichloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Vinyl chloride	0.00	0.55	R	ug/l	08/17/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW1-GW4	571667	1,2-Dichlorobenzene	0.88	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,2-Dimethylbenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-Dichlorobenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,3-Dimethylbenzene	0.04	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,4-Dichlorobenzene	0.00	0.15	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	1,4-Dimethylbenzene	0.04	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Benzene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Chlorobenzene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Ethylbenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Methyl-t-Butyl Ether	0.00	5.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Styrene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571667	Toluene	0.17	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1,1,2-Tetrachloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1,1-Trichloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1,2,2-Tetrachloroethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1,2-Trichloroethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1-Dichloroethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,1-Dichloroethylene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2,3-Trichloropropane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2-Dibromoethane	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2-Dichlorobenzene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2-Dichloroethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2-Dichloropropane	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,2-trans-Dichloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,3-Dichlorobenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,3-cis-Dichloropropylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,3-trans-Dichloropropylene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	1,4-Dichlorobenzene	0.00	0.20	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	2-Chloroethylvinyl ether	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	2-Chlorotoluene	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW8-GW4	571661	4-Chlorotoluene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Bromobenzene	0.00	0.85	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Bromochloromethane	0.00	0.25	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Bromodichloromethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Bromoform	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Carbon Tetrachloride	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Chlorobenzene	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Chloroethane	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Chloroform	0.00	0.35	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Dibromochloromethane	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Dibromomethane	0.00	0.40	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Methyl bromide	0.00	0.45	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Methyl chloride	0.00	0.50	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Methylene chloride	0.27	0.00	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Tetrachloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Trichloroethylene	0.00	0.30	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571661	Vinyl chloride	0.00	0.55	R	ug/l	08/17/93	COMPUCHEM
PC-TF4-SD010B	567556	1,1,1,2-Tetrachloroethane	0.00	0.94	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,1,2,2-Tetrachloroethane	0.00	0.63	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,1,2-Trichloroethane	0.00	0.89	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,1-Dichloroethane	0.00	0.78	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,2,3-Trichloropropane	0.00	0.94	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,2-Dichlorobenzene	0.00	1.50	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,2-Dichloroethane	0.00	0.68	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,2-Dichloropropane	0.00	0.68	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,2-trans-Dichloroethylene	0.00	1.10	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,3-Dichlorobenzene	0.00	1.10	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,3-cis-Dichloropropylene	0.00	0.99	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,4-Dichlorobenzene	0.00	1.50	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	2-Chlorotoluene	0.00	1.00	R	ug/kg	07/31/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD010B	567556	4-Chlorotoluene	0.00	1.10	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Bromobenzene	0.00	0.78	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Bromochloromethane	0.00	0.94	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Carbon Tetrachloride	0.00	0.68	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Chlorobenzene	0.00	0.94	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Dibromomethane	0.00	0.94	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Tetrachloroethylene	0.00	0.83	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Trichloroethylene	0.00	0.83	R	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD011	567739	Potassium	0.00	302.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567743	Potassium	0.00	319.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD013	567735	Potassium	0.00	313.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD014	567755	Potassium	0.00	303.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD016	567747	Potassium	0.00	439.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD018	567751	Potassium	0.00	729.00	R	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567759	Potassium	0.00	302.00	R	mg/kg	08/01/93	COMPUCHEM
PC-SF5-MW8-GW4	577018	Selenium, Dissolved	0.00	3.00	R	ug/l	09/13/93	COMPUCHEM
PC-FF7-MW2-GW4	577513	Selenium, Dissolved	0.00	3.00	R	ug/l	09/14/93	COMPUCHEM
PC-FF7-MW3-GW4	577712	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570788	Potassium	0.00	238.00	R	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,1,1,2-Tetrachloroethane	0.00	0.94	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,1,1-Trichloroethane	0.00	2.80	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,1,2,2-Tetrachloroethane	0.00	0.63	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,1,2-Trichloroethane	0.00	0.89	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,2,3-Trichloropropane	0.00	0.94	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,2-Dibromoethane	0.00	1.40	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,2-Dichloroethane	0.00	0.68	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,2-Dichloropropane	0.00	0.68	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	2-Chloroethylvinyl ether	0.00	1.10	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Bromochloromethane	0.00	0.94	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Bromodichloromethane	0.00	1.00	R	ug/kg	08/13/93	COMPUCHEM

Table J - 11 Data Points Qualified "R"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-SB3-SS01-02	570781	Bromoform	0.00	0.94	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Dibromochloromethane	0.00	0.83	R	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570804	Potassium	0.00	236.00	R	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570810	Potassium	0.00	243.00	R	mg/kg	08/13/93	COMPUCHEM
PC-RT9-MW6-GW4	577718	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569298	Potassium	0.00	240.00	R	mg/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569299	Potassium	0.00	241.00	R	mg/kg	08/09/93	COMPUCHEM
PC-PW-PW2-GW4	569871	Thallium, Dissolved	0.00	3.00	R	ug/l	08/10/93	COMPUCHEM
PC-ER20	577485	Selenium, Dissolved	0.00	3.00	R	ug/l	09/14/93	COMPUCHEM
PC-ER21	578094	Selenium, Dissolved	0.00	3.00	R	ug/l	09/15/93	COMPUCHEM
PC-FB04	573128	2,4,5-Trichlorophenol	0.00	20.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2,4,6-Trichlorophenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2,4-Dimethylphenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2,4-Dinitrophenol	0.00	20.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2-Chlorophenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2-Methyl-4,6-Dinitrophenol	0.00	20.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2-Methylphenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	2-Nitrophenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	4-Chloro-3-methyl phenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	4-Methylphenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	4-Nitrophenol	0.00	20.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	Pentachlorophenol	0.00	20.00	R	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	Phenol	0.00	5.00	R	ug/l	08/23/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-MW1-GW4	577693	Methylene chloride	0.42	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW1-GW4	577704	Arsenic, Dissolved	4.10	0.00	)B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW1-GW4	577697	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW1-GW4	577706	Total Petroleum Hydrocarbons	2.00	0.25	B	mg/l	09/15/93	COMPUCHEM
PC-P1-MW11-GW4	577552	Methylene chloride	0.34	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW11-GW4	577635	Di-n-butyl phthalate	0.90	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW11-GW4	577635	Phenol	0.50	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW11-GW4	577635	bis(2-Ethylhexyl)phthalate	12.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577472	Methylene chloride	0.15	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577472	1,4-Dichlorobenzene	0.28	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577472	Toluene	0.15	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577473	Diethyl phthalate	0.60	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW12-GW4	577473	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577515	Methylene chloride	0.12	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577515	1,3-Dichlorobenzene	0.14	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577515	1,4-Dichlorobenzene	0.66	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577515	Toluene	0.22	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577525	Diethyl phthalate	0.50	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577525	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-P1-MW13-GW4	577527	Total Petroleum Hydrocarbons	0.80	0.25	B	mg/l	09/14/93	COMPUCHEM
PC-P1-MW14-GW4	577694	Methylene chloride	0.21	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW14-GW4	577694	Ethylbenzene	0.22	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW14-GW4	577699	Di-n-butyl phthalate	0.80	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW14-GW4	577699	Diethyl phthalate	0.60	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW14-GW4	577699	Phenol	2.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW14-GW4	577699	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW2-GW4	576497	1,2-Dichlorobenzene	0.30	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576497	1,3-Dichlorobenzene	0.13	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576497	1,4-Dichlorobenzene	0.47	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576501	Selenium	5.60	0.00	B	ug/l	09/09/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-MW2-GW4	576499	Di-n-butyl phthalate	0.70	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576499	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-P1-MW2-GW4	576502	Total Petroleum Hydrocarbons	0.50	0.25	B	mg/l	09/09/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,2-Dichlorobenzene	0.75	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,3-Dichlorobenzene	0.21	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576679	1,4-Dichlorobenzene	0.35	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Antimony	46.20	0.00	)B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Copper	5.70	0.00	)B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Selenium	6.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576673	Zinc	12.60	0.00	)B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576682	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW3-GW4	576685	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	Methylene chloride	0.37	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,2-Dichlorobenzene	0.19	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,3-Dichlorobenzene	0.23	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	1,4-Dichlorobenzene	0.68	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576697	Toluene	0.11	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576675	Antimony	38.60	0.00	)B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576675	Selenium	20.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576703	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-P1-MW4-GW4	576705	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	09/10/93	COMPUCHEM
PC-P1-MW6-GW4	578081	Methylene chloride	0.40	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578084	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-P1-MW6-GW4	578090	Total Petroleum Hydrocarbons	0.70	0.25	B	mg/l	09/15/93	COMPUCHEM
PC-P1-SB10-SS00-02	573529	Chloroform	0.82	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS00-02	573535	Zinc	1.20	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS03-04	573537	Chloroform	0.81	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB10-SS03-04	573540	Zinc	3.00	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	1,1,1-Trichloroethane	0.89	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	Chloroform	0.48	0.00	B	ug/kg	08/24/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-SB11-SS00-02	573519	Methylene chloride	4.60	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	1,2-Dichlorobenzene	0.07	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	1,2-Dimethylbenzene	0.03	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	1,4-Dichlorobenzene	0.10	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	Styrene	0.02	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573519	Toluene	0.23	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS00-02	573522	Zinc	1.70	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS03-04	573524	Chloroform	0.65	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS03-04	573527	Arsenic	0.87	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB11-SS03-04	573527	Zinc	4.50	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	1,1,1-Trichloroethane	0.48	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	Chloroform	0.71	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	1,2-Dichlorobenzene	0.08	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	1,2-Dimethylbenzene	0.03	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	1,3-Dichlorobenzene	0.07	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	1,4-Dichlorobenzene	0.33	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	Chlorobenzene	0.03	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	Styrene	0.05	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573506	Toluene	0.13	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573509	Arsenic	0.55	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB12-SS00-02	573509	Zinc	3.60	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS00-02	573547	Chloroform	0.31	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS00-02	573547	Methylene chloride	1.20	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS00-02	573550	Zinc	4.10	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS03-04	573542	1,1,1-Trichloroethane	0.29	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS03-04	573542	Chloroform	0.54	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB13-SS03-04	573545	Zinc	3.50	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB20-SS00-02	573514	1,1,1-Trichloroethane	0.36	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB20-SS00-02	573514	Chloroform	0.63	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB20-SS00-02	573514	1,2-Dimethylbenzene	0.16	0.00	B	ug/kg	08/24/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-SB20-SS00-02	573514	Toluene	0.17	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB20-SS00-02	573517	Arsenic	0.73	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB20-SS00-02	573517	Zinc	4.30	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS00-01	573625	1,1,1-Trichloroethane	0.26	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS00-01	573625	Chloroform	0.41	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS00-01	573625	Methylene chloride	1.80	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS00-01	573627	Zinc	2.00	0.00	)B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573630	1,1,1-Trichloroethane	0.30	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573630	Chloroform	0.79	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573630	Methylene chloride	5.40	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573630	1,3-Dichlorobenzene	0.45	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573630	Toluene	0.22	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB4-SS02-03	573632	Zinc	4.20	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS00-02	573606	Chloroform	0.70	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS00-02	573606	Methylene chloride	4.90	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS00-02	573606	1,3-Dichlorobenzene	0.45	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS00-02	573606	Toluene	0.22	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS00-02	573608	Zinc	5.00	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573615	1,1,1-Trichloroethane	0.26	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573615	Chloroform	0.69	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573615	Methylene chloride	2.50	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573615	1,3-Dichlorobenzene	0.29	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573615	1,4-Dichlorobenzene	0.65	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB5-SS03-04	573620	Zinc	3.80	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573601	1,1,1-Trichloroethane	0.05	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573601	Chloroform	0.61	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573601	Methylene chloride	5.90	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573601	1,2-Dimethylbenzene	0.25	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573601	Toluene	0.16	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS00-02	573603	Zinc	5.70	0.00	B	mg/kg	08/24/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-SB6-SS03-04	573596	1,1,1-Trichloroethane	0.22	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS03-04	573596	Chloroform	0.74	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB6-SS03-04	573598	Zinc	6.10	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS00-02	573586	1,1,1-Trichloroethane	0.48	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS00-02	573586	Chloroform	0.81	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS00-02	573588	Zinc	2.80	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	1,1,1-Trichloroethane	0.11	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	Chloroform	0.88	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	Methylene chloride	5.80	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	1,2-Dimethylbenzene	0.09	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573578	Toluene	0.26	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB7-SS03-04	573580	Zinc	4.70	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,1,1-Trichloroethane	0.13	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	Chloroform	0.67	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,2-Dimethylbenzene	0.16	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	1,3-Dichlorobenzene	0.03	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573591	Toluene	0.13	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS00-02	573593	Zinc	23.60	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	1,1,1-Trichloroethane	0.33	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	Chloroform	0.89	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	1,3-Dichlorobenzene	0.39	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573635	Toluene	0.28	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB8-SS03-04	573649	Zinc	2.50	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS00-02	573566	Chloroform	0.61	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS00-02	573566	Methylene chloride	4.40	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS00-02	573566	1,2-Dimethylbenzene	0.04	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS00-02	573566	Toluene	0.19	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS00-02	573571	Zinc	8.00	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS03-04	573555	1,1,1-Trichloroethane	0.09	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS03-04	573555	Chloroform	1.40	0.00	B	ug/kg	08/24/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-P1-SB9-SS03-04	573555	Methylene chloride	3.90	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS03-04	573555	1,2-Dimethylbenzene	0.16	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS03-04	573555	Toluene	0.46	0.00	B	ug/kg	08/24/93	COMPUCHEM
PC-P1-SB9-SS03-04	573564	Zinc	5.70	0.00	B	mg/kg	08/24/93	COMPUCHEM
PC-P1-SD001	577048	Chloroform	0.34	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD001	577048	Methylene chloride	0.63	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD001	577048	1,2-Dimethylbenzene	0.20	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD001	577048	1,4-Dichlorobenzene	0.27	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD001	577048	Toluene	0.24	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD002	577032	Chloroform	0.23	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD002	577032	Methylene chloride	1.40	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD002	577032	Toluene	0.20	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD003	577038	Chloroform	0.30	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD003	577038	Methylene chloride	0.26	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD003	577038	1,2-Dimethylbenzene	0.12	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD003	577038	Toluene	0.34	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD004	577042	Chloroform	0.29	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD004	577042	Methylene chloride	2.70	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD004	577042	1,2-Dimethylbenzene	0.12	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD004	577042	Toluene	0.14	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD005	577049	Chloroform	0.60	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD005	577049	Methylene chloride	2.80	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD005	577049	1,2-Dimethylbenzene	0.12	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD005	577049	1,4-Dichlorobenzene	0.25	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-P1-SD005	577049	Toluene	0.12	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-MW1-GW4	569859	1,2-Dichlorobenzene	0.29	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-MP2-MW1-GW4	569859	1,4-Dichlorobenzene	0.13	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-MP2-MW1-GW4	569859	Toluene	0.22	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-MP2-MW1-GW4	569881	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-MP2-MW1-GW4	569882	Total Petroleum Hydrocarbons	2.50	0.25	B	mg/l	08/10/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-MW2-GW4	571265	1,2-Dichlorobenzene	0.52	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571265	Toluene	0.09	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571314	Antimony, Dissolved	42.30	0.00	)B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571314	Arsenic, Dissolved	14.70	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571299	Copper	4.50	0.00	)B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571314	Lead, Dissolved	4.10	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571277	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-MP2-MW2-GW4	571300	Total Petroleum Hydrocarbons	5.60	0.25	B	mg/l	08/15/93	COMPUCHEM
PC-MP2-MW3-GW4	571257	1,2-Dichlorobenzene	0.26	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571257	1,3-Dichlorobenzene	0.08	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571257	Toluene	0.17	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571280	Antimony	44.30	0.00	)B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571268	Phenol	0.70	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571268	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW3-GW4	571281	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	08/16/93	COMPUCHEM
PC-MP2-MW4-GW4	571266	1,2-Dichlorobenzene	0.38	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW4-GW4	571266	1,4-Dichlorobenzene	0.36	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW4-GW4	571266	Toluene	0.21	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW4-GW4	571278	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW4-GW4	571305	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	08/16/93	COMPUCHEM
PC-MP2-MW5-GW4	571800	Antimony, Dissolved	46.10	0.00	)B	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	571800	Zinc, Dissolved	5.10	0.00	)B	ug/l	08/12/93	COMPUCHEM
PC-MP2-MW5-GW4	578221	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/16/93	COMPUCHEM
PC-MP2-MW5-GW4	571793	Total Petroleum Hydrocarbons	1.10	0.25	B	mg/l	08/12/93	COMPUCHEM
PC-MP2-MW6-GW4	576523	1,2-Dichlorobenzene	3.40	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW6-GW4	576523	1,3-Dichlorobenzene	0.15	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW6-GW4	576523	1,4-Dichlorobenzene	0.52	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW6-GW4	576527	Zinc	9.70	0.00	)B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW6-GW4	576525	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW6-GW4	576529	Total Petroleum Hydrocarbons	2.30	0.25	B	mg/l	09/09/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-MW7-GW4	576505	Methylene chloride	0.42	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW7-GW4	576505	1,2-Dichlorobenzene	0.17	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW7-GW4	576505	1,4-Dichlorobenzene	0.30	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW7-GW4	576509	Selenium	3.20	0.00	)B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW7-GW4	576507	Di-n-butyl phthalate	1.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW7-GW4	576507	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-MP2-MW9-GW4	571262	Toluene	0.26	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW9-GW4	571312	Arsenic, Dissolved	6.10	0.00	)B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW9-GW4	571293	Copper	4.50	0.00	)B	ug/l	08/16/93	COMPUCHEM
PC-MP2-MW9-GW4	571273	bis(2-Ethylhexyl)phthalate	7.00	0.00	B	ug/l	08/16/93	COMPUCHEM
PC-MP2-SB10-SS00-01	577028	Chloroform	0.19	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS00-01	577028	Methylene chloride	3.80	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS03-04	577029	Chloroform	0.30	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS03-04	577029	Methylene chloride	5.20	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS03-04	577029	Toluene	0.15	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS08-10	577024	Chloroform	0.31	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS08-10	577024	Methylene chloride	4.10	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS08-10	577024	1,2-Dimethylbenzene	0.14	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS08-10	577024	1,4-Dichlorobenzene	0.11	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB10-SS08-10	577024	Toluene	0.17	0.00	B	ug/kg	09/13/93	COMPUCHEM
PC-MP2-SB2-SS00-02	571978	1,1,1-Trichloroethane	0.36	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS00-02	571978	Chloroform	0.56	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS00-02	571978	Methylene chloride	7.20	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS00-02	572052	Arsenic	0.58	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS00-02	572052	Zinc	13.00	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS04-05	571975	1,1,1-Trichloroethane	0.38	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS04-05	571975	Chloroform	0.31	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS04-05	571975	Methylene chloride	3.20	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS04-05	572038	Arsenic	0.48	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB2-SS04-05	572038	Zinc	4.50	0.00	B	mg/kg	08/17/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-SB3-SS00-02	571982	Chloroform	0.30	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	571982	Methylene chloride	3.80	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	572067	Arsenic	0.49	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS00-02	572067	Zinc	5.50	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	571977	1,1,1-Trichloroethane	0.50	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	571977	Chloroform	0.31	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	571977	Methylene chloride	1.40	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	572046	Arsenic	0.60	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS04-05	572046	Zinc	5.50	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	571979	1,1,1-Trichloroethane	0.38	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	571979	Chloroform	0.47	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	571979	Methylene chloride	1.40	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	572056	Arsenic	0.49	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB3-SS05-07	572056	Zinc	2.90	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS00-02	571974	1,1,1-Trichloroethane	0.41	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS00-02	571974	Chloroform	0.32	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS00-02	571974	Methylene chloride	2.40	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS00-02	572028	Arsenic	0.89	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS00-02	572028	Zinc	6.90	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571328	Chloroform	0.90	0.00	B	ug/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571328	Methylene chloride	3.00	0.00	B	ug/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571328	Toluene	0.53	0.00	B	ug/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571371	Arsenic	0.79	0.00	)B	mg/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571371	Lead	1.00	0.00	B	mg/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS03-04	571371	Zinc	13.50	0.00	B	mg/kg	08/14/93	COMPUCHEM
PC-MP2-SB4-SS04-05	571983	Chloroform	0.32	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS04-05	571983	Methylene chloride	4.70	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB4-SS04-05	572083	Zinc	6.00	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	571981	1,1,1-Trichloroethane	0.34	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	571981	Chloroform	0.41	0.00	B	ug/kg	08/17/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-SB5-SS00-02	571981	Methylene chloride	2.70	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	572064	Arsenic	0.68	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS00-02	572064	Zinc	8.50	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	1,1,1-Trichloroethane	0.40	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	Chloroform	0.32	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	Methylene chloride	1.70	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	571976	1,3-Dichlorobenzene	0.31	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	572043	Arsenic	0.41	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB5-SS04-05	572043	Zinc	3.50	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	Chloroform	0.55	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	1,4-Dichlorobenzene	0.26	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571316	Toluene	0.28	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571341	Arsenic	1.90	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS00-02	571341	Zinc	20.30	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Chloroform	0.37	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Methylene chloride	7.60	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	1,4-Dichlorobenzene	0.62	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571334	Toluene	0.69	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Arsenic	0.61	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Lead	0.94	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB6-SS05-06	571395	Zinc	6.70	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	1,1,1-Trichloroethane	0.22	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Chloroform	0.58	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Methylene chloride	4.40	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571323	Toluene	0.23	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Arsenic	0.69	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Lead	1.40	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS00-02	571356	Zinc	9.50	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571333	Chloroform	0.54	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571333	Methylene chloride	5.60	0.00	B	ug/kg	08/15/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-MP2-SB7-SS05-06	571333	Toluene	0.25	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571391	Arsenic	0.71	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571391	Lead	1.10	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB7-SS05-06	571391	Zinc	9.60	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571332	1,1,1-Trichloroethane	0.20	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571332	Chloroform	0.97	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571332	Methylene chloride	1.30	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571332	Toluene	0.54	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571387	Arsenic	2.50	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571387	Lead	11.80	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS00-02	571387	Zinc	21.70	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571331	Chloroform	0.59	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571331	Methylene chloride	1.40	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571331	1,4-Dichlorobenzene	0.46	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571331	Toluene	0.18	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571383	Arsenic	0.58	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571383	Lead	2.50	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB8-SS05-06	571383	Zinc	10.00	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571695	1,1,1-Trichloroethane	0.05	0.00	B	ug/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571695	Chloroform	0.57	0.00	B	ug/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571695	Methylene chloride	5.70	0.00	B	ug/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571697	Arsenic	0.62	0.00	)B	mg/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571697	Lead	0.84	0.00	B	mg/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS03-04	571697	Zinc	5.40	0.00	B	mg/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS04-06	571678	Chloroform	0.63	0.00	B	ug/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS04-06	571678	Methylene chloride	2.00	0.00	B	ug/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS04-06	571680	Arsenic	0.57	0.00	)B	mg/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS04-06	571680	Lead	1.00	0.00	B	mg/kg	08/16/93	COMPUCHEM
PC-MP2-SB9-SS04-06	571680	Zinc	4.60	0.00	B	mg/kg	08/16/93	COMPUCHEM
PC-CG3-MW1-GW4	571259	1,3-Dichlorobenzene	0.14	0.00	B	ug/l	08/15/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-MW1-GW4	571259	Toluene	0.19	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-CG3-MW1-GW4	571270	bis(2-Ethylhexyl)phthalate	0.90	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-CG3-MW1-GW4	571285	Total Petroleum Hydrocarbons	1.80	0.25	B	mg/l	08/15/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	Methylene chloride	0.13	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	1,2-Dichlorobenzene	1.80	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574047	Toluene	0.11	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574069	Zinc, Dissolved	12.70	0.00	)B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574055	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW2-GW4	574068	Total Petroleum Hydrocarbons	0.90	0.25	B	mg/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	Methylene chloride	0.27	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	1,2-Dichlorobenzene	0.31	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574048	Toluene	0.08	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574061	Copper	5.30	0.00	)B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574061	Zinc	18.50	0.00	)B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574071	Zinc, Dissolved	5.00	0.00	)B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574056	Phenol	1.00	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW3-GW4	574056	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	Methylene chloride	0.43	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	1,2-Dichlorobenzene	0.25	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574049	Toluene	0.15	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574062	Zinc	6.80	0.00	)B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574073	Zinc, Dissolved	23.80	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574057	Phenol	0.50	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW4-GW4	574057	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/25/93	COMPUCHEM
PC-CG3-MW5-GW4	574362	1,1,1-Trichloroethane	0.08	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574362	Methylene chloride	0.31	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574380	Antimony	43.10	0.00	)B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574380	Zinc	8.80	0.00	)B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574397	Zinc, Dissolved	20.90	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW5-GW4	574415	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/26/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-MW5-GW4	574417	Total Petroleum Hydrocarbons	1.00	0.25	B	mg/l	08/26/93	COMPUCHEM
PC-CG3-MW6-GW4	576676	1,2-Dichlorobenzene	0.41	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576676	1,3-Dichlorobenzene	0.29	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576672	Antimony	42.50	0.00	)B	ug/l	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576672	Selenium	17.20	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576677	bis(2-Ethylhexyl)phthalate	7.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-CG3-MW6-GW4	576678	Total Petroleum Hydrocarbons	0.80	0.25	B	mg/l	09/10/93	COMPUCHEM
PC-CG3-MW7-GW4	576961	Methylene chloride	0.31	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-CG3-MW7-GW4	576961	1,2-Dichlorobenzene	0.67	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-CG3-MW7-GW4	576961	Toluene	0.10	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-CG3-MW7-GW4	577019	Selenium	5.30	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-CG3-MW7-GW4	576970	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-CG3-MW9-GW4	574367	1,1,1-Trichloroethane	0.11	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574367	Methylene chloride	0.35	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574390	Zinc	73.20	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574400	Zinc, Dissolved	21.80	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574431	Phenol	0.80	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574431	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-CG3-MW9-GW4	574432	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	08/26/93	COMPUCHEM
PC-CG3-SB11-SS00-02	574436	Chloroform	0.55	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS00-02	574436	Toluene	0.12	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS00-02	574446	Zinc	9.00	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1,1,1-Trichloroethane	0.11	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Chloroform	0.59	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Methylene chloride	2.70	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1,2-Dichlorobenzene	0.12	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	1,2-Dimethylbenzene	0.12	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574592	Toluene	0.16	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS04-06	574605	Zinc	14.80	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS10-12	574454	Chloroform	0.42	0.00	B	ug/kg	08/26/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-SB11-SS10-12	574454	Methylene chloride	2.40	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB11-SS10-12	574462	Zinc	5.40	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574464	Chloroform	0.50	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574464	Methylene chloride	4.50	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS00-02	574467	Zinc	9.90	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	1,1,1-Trichloroethane	0.09	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	Chloroform	0.60	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	Methylene chloride	2.90	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	1,2-Dimethylbenzene	0.14	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574596	Toluene	0.13	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS04-06	574608	Zinc	19.00	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	1,1,1-Trichloroethane	0.19	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	Chloroform	0.53	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574469	Methylene chloride	3.10	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB12-SS10-12	574472	Zinc	4.70	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	1,1,1-Trichloroethane	0.18	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Chloroform	0.60	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Methylene chloride	3.10	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	1,4-Dichlorobenzene	0.25	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Benzene	0.02	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574474	Styrene	0.08	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS00-02	574480	Zinc	7.10	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574487	Chloroform	0.40	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574487	Methylene chloride	3.10	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS02-04	574490	Zinc	10.70	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,1,1-Trichloroethane	0.14	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	Chloroform	0.54	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	Methylene chloride	2.80	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,2-Dimethylbenzene	0.09	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574597	1,4-Dichlorobenzene	0.10	0.00	B	ug/kg	08/26/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-CG3-SB13-SS04-06	574597	Toluene	0.12	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS04-06	574613	Zinc	65.30	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,1,1-Trichloroethane	0.18	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	Chloroform	0.67	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	Methylene chloride	10.00	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,2-Dichlorobenzene	0.08	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,2-Dimethylbenzene	0.35	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	1,4-Dichlorobenzene	0.03	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575034	Toluene	0.24	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS08-10	575037	Zinc	11.60	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1,1,1-Trichloroethane	0.10	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1,3-Dichlorobenzene	0.05	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	1,4-Dichlorobenzene	0.07	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	4-Chlorotoluene	0.06	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Chloroform	0.39	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Methylene chloride	2.60	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Tetrachloroethylene	0.06	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574482	Trichloroethylene	0.03	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB13-SS10-12	574485	Zinc	4.90	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-CG3-SB20-SS00-02	574492	Chloroform	0.44	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB20-SS00-02	574492	Methylene chloride	9.30	0.00	B	ug/kg	08/26/93	COMPUCHEM
PC-CG3-SB20-SS00-02	574495	Zinc	33.10	0.00	B	mg/kg	08/26/93	COMPUCHEM
PC-TF4-MW1-GW4	571677	Antimony, Dissolved	53.80	0.00	)B	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW1-GW4	571671	Total Petroleum Hydrocarbons	1.50	0.25	B	mg/l	08/17/93	COMPUCHEM
PC-TF4-MW2-GW4	570190	1,2-Dichlorobenzene	1.00	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570190	Toluene	0.21	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570196	Copper	18.60	0.00	)B	ug/l	08/11/93	COMPUCHEM
PC-TF4-MW2-GW4	570181	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TF4-MW3-GW4	570205	Antimony	84.60	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TF4-MW3-GW4	570188	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/11/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-MW3-GW4	570211	Total Petroleum Hydrocarbons	1.10	0.25	B	mg/l	08/11/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,2-Dichlorobenzene	1.10	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,3-Dichlorobenzene	0.07	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	1,4-Dichlorobenzene	0.07	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570415	Toluene	0.11	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570462	Antimony, Dissolved	36.20	0.00	)B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570467	Copper	22.50	0.00	)B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	570425	bis(2-Ethylhexyl)phthalate	0.90	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TF4-MW4-GW4	572090	Total Petroleum Hydrocarbons	2.10	0.25	B	mg/l	08/12/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Antimony, Dissolved	69.20	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Lead, Dissolved	9.40	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571676	Zinc, Dissolved	7.10	0.00	)B	ug/l	08/17/93	COMPUCHEM
PC-TF4-MW8-GW4	571666	Total Petroleum Hydrocarbons	0.80	0.25	B	mg/l	08/17/93	COMPUCHEM
PC-TF4-SD001	566948	Chloroform	1.10	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566948	Methylene chloride	1.90	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566948	1,2-Dichlorobenzene	3.30	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Copper	4.80	0.00	)B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Lead	4.50	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566964	Zinc	13.80	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001	566956	bis(2-Ethylhexyl)phthalate	90.00	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	566952	Chloroform	0.95	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	566968	Copper	2.60	0.00	)B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	566968	Lead	0.93	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	566968	Zinc	4.80	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD001A	566957	bis(2-Ethylhexyl)phthalate	50.00	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566954	1,1,1-Trichloroethane	0.36	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566954	Chloroform	1.50	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566970	Copper	1.40	0.00	)B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566970	Lead	1.30	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002A	566970	Zinc	5.60	0.00	B	mg/kg	07/29/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD002A	566962	bis(2-Ethylhexyl)phthalate	110.00	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002B	566953	Chloroform	0.98	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD002B	566969	Copper	1.80	0.00	)B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002B	566969	Lead	0.90	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD002B	566969	Zinc	5.90	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566955	Chloroform	1.00	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566955	1,2-Dichlorobenzene	1.20	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566971	Copper	1.50	0.00	)B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566971	Lead	3.00	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566971	Zinc	7.30	0.00	B	mg/kg	07/29/93	COMPUCHEM
PC-TF4-SD003	566963	bis(2-Ethylhexyl)phthalate	110.00	0.00	B	ug/kg	07/29/93	COMPUCHEM
PC-TF4-SD004A	567306	Chloroform	0.95	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD004A	567323	Copper	1.70	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD004A	567323	Lead	1.90	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD004A	567323	Zinc	12.70	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD004B	567307	Chloroform	1.10	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD004B	567330	Copper	2.10	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD004B	567330	Zinc	9.10	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567308	Chloroform	1.10	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567308	Methylene chloride	18.00	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567333	Copper	6.20	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567333	Lead	8.10	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567333	Zinc	8.90	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005A	567316	bis(2-Ethylhexyl)phthalate	100.00	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD005B	567310	Chloroform	0.95	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD005B	567338	Copper	1.40	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005B	567338	Lead	1.60	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD005B	567338	Zinc	6.90	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567313	1,1,1-Trichloroethane	1.60	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567313	Chloroform	0.57	0.00	B	ug/kg	07/30/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD006A	567313	Methylene chloride	2.90	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567348	Copper	2.40	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567348	Lead	3.80	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567348	Zinc	8.60	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006A	567321	bis(2-Ethylhexyl)phthalate	280.00	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567312	Chloroform	0.74	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567312	Methylene chloride	2.70	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Copper	1.90	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Lead	1.20	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD006B	567346	Zinc	10.50	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD007	567551	Chloroform	0.82	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567551	Methylene chloride	4.70	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567551	1,2-Dichlorobenzene	3.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Copper	0.78	0.00	)B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Lead	0.93	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD007	567557	Zinc	6.30	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567552	Chloroform	0.72	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567552	1,2-Dichlorobenzene	2.80	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567561	Copper	1.60	0.00	)B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567561	Lead	4.60	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD008	567561	Zinc	10.60	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567553	Chloroform	0.68	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567564	Copper	1.70	0.00	)B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567564	Lead	3.90	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567564	Zinc	10.20	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009A	567563	bis(2-Ethylhexyl)phthalate	42.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567554	Chloroform	0.74	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567554	1,2-Dichlorobenzene	2.50	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567567	Beryllium	0.13	0.00	)B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567567	Copper	3.20	0.00	B	mg/kg	07/31/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD009B	567567	Lead	1.10	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567567	Zinc	12.20	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD009B	567566	bis(2-Ethylhexyl)phthalate	46.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567555	Chloroform	0.82	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567570	Copper	4.50	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567570	Lead	14.50	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567570	Zinc	79.20	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010A	567569	bis(2-Ethylhexyl)phthalate	55.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,1,1-Trichloroethane	0.28	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Chloroform	0.54	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	Methylene chloride	2.70	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567556	1,4-Dichlorobenzene	0.06	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567573	Copper	1.70	0.00	)B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567573	Lead	3.40	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567573	Zinc	7.80	0.00	B	mg/kg	07/31/93	COMPUCHEM
PC-TF4-SD010B	567572	bis(2-Ethylhexyl)phthalate	41.00	0.00	B	ug/kg	07/31/93	COMPUCHEM
PC-TF4-SD011	567737	1,1,1-Trichloroethane	0.34	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD011	567737	Chloroform	1.20	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD011	567737	Methylene chloride	2.00	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD011	567739	Lead	0.77	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD011	567739	Zinc	4.40	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567741	Chloroform	1.00	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567741	Methylene chloride	2.10	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567743	Lead	1.70	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567743	Zinc	5.80	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD012	567742	bis(2-Ethylhexyl)phthalate	47.00	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD013	567733	Chloroform	1.10	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD013	567733	Methylene chloride	4.90	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD013	567735	Lead	1.30	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD013	567735	Zinc	4.80	0.00	B	mg/kg	08/01/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD014	567753	1,1,1-Trichloroethane	0.37	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD014	567753	Chloroform	1.20	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD014	567755	Lead	2.30	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD014	567755	Zinc	8.30	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD015	567713	Chloroform	0.96	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD015	567715	Copper	1.40	0.00	)B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD015	567715	Lead	0.77	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD015	567715	Zinc	14.30	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD016	567745	Chloroform	0.92	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD016	567747	Lead	2.20	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD016	567747	Zinc	7.60	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD016	567746	bis(2-Ethylhexyl)phthalate	85.00	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD017	567717	Methylene chloride	0.77	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD017	567725	Lead	7.30	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD017	567725	Zinc	40.90	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD018	567749	1,1,1-Trichloroethane	1.10	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD018	567749	Chloroform	2.10	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD018	567751	Lead	1.60	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD018	567751	Zinc	14.10	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD104B	567309	Chloroform	1.10	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD104B	567309	Methylene chloride	3.30	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD104B	567336	Copper	2.10	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD104B	567336	Lead	1.40	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD104B	567336	Zinc	8.50	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567311	1,1,1-Trichloroethane	0.43	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567311	Chloroform	0.99	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567311	Methylene chloride	3.90	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567340	Copper	1.90	0.00	)B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567340	Lead	1.90	0.00	B	mg/kg	07/30/93	COMPUCHEM
PC-TF4-SD106B	567340	Zinc	8.30	0.00	B	mg/kg	07/30/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SD106B	567319	bis(2-Ethylhexyl)phthalate	60.00	0.00	B	ug/kg	07/30/93	COMPUCHEM
PC-TF4-SD115	567757	1,1,1-Trichloroethane	0.37	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567757	Chloroform	1.20	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567757	Methylene chloride	6.90	0.00	B	ug/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567759	Lead	0.80	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SD115	567759	Zinc	5.80	0.00	B	mg/kg	08/01/93	COMPUCHEM
PC-TF4-SW001	566797	Methylene chloride	0.29	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW001	566797	1,2-Dichlorobenzene	1.00	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW001	566797	1,4-Dichlorobenzene	0.17	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW001	566797	Toluene	0.16	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW001	566803	Copper	4.60	0.00	)B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW002	566819	Methylene chloride	0.32	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW002	566819	Toluene	0.11	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW002	566822	Antimony	56.60	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW002	566822	Copper	5.00	0.00	)B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW003	566824	Methylene chloride	0.17	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW003	566824	Toluene	0.33	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	1,1,1-Trichloroethane	0.16	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	Benzene	0.14	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW004	566828	Toluene	0.18	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TF4-SW005	567254	Methylene chloride	0.18	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW005	567260	bis(2-Ethylhexyl)phthalate	0.90	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW006	567252	Methylene chloride	0.33	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW006	567258	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW007	567250	Chloroform	0.29	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW007	567250	Methylene chloride	0.15	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW007	567283	Antimony	56.50	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW007	567257	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW008	567256	Methylene chloride	0.34	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-TF4-SW008	567303	Copper	5.40	0.00	)B	ug/l	07/30/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TF4-SW106	567255	Methylene chloride	0.37	0.00	B	ug/l	07/30/93	COMPUCHEM
PC-SF5-MW1-GW4	571264	Toluene	0.11	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571313	Antimony, Dissolved	49.90	0.00	()B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571313	Arsenic, Dissolved	22.10	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571297	Cadmium	4.70	0.00	()B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571297	Zinc	14.80	0.00	()B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571313	Zinc, Dissolved	4.20	0.00	()B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571276	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-SF5-MW1-GW4	571298	Total Petroleum Hydrocarbons	5.80	0.25	B	mg/l	08/15/93	COMPUCHEM
PC-SF5-MW2-GW4	574053	Methylene chloride	0.11	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574053	1,2-Dichlorobenzene	2.20	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574053	Ethylbenzene	0.09	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574053	Toluene	0.14	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574064	Copper	5.90	0.00	()B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574064	Zinc	33.60	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574080	Zinc, Dissolved	27.90	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574059	Phenol	0.70	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574059	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW2-GW4	574076	Total Petroleum Hydrocarbons	1.70	0.25	B	mg/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573653	Toluene	0.11	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573656	Copper	6.80	0.00	()B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573656	Zinc	74.50	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573654	Di-n-butyl phthalate	1.00	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573654	bis(2-Ethylhexyl)phthalate	11.00	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW3-GW4	573655	Total Petroleum Hydrocarbons	3.80	0.25	B	mg/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574052	Methylene chloride	0.44	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574052	1,2-Dichlorobenzene	0.28	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574052	Ethylbenzene	0.10	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574052	Toluene	0.23	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574063	Zinc	13.00	0.00	()B	ug/l	08/24/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-SF5-MW4-GW4	574075	Zinc, Dissolved	65.30	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW4-GW4	574058	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-SF5-MW5-GW4	575028	1,1,1-Trichloroethane	0.08	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575028	Chloroform	0.17	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575028	Methylene chloride	0.74	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575030	Antimony	38.50	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575030	Copper	4.40	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575030	Selenium	9.50	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	575030	Zinc	7.10	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW5-GW4	576981	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-SF5-MW5-GW4	575031	Total Petroleum Hydrocarbons	0.30	0.25	B	mg/l	08/29/93	COMPUCHEM
PC-SF5-MW6-GW4	574969	Copper	10.10	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW6-GW4	574969	Zinc	33.60	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW6-GW4	574972	Zinc, Dissolved	9.40	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW6-GW4	576977	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-SF5-MW6-GW4	574970	Total Petroleum Hydrocarbons	1.10	0.25	B	mg/l	09/29/93	COMPUCHEM
PC-SF5-MW7-GW4	575020	Methylene chloride	0.39	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW7-GW4	575022	Selenium	7.50	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW7-GW4	575022	Zinc	14.70	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW7-GW4	575027	Zinc, Dissolved	18.20	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-SF5-MW7-GW4	576985	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-SF5-MW7-GW4	575026	Total Petroleum Hydrocarbons	1.00	0.25	B	mg/l	08/29/93	COMPUCHEM
PC-SF5-MW8-GW4	576959	Methylene chloride	0.28	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	576959	1,2-Dichlorobenzene	0.43	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	576959	1,3-Dichlorobenzene	0.15	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	576959	1,4-Dichlorobenzene	0.38	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	576959	Toluene	0.39	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	577018	Arsenic, Dissolved	4.20	0.00	)B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW8-GW4	576969	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW9-GW4	576954	Methylene chloride	0.30	0.00	B	ug/l	09/13/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-SF5-MW9-GW4	576954	1,2-Dichlorobenzene	0.11	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW9-GW4	576954	Toluene	0.18	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW9-GW4	577013	Arsenic, Dissolved	4.50	0.00	()B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW9-GW4	576966	Phenol	0.50	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-SF5-MW9-GW4	576966	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-LF6-MW1-GW4	570412	1,2-Dichlorobenzene	0.86	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW1-GW4	570412	1,3-Dichlorobenzene	0.20	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW1-GW4	570412	1,4-Dichlorobenzene	0.19	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW1-GW4	570412	Toluene	0.16	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW1-GW4	570419	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-LF6-MW1-GW4	570449	Total Petroleum Hydrocarbons	1.60	0.25	B	mg/l	08/12/93	COMPUCHEM
PC-LF6-MW10-GW4	578083	Methylene chloride	0.10	0.00	B	ug/l	09/16/93	COMPUCHEM
PC-LF6-MW10-GW4	578095	Arsenic, Dissolved	4.60	0.00	()B	ug/l	09/16/93	COMPUCHEM
PC-LF6-MW10-GW4	578083	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/16/93	COMPUCHEM
PC-LF6-MW10-GW4	578092	Total Petroleum Hydrocarbons	0.90	0.25	B	mg/l	09/16/93	COMPUCHEM
PC-LF6-MW2-GW4	570193	1,2-Dichlorobenzene	0.58	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-LF6-MW2-GW4	570193	Toluene	0.15	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-LF6-MW2-GW4	570203	Antimony	48.40	0.00	()B	ug/l	08/11/93	COMPUCHEM
PC-LF6-MW2-GW4	570203	Zinc	6.90	0.00	()B	ug/l	08/11/93	COMPUCHEM
PC-LF6-MW2-GW4	570187	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-LF6-MW2-GW4	570210	Total Petroleum Hydrocarbons	0.50	0.25	B	mg/l	08/11/93	COMPUCHEM
PC-LF6-MW3-GW4	574377	Copper	4.20	0.00	()B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574377	Zinc	4.30	0.00	()B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574408	Di-n-butyl phthalate	0.80	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574408	Diethyl phthalate	0.70	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574408	Phenol	3.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574408	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-LF6-MW3-GW4	574411	Total Petroleum Hydrocarbons	0.50	0.25	B	mg/l	08/26/93	COMPUCHEM
PC-LF6-MW4-GW4	574951	Methylene chloride	0.34	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	574955	Copper	8.20	0.00	()B	ug/l	08/30/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-LF6-MW4-GW4	574955	Zinc	20.40	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	574959	Zinc, Dissolved	8.80	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW4-GW4	576976	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW4-GW4	574957	Total Petroleum Hydrocarbons	0.50	0.25	B	mg/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	574933	Methylene chloride	0.35	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	574933	1,2-Dichlorobenzene	0.15	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	574936	Copper	4.90	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	574936	Zinc	11.60	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	574938	Zinc, Dissolved	10.00	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW5-GW4	576975	bis(2-Ethylhexyl)phthalate	9.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW6-GW4	575017	Antimony	35.20	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW6-GW4	575017	Copper	5.20	0.00	)B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW6-GW4	575017	Zinc	67.70	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW6-GW4	575019	Zinc, Dissolved	38.20	0.00	B	ug/l	08/30/93	COMPUCHEM
PC-LF6-MW6-GW4	576986	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-LF6-MW6-GW4	575018	Total Petroleum Hydrocarbons	2.30	0.25	B	mg/l	08/30/93	COMPUCHEM
PC-LF6-MW8-GW4	576281	Methylene chloride	0.42	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW8-GW4	576281	1,2-Dichlorobenzene	1.00	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW8-GW4	576281	1,3-Dichlorobenzene	0.27	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW8-GW4	576281	1,4-Dichlorobenzene	0.27	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW8-GW4	576279	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW8-GW4	576283	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576285	Methylene chloride	0.68	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576285	1,2-Dichlorobenzene	2.40	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576285	1,3-Dichlorobenzene	0.19	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576285	1,4-Dichlorobenzene	0.21	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576286	Antimony	42.40	0.00	)B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576286	Selenium	24.50	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-MW9-GW4	576284	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-LF6-SD1	571972	1,1,1-Trichloroethane	3.30	0.00	B	ug/kg	08/17/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-LF6-SD1	571972	Chloroform	1.20	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD1	571972	Methylene chloride	1.90	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD1	572014	Arsenic	2.50	0.00	()B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD1	572014	Zinc	20.70	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD2	571967	Chloroform	0.38	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD2	571967	Methylene chloride	4.80	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD2	571967	1,2-Dichlorobenzene	0.23	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD2	572000	Arsenic	11.90	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD2	572000	Zinc	199.00	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD3	571968	Chloroform	0.23	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD3	571968	Methylene chloride	1.70	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD3	572005	Arsenic	2.80	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD3	572005	Zinc	80.70	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	571973	1,1,1-Trichloroethane	0.72	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	571973	Chloroform	0.61	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	571973	Methylene chloride	1.50	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	572019	Arsenic	2.00	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	572019	Selenium	0.97	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-LF6-SD4	572019	Zinc	67.40	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-FF7-MW1-GW4	576484	1,1,1-Trichloroethane	0.08	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576484	Methylene chloride	0.32	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576484	1,3-Dichlorobenzene	4.60	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576494	Antimony, Dissolved	42.50	0.00	()B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576488	Selenium	3.30	0.00	()B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576486	Di-n-butyl phthalate	1.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW1-GW4	576486	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-FF7-MW2-GW4	577486	Methylene chloride	0.16	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-FF7-MW2-GW4	577486	1,3-Dichlorobenzene	0.14	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-FF7-MW2-GW4	577486	Toluene	0.36	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-FF7-MW2-GW4	577507	Selenium	3.00	0.00	()B	ug/l	09/14/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-FF7-MW2-GW4	577487	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-FF7-MW2-GW4	577505	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	09/14/93	COMPUCHEM
PC-FF7-MW3-GW4	577695	Methylene chloride	0.24	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577712	Arsenic, Dissolved	4.10	0.00	)B	ug/l	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577710	Selenium	3.40	0.00	)B	ug/l	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577700	Di-n-butyl phthalate	0.90	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577700	bis(2-Ethylhexyl)phthalate	11.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-FF7-MW3-GW4	577711	Total Petroleum Hydrocarbons	0.80	0.25	B	mg/l	09/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571260	Methylene chloride	0.11	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571260	1,3-Dichlorobenzene	0.53	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571286	Antimony	52.30	0.00	)B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571628	Antimony, Dissolved	46.10	0.00	)B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571628	Lead, Dissolved	4.80	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571271	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-HN8-MW1-GW4	571287	Total Petroleum Hydrocarbons	2.30	0.25	B	mg/l	08/15/93	COMPUCHEM
PC-HN8-MW2-GW4	574927	Methylene chloride	0.83	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574927	1,4-Dichlorobenzene	0.25	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574927	Toluene	0.24	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574930	Zinc	9.20	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	574932	Zinc, Dissolved	15.90	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW2-GW4	576995	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-HN8-MW2-GW4	574931	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	574989	Methylene chloride	0.50	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	574994	Zinc	7.90	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	574997	Zinc, Dissolved	6.80	0.00	)B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW3-GW4	576989	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-HN8-MW3-GW4	574996	Total Petroleum Hydrocarbons	1.00	0.25	B	mg/l	08/29/93	COMPUCHEM
PC-HN8-MW4-GW4	575003	Chloroform	0.33	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW4-GW4	575003	Methylene chloride	0.83	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW4-GW4	575006	Zinc	15.30	0.00	)B	ug/l	08/29/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-MW4-GW4	575011	Zinc, Dissolved	6.20	0.00	()B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW4-GW4	576974	bis(2-Ethylhexyl)phthalate	7.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-HN8-MW5-GW4	577542	Methylene chloride	0.21	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-HN8-MW5-GW4	577542	1,2-Dichlorobenzene	0.14	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-HN8-MW5-GW4	577542	Toluene	0.17	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-HN8-MW5-GW4	577546	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-HN8-MW5-GW4	577548	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	09/14/93	COMPUCHEM
PC-HN8-MW9-GW4	574939	Methylene chloride	0.66	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW9-GW4	574939	Toluene	0.15	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW9-GW4	574944	Zinc	6.70	0.00	()B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW9-GW4	574949	Zinc, Dissolved	11.80	0.00	()B	ug/l	08/29/93	COMPUCHEM
PC-HN8-MW9-GW4	576992	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-HN8-MW9-GW4	574946	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	08/29/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570778	1,1,1-Trichloroethane	0.08	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570778	Chloroform	0.63	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570778	Methylene chloride	1.40	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570778	1,2-Dimethylbenzene	0.04	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570778	Toluene	0.21	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS01-02	570786	Zinc	10.10	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570779	1,1,1-Trichloroethane	0.07	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570779	Chloroform	0.42	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570779	Methylene chloride	1.00	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570779	1,2-Dimethylbenzene	0.03	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570779	Toluene	0.21	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS02-03	570788	Zinc	5.60	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS09-10	570780	1,1,1-Trichloroethane	0.13	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS09-10	570780	Chloroform	0.97	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS09-10	570780	Methylene chloride	1.20	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS09-10	570780	1,4-Dichlorobenzene	0.13	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB2-SS09-10	570780	Toluene	0.25	0.00	B	ug/kg	08/13/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-SB2-SS09-10	570795	Zinc	4.70	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Chloroform	0.55	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	Methylene chloride	1.60	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,2-Dimethylbenzene	0.12	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,3-Dichlorobenzene	0.04	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570781	1,4-Dichlorobenzene	0.13	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS01-02	570798	Zinc	8.50	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570782	1,1,1-Trichloroethane	0.07	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570782	Chloroform	0.24	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570782	Methylene chloride	0.48	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570782	1,2-Dimethylbenzene	0.30	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570782	Styrene	0.15	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB3-SS09-11	570804	Zinc	4.20	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS00-02	570783	Chloroform	0.22	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS00-02	570783	Methylene chloride	0.31	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS00-02	570783	1,2-Dimethylbenzene	0.21	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS00-02	570783	Toluene	0.12	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS00-02	570807	Zinc	13.30	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570784	Chloroform	0.20	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570784	Methylene chloride	0.43	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570784	1,2-Dimethylbenzene	0.13	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570784	Toluene	0.19	0.00	B	ug/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570810	Zinc	4.60	0.00	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB4-SS12-14	570811	Total Petroleum Hydrocarbons	7.30	6.30	B	mg/kg	08/13/93	COMPUCHEM
PC-HN8-SB6-SS00-02	571327	1,1,1-Trichloroethane	0.26	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS00-02	571327	Chloroform	0.61	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS00-02	571364	Arsenic	2.50	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS00-02	571364	Zinc	15.00	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS12-13	571320	Chloroform	0.51	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS12-13	571320	Methylene chloride	5.70	0.00	B	ug/kg	08/15/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-SB6-SS12-13	571348	Arsenic	1.20	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS12-13	571348	Lead	0.72	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB6-SS12-13	571348	Zinc	6.80	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571335	Chloroform	0.48	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571335	Methylene chloride	5.10	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571335	Toluene	0.23	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571399	Arsenic	0.62	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571399	Lead	1.70	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS00-02	571399	Zinc	17.60	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571324	1,1,1-Trichloroethane	0.20	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571324	Chloroform	0.82	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571324	Methylene chloride	2.80	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571324	Toluene	0.21	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571360	Arsenic	0.52	0.00	)B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571360	Lead	1.00	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB7-SS12-13	571360	Zinc	5.50	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571690	1,1,1-Trichloroethane	0.10	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571690	Chloroform	0.78	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571690	Methylene chloride	12.00	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571692	Arsenic	1.20	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571692	Lead	1.10	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS01-02	571692	Zinc	11.10	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS09-10	571700	Chloroform	0.62	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS09-10	571700	Methylene chloride	2.70	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS09-10	571705	Arsenic	0.43	0.00	)B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS09-10	571705	Lead	0.76	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS09-10	571705	Zinc	7.30	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS10-12	571683	Chloroform	0.59	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS10-12	571683	Methylene chloride	7.30	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS10-12	571686	Arsenic	0.56	0.00	)B	mg/kg	08/17/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-HN8-SB8-SS10-12	571686	Lead	0.88	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS10-12	571686	Zinc	5.80	0.00	B	mg/kg	08/17/93	COMPUCHEM
PC-HN8-SB8-SS10-12	571685	bis(2-Ethylhexyl)phthalate	35.00	0.00	B	ug/kg	08/17/93	COMPUCHEM
PC-RT9-MW1-GW4	574560	Methylene chloride	0.26	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574573	Zinc	32.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574585	Zinc, Dissolved	4.40	0.00	)B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574569	Diethyl phthalate	0.60	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574569	Phenol	2.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574569	bis(2-Ethylhexyl)phthalate	7.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW1-GW4	574577	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574574	Antimony	35.30	0.00	)B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574574	Beryllium	1.00	0.00	)B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574574	Zinc	103.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574587	Zinc, Dissolved	10.60	0.00	)B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574570	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW2-GW4	574579	Total Petroleum Hydrocarbons	0.80	0.25	B	mg/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574565	1,1,1-Trichloroethane	0.07	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574565	Methylene chloride	0.23	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574575	Beryllium	1.00	0.00	)B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574575	Zinc	77.80	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574571	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-RT9-MW3-GW4	574580	Total Petroleum Hydrocarbons	0.60	0.25	B	mg/l	08/27/93	COMPUCHEM
PC-RT9-MW4-GW4	576289	Methylene chloride	0.81	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-RT9-MW4-GW4	576289	1,3-Dichlorobenzene	0.75	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-RT9-MW4-GW4	576290	Antimony	61.60	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-RT9-MW4-GW4	576290	Selenium	22.70	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-RT9-MW4-GW4	576288	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-RT9-MW4-GW4	576291	Total Petroleum Hydrocarbons	0.40	0.25	B	mg/l	09/08/93	COMPUCHEM
PC-RT9-MW5-GW4	574566	Methylene chloride	0.83	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-RT9-MW5-GW4	574566	1,4-Dichlorobenzene	0.18	0.00	B	ug/l	08/26/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-MW5-GW4	574566	Toluene	0.22	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-RT9-MW5-GW4	577702	Di-n-butyl phthalate	0.60	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW5-GW4	577702	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW5-GW4	574584	Total Petroleum Hydrocarbons	1.10	0.25	B	mg/l	08/26/93	COMPUCHEM
PC-RT9-MW6-GW4	577696	Methylene chloride	0.19	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW6-GW4	577696	1,3-Dichlorobenzene	0.19	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW6-GW4	577701	Di-n-butyl phthalate	1.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW6-GW4	577701	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-RT9-MW6-GW4	577714	Total Petroleum Hydrocarbons	1.40	0.25	B	mg/l	09/15/93	COMPUCHEM
PC-RT9-SB10-SS01-02	522279	Chloroform	0.77	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522279	Methylene chloride	3.70	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Arsenic	0.65	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Barium	7.90	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Cobalt	1.20	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Magnesium	490.00	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Sodium	81.40	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Vanadium	5.10	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS01-02	522311	Zinc	4.90	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522280	Chloroform	1.30	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522280	Methylene chloride	1.70	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522280	Methyl-t-Butyl Ether	5.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522312	Arsenic	0.67	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522312	Barium	2.70	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522312	Sodium	121.00	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522312	Vanadium	3.10	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB10-SS10-12	522312	Zinc	3.50	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522281	Chloroform	1.50	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522281	Methylene chloride	2.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522281	1,3-Dichlorobenzene	0.41	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522281	Toluene	0.20	0.00	B	ug/kg	11/12/92	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB11-SS01-02	522313	Arsenic	0.52	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522313	Barium	7.60	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522313	Cobalt	1.20	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522313	Magnesium	504.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522313	Sodium	87.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522313	Zinc	4.30	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS01-02	522298	Di-n-butyl phthalate	72.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522284	Chloroform	0.84	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522284	Methylene chloride	5.30	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522284	1,3-Dichlorobenzene	0.50	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522284	Toluene	0.41	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522314	Arsenic	0.45	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522314	Barium	2.50	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522314	Sodium	102.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522314	Vanadium	2.70	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522314	Zinc	3.30	0.00	()B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB11-SS12-14	522299	Di-n-butyl phthalate	52.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB12-SS01-02	522588	Chloroform	0.51	0.00	B	ug/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS01-02	522588	Methylene chloride	9.40	0.00	B	ug/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS01-02	525558	Arsenic	0.75	0.00	B	mg/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS01-02	525558	Beryllium	0.26	0.00	B	mg/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS01-02	525558	Zinc	6.00	0.00	B	mg/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS01-02	522589	Di-n-butyl phthalate	86.00	0.00	B	ug/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS05-07	522574	1,2-Dichlorobenzene	0.92	0.00	B	ug/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS05-07	525548	Arsenic	0.65	0.00	B	mg/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS05-07	525548	Zinc	6.70	0.00	B	mg/kg	11/13/92	COMPUCHEM
PC-RT9-SB12-SS05-07	522578	Di-n-butyl phthalate	55.00	0.00	B	ug/kg	11/13/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522277	1,1,1-Trichloroethane	0.24	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522277	Chloroform	1.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522277	Methylene chloride	3.10	0.00	B	ug/kg	11/12/92	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB7-SS01-02	522309	Arsenic	0.65	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Barium	13.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Calcium	495.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Cobalt	1.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Magnesium	515.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Sodium	84.10	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522309	Zinc	6.80	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS01-02	522294	Di-n-butyl phthalate	150.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,1,1-Trichloroethane	0.17	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Chloroform	0.72	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Methylene chloride	2.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,2-Dichlorobenzene	0.08	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	1,3-Dichlorobenzene	0.49	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522276	Toluene	0.43	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Arsenic	0.44	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Barium	4.40	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Calcium	495.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Cobalt	1.40	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Sodium	95.20	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522308	Zinc	5.00	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS05-07	522293	Di-n-butyl phthalate	190.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,1,1-Trichloroethane	0.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Chloroform	1.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,2-Dichlorobenzene	0.19	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,3-Dichlorobenzene	0.06	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	1,4-Dichlorobenzene	0.55	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Ethylbenzene	0.22	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Styrene	0.07	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522271	Toluene	0.66	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522300	Arsenic	0.90	0.00	B()	mg/kg	11/12/92	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB7-SS15-17	522300	Barium	2.80	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522300	Sodium	113.00	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522300	Vanadium	3.30	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522300	Zinc	3.60	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS15-17	522285	Di-n-butyl phthalate	320.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	1,1,1-Trichloroethane	0.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	Chloroform	1.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	Methylene chloride	4.80	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	1,2-Dichlorobenzene	0.14	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	1,3-Dichlorobenzene	0.28	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	1,4-Dichlorobenzene	0.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	Ethylbenzene	0.38	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522272	Toluene	0.56	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522304	Arsenic	0.65	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522304	Barium	2.80	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522304	Sodium	105.00	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522304	Vanadium	3.40	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522304	Zinc	3.40	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB7-SS21-22	522289	Di-n-butyl phthalate	240.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522275	Chloroform	0.34	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522275	Methylene chloride	0.97	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522275	1,3-Dichlorobenzene	0.07	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522275	1,4-Dichlorobenzene	1.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522275	Toluene	0.47	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Arsenic	0.71	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Barium	5.60	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Calcium	358.00	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Cobalt	1.20	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Sodium	89.30	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS01-02	522307	Zinc	4.50	0.00	B	mg/kg	11/12/92	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB8-SS01-02	522292	Di-n-butyl phthalate	210.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,1,1-Trichloroethane	0.11	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Chloroform	0.86	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Methylene chloride	2.90	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,2-Dichlorobenzene	0.11	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,3-Dichlorobenzene	0.08	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	1,4-Dichlorobenzene	0.77	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Ethylbenzene	0.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Styrene	0.09	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522273	Toluene	0.64	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Arsenic	0.66	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Barium	2.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Sodium	105.00	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Vanadium	2.50	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522305	Zinc	3.40	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB8-SS15-17	522290	Di-n-butyl phthalate	230.00	0.00	BJ	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	1,1,1-Trichloroethane	0.23	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Chloroform	1.10	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Methylene chloride	4.20	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	1,3-Dichlorobenzene	0.61	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Ethylbenzene	0.17	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522274	Toluene	0.52	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Barium	10.20	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Sodium	97.30	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522306	Zinc	5.60	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS01-02	522291	Di-n-butyl phthalate	230.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522278	Chloroform	1.80	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522278	Methylene chloride	1.50	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Arsenic	0.51	0.00	B()	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Barium	3.70	0.00	B()	mg/kg	11/12/92	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-RT9-SB9-SS15-17	522310	Sodium	138.00	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Vanadium	4.10	0.00	BQ	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522310	Zinc	3.90	0.00	B	mg/kg	11/12/92	COMPUCHEM
PC-RT9-SB9-SS15-17	522295	Di-n-butyl phthalate	210.00	0.00	B	ug/kg	11/12/92	COMPUCHEM
PC-BG1-SB1-SS00-01	569291	1,1,1-Trichloroethane	0.07	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS00-01	569291	Chloroform	1.00	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS00-01	569291	Methylene chloride	3.00	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS00-01	569297	Zinc	11.40	0.00	B	mg/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569292	1,1,1-Trichloroethane	0.27	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569292	Chloroform	0.91	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569292	Methylene chloride	2.50	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS02-03	569298	Zinc	3.80	0.00	B	mg/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569293	1,1,1-Trichloroethane	0.10	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569293	Chloroform	0.83	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569293	Methylene chloride	1.80	0.00	B	ug/kg	08/09/93	COMPUCHEM
PC-BG1-SB1-SS09-10	569299	Zinc	3.80	0.00	B	mg/kg	08/09/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571322	1,1,1-Trichloroethane	0.05	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571322	Chloroform	0.79	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571322	Methylene chloride	3.40	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571322	Toluene	0.25	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571352	Lead	1.40	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS00-01	571352	Zinc	15.30	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS02-03	571330	Chloroform	0.92	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS02-03	571330	1,4-Dichlorobenzene	0.11	0.00	B	ug/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS02-03	571379	Arsenic	1.70	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS02-03	571379	Lead	1.40	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-BG1-SB2-SS02-03	571379	Zinc	9.60	0.00	B	mg/kg	08/15/93	COMPUCHEM
PC-PW-PW1-GW4	569853	1,2-Dichlorobenzene	0.76	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW1-GW4	569853	Toluene	0.12	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW1-GW4	569862	Antimony	44.40	0.00	B	ug/l	08/10/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-PW-PW1-GW4	569867	Antimony, Dissolved	38.50	0.00	()B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW1-GW4	569862	Copper	4.60	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW1-GW4	569874	bis(2-Ethylhexyl)phthalate	1.00	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW2-GW4	569854	1,2-Dichlorobenzene	0.31	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW2-GW4	569854	1,4-Dichlorobenzene	0.36	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW2-GW4	569854	Toluene	0.17	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW2-GW4	569863	Copper	4.10	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW2-GW4	569877	bis(2-Ethylhexyl)phthalate	0.60	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW3-GW4	569860	1,2-Dichlorobenzene	0.23	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW3-GW4	569860	1,4-Dichlorobenzene	0.38	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW3-GW4	569860	Toluene	0.18	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-PW-PW3-GW4	569883	bis(2-Ethylhexyl)phthalate	0.90	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-EB01	522051	Chloroform	0.17	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB01	522051	Methylene chloride	2.40	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB01	522053-EB1	bis(2-Ethylhexyl)phthalate	69.00	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB01	525534	Zinc	5.30	0.00	()B	ug/l	11/12/92	COMPUCHEM
PC-EB02	522051-EB2	Chloroform	0.20	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB02	522051-EB2	Methylene chloride	2.60	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB02	522053	Diethyl phthalate	2.00	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB02	522053	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-EB02	525534-EB2	Zinc	5.30	0.00	()B	ug/l	11/12/92	COMPUCHEM
PC-ER01	567253	Methylene chloride	0.11	0.00	B	ug/l	07/29/93	COMPUCHEM
PC-ER03	567576	Toluene	0.13	0.00	B	ug/l	07/31/93	COMPUCHEM
PC-ER03	567579	Copper	4.60	0.00	()B	ug/l	07/31/93	COMPUCHEM
PC-ER04	567708	1,2-Dichlorobenzene	0.07	0.00	B	ug/l	08/01/93	COMPUCHEM
PC-ER04	567708	Toluene	0.29	0.00	B	ug/l	08/01/93	COMPUCHEM
PC-ER04	567709	bis(2-Ethylhexyl)phthalate	9.00	0.00	B	ug/l	08/01/93	COMPUCHEM
PC-ER05	570413	1,2-Dichlorobenzene	0.29	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-ER05	570413	1,3-Dichlorobenzene	0.07	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-ER05	570413	1,4-Dichlorobenzene	0.62	0.00	B	ug/l	08/12/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER05	570413	Toluene	0.16	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-ER05	570450	Antimony	60.50	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-ER05	570463	Antimony, Dissolved	36.20	0.00	)B	ug/l	08/12/93	COMPUCHEM
PC-ER07	571263	Toluene	0.25	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER07	571274	bis(2-Ethylhexyl)phthalate	3.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER08	571310	Antimony, Dissolved	76.90	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER08	571269	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER09	571261	1,2-Dichlorobenzene	1.40	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER09	571261	Toluene	0.18	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER09	571272	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	08/15/93	COMPUCHEM
PC-ER10	571672	Methylene chloride	0.76	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER10	571672	1,2-Dichlorobenzene	0.40	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER10	571672	1,4-Dichlorobenzene	0.37	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER10	571672	Toluene	0.12	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER10	571674	Copper	4.50	0.00	)B	ug/l	08/17/93	COMPUCHEM
PC-ER11	571952	Methylene chloride	0.99	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER11	571952	Benzene	0.08	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER11	571952	Toluene	0.39	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER11	571957	Copper	4.50	0.00	)B	ug/l	08/17/93	COMPUCHEM
PC-ER12	571951	Methylene chloride	0.98	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER12	571951	Benzene	0.07	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER12	571951	Toluene	0.28	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-ER13	573664	1,4-Dichlorobenzene	0.25	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-ER13	573664	Toluene	0.19	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-ER13	573665	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-ER14	574364	1,1,1-Trichloroethane	0.07	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER14	574364	Methylene chloride	0.29	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER14	574399	Copper, Dissolved	5.70	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER14	574382	Zinc	5.80	0.00	)B	ug/l	08/26/93	COMPUCHEM
PC-ER14	574418	Di-n-butyl phthalate	1.00	0.00	B	ug/l	08/26/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER14	574418	Diethyl phthalate	1.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER14	574418	Phenol	5.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574349	Methylene chloride	0.15	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574349	1,2-Dichlorobenzene	0.66	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574349	Ethylbenzene	0.10	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574349	Toluene	0.17	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574373	Zinc	21.40	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER15	574401	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	1,1,1-Trichloroethane	0.10	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Methylene chloride	0.29	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER16	574388	Zinc	8.80	0.00	()B	ug/l	08/26/93	COMPUCHEM
PC-ER16	574423	bis(2-Ethylhexyl)phthalate	15.00	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-ER17	574973	1,1,1-Trichloroethane	0.25	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-ER17	574973	Chloroform	0.17	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-ER17	574973	Methylene chloride	0.79	0.00	B	ug/l	08/29/93	COMPUCHEM
PC-ER17	574978	Zinc	8.50	0.00	()B	ug/l	08/29/93	COMPUCHEM
PC-ER17	576997	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	09/12/93	COMPUCHEM
PC-ER18	576688	Methylene chloride	0.30	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-ER18	576688	1,2-Dichlorobenzene	0.38	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-ER18	576688	1,3-Dichlorobenzene	0.18	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-ER18	576688	Toluene	0.39	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-ER18	576674	Zinc	6.80	0.00	()B	ug/l	09/10/93	COMPUCHEM
PC-ER18	576690	bis(2-Ethylhexyl)phthalate	10.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-ER19	576962	Chloroform	0.17	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER19	576962	Methylene chloride	0.77	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER19	576962	1,3-Dichlorobenzene	0.18	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER19	576962	1,4-Dichlorobenzene	0.59	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER19	576962	Toluene	0.22	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER19	576971	bis(2-Ethylhexyl)phthalate	14.00	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-ER20	577481	Methylene chloride	0.30	0.00	B	ug/l	09/14/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER20	577481	1,3-Dichlorobenzene	0.15	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-ER20	577481	1,4-Dichlorobenzene	0.37	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-ER20	577481	Toluene	0.24	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-ER20	577482	bis(2-Ethylhexyl)phthalate	5.00	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-ER21	578082	Methylene chloride	0.60	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-ER21	578085	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-FB01	522262	Chloroform	0.98	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB01	566786	Methylene chloride	2.00	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-FB01	522262	Methylene chloride	3.70	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB01	522262	1,2-Dichlorobenzene	1.40	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB01	522262	Toluene	0.22	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB01	566790	Copper	4.10	0.00	)B	ug/l	07/28/93	COMPUCHEM
PC-FB01	522263	bis(2-Ethylhexyl)phthalate	2.00	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB01	525534-FB1	Zinc	6.50	0.00	)B	ug/l	11/12/92	COMPUCHEM
PC-FB02	566978	Methylene chloride	0.14	0.00	B	ug/l	07/29/93	COMPUCHEM
PC-FB02	566988	Antimony	40.40	0.00	B	ug/l	07/29/93	COMPUCHEM
PC-FB02	522263-FB2	Diethyl phthalate	1.00	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB02	522263-FB2	bis(2-Ethylhexyl)phthalate	8.00	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-FB02	525534-FB2	Zinc	23.00	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-FB03	569858	1,2-Dichlorobenzene	0.24	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-FB03	569858	Toluene	0.14	0.00	B	ug/l	08/10/93	COMPUCHEM
PC-FB03	569864	Copper	7.90	0.00	)B	ug/l	08/10/93	COMPUCHEM
PC-FB04	572980	Toluene	0.11	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-FB04	573128	bis(2-Ethylhexyl)phthalate	4.00	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-FB05	572986	Benzene	0.06	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-FB05	572986	Toluene	0.40	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-FB05	572988	Copper	4.50	0.00	)B	ug/l	08/23/93	COMPUCHEM
PC-FB05	573130	bis(2-Ethylhexyl)phthalate	11.00	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-FB06	570192	1,1,1-Trichloroethane	0.21	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-FB06	570192	Methylene chloride	0.14	0.00	B	ug/l	08/11/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-FB06	570186	bis(2-Ethylhexyl)phthalate	9.00	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-FB07	576295	Methylene chloride	0.58	0.00	B	ug/l	09/07/93	COMPUCHEM
PC-FB07	576295	1,2-Dichlorobenzene	0.36	0.00	B	ug/l	09/07/93	COMPUCHEM
PC-FB07	576295	1,3-Dichlorobenzene	0.26	0.00	B	ug/l	09/07/93	COMPUCHEM
PC-FB07	576295	1,4-Dichlorobenzene	0.23	0.00	B	ug/l	09/07/93	COMPUCHEM
PC-FB07	576296	Selenium	8.10	0.00	B	ug/l	09/07/93	COMPUCHEM
PC-FB07	576663	bis(2-Ethylhexyl)phthalate	6.00	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-TB01	566832	Methylene chloride	0.25	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TB01	566832	1,2-Dichlorobenzene	0.36	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TB01	566832	1,4-Dichlorobenzene	0.13	0.00	B	ug/l	07/28/93	COMPUCHEM
PC-TB02	566977	1,3-Dichlorobenzene	0.09	0.00	B	ug/l	07/27/93	COMPUCHEM
PC-TB03	567263	1,2-Dichlorobenzene	0.67	0.00	B	ug/l	07/29/93	COMPUCHEM
PC-TB03	522260	1,2-Dichlorobenzene	0.49	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-TB03	567263	Toluene	0.12	0.00	B	ug/l	07/29/93	COMPUCHEM
PC-TB03	522260	Toluene	0.19	0.00	B	ug/l	11/12/92	COMPUCHEM
PC-TB04	567575	Toluene	0.47	0.00	B	ug/l	07/31/93	COMPUCHEM
PC-TB05	522260-TB5	Chloroform	0.14	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-TB05	522260-TB5	Methylene chloride	1.10	0.00	B	ug/l	11/13/92	COMPUCHEM
PC-TB05	567712	Toluene	0.16	0.00	B	ug/l	08/01/93	COMPUCHEM
PC-TB06	569290	1,2-Dichlorobenzene	0.56	0.00	B	ug/l	08/09/93	COMPUCHEM
PC-TB06	569290	Toluene	0.12	0.00	B	ug/l	08/09/93	COMPUCHEM
PC-TB08	570212	Methylene chloride	0.17	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TB08	570212	Toluene	0.19	0.00	B	ug/l	08/11/93	COMPUCHEM
PC-TB09	570416	Methylene chloride	0.24	0.00	B	ug/l	08/12/93	COMPUCHEM
PC-TB10	570777	Methylene chloride	0.05	0.00	B	ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	Toluene	0.22	0.00	B	ug/l	08/13/93	COMPUCHEM
PC-TB13	571711	Methylene chloride	0.57	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB13	571711	1,2-Dichlorobenzene	0.19	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB13	571711	1,4-Dichlorobenzene	0.49	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB13	571711	Toluene	0.38	0.00	B	ug/l	08/17/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TB14	571950	Methylene chloride	0.74	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB14	571950	Benzene	0.09	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB14	571950	Toluene	0.31	0.00	B	ug/l	08/17/93	COMPUCHEM
PC-TB15	572976	1,4-Dichlorobenzene	0.26	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-TB15	572975	Benzene	0.07	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-TB15	572976	Toluene	0.24	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-TB15	572975	Toluene	0.21	0.00	B	ug/l	08/23/93	COMPUCHEM
PC-TB16	573652	Toluene	0.15	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-TB17	574054	Chloroform	0.09	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-TB17	574054	Methylene chloride	0.67	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-TB17	574054	1,2-Dichlorobenzene	1.70	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-TB17	574054	Toluene	0.21	0.00	B	ug/l	08/24/93	COMPUCHEM
PC-TB18	574369	Methylene chloride	0.42	0.00	B	ug/l	08/26/93	COMPUCHEM
PC-TB19	574568	Methylene chloride	0.26	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-TB19	574568	1,4-Dichlorobenzene	0.50	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-TB19	574568	Toluene	0.23	0.00	B	ug/l	08/27/93	COMPUCHEM
PC-TB22	576297	Methylene chloride	0.52	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-TB22	576297	1,2-Dichlorobenzene	0.51	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-TB22	576297	1,3-Dichlorobenzene	0.30	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-TB22	576297	1,4-Dichlorobenzene	0.27	0.00	B	ug/l	09/08/93	COMPUCHEM
PC-TB23	576533	1,2-Dichlorobenzene	0.25	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-TB23	576533	1,3-Dichlorobenzene	0.11	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-TB23	576533	1,4-Dichlorobenzene	0.27	0.00	B	ug/l	09/09/93	COMPUCHEM
PC-TB24	576709	Methylene chloride	0.58	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-TB24	576709	1,2-Dichlorobenzene	0.15	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-TB24	576709	1,4-Dichlorobenzene	0.32	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-TB24	576709	Toluene	0.14	0.00	B	ug/l	09/10/93	COMPUCHEM
PC-TB25	576951	Methylene chloride	0.36	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-TB25	576951	1,3-Dichlorobenzene	0.11	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-TB25	576951	1,4-Dichlorobenzene	0.70	0.00	B	ug/l	09/13/93	COMPUCHEM

Table J - 12 Data Points Qualified "B"
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TB25	576951	Toluene	0.18	0.00	B	ug/l	09/13/93	COMPUCHEM
PC-TB26	577551	Methylene chloride	0.39	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-TB26	577551	1,2-Dichlorobenzene	0.32	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-TB26	577551	1,4-Dichlorobenzene	0.21	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-TB26	577551	Toluene	0.19	0.00	B	ug/l	09/14/93	COMPUCHEM
PC-TB27	577703	Methylene chloride	0.18	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-TB27	577703	1,4-Dichlorobenzene	0.30	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-TB28	578080	Methylene chloride	0.67	0.00	B	ug/l	09/15/93	COMPUCHEM
PC-TB28	578080	1,3-Dichlorobenzene	0.58	0.00	B	ug/l	09/15/93	COMPUCHEM

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-P1-MW1-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
PC-P1-MW11-GW4	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
PC-P1-MW12-GW4	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
PC-P1-MW13-GW4	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
PC-P1-MW14-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
PC-P1-MW2-GW4	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-P1-MW3-GW4	GROUNDWATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
PC-P1-MW4-GW4	GROUNDWATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
PC-P1-MW6-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB28	PC-ER21
PC-P1-SB10-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB10-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB11-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB11-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB12-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB13-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB13-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB4-SS00-01	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB4-SS02-03	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB5-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB5-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB6-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB6-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB7-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB7-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB8-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB8-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER13
PC-P1-SB9-SS00-02	SOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SB9-SS03-04	SUBSOIL	08/24/93	PC-FB4	PC-FB5	PC-TB16	PC-ER15
PC-P1-SD001	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-P1-SD002	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-P1-SD003	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-P1-SD005	SEDIMENT	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-MW1-GW4	GROUNDWATE	08/10/93	PC-FB1		PC-TB7	PC-ER5F
PC-MP2-MW2-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW3-GW4	GROUNDWATE	08/16/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW4-GW4	GROUNDWATE	08/16/93	PC-FB6		PC-TB12	PC-ER8
PC-MP2-MW5-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-MP2-MW5-GW4-RE	GROUNDWATE	09/16/93	PC-FB7		PC-TB28	PC-ER17
PC-MP2-MW6-GW4	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-MP2-MW7-GW4	GROUNDWATE	09/09/93	PC-FB7		PC-TB23	PC-ER18
PC-MP2-SB10-SS00-01	SOIL	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-SB10-SS03-04	SUBSOIL	09/13/93	PC-FB7		PC-TB25	PC-ER19
PC-MP2-SB2-SS00-02	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB2-SS04-05	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB3-SS00-02	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER10
PC-MP2-SB3-SS04-05	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER10
PC-MP2-SB4-SS00-02	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB4-SS04-05	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB5-SS00-02	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB5-SS04-05	SUBSOIL	08/17/93	PC-TB3	PC-FB6	PC-TB14	PC-ER12
PC-MP2-SB6-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB6-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB7-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB7-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-MP2-SB8-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER10
PC-MP2-SB8-SS05-06	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER10
PC-MP2-SB9-SS03-04	SUBSOIL	08/16/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-CG3-MW1-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-CG3-MW2-GW4	GROUNDWATE	08/25/93	PC-FB5		PC-TB17	PC-ER14
PC-CG3-MW3-GW4	GROUNDWATE	08/25/93	PC-FB5		PC-TB17	PC-ER14

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-CG3-MW4-GW4	GROUNDWATE	08/25/93	PC-FB5		PC-TB17	PC-ER14
PC-CG3-MW5-GW4	GROUNDWATE	08/26/93	PC-FB5		PC-TB18	PC-ER14
PC-CG3-MW6-GW4	GROUNDWATE	09/10/93	PC-FB7		PC-TB24	PC-ER18
PC-CG3-MW7-GW4	GROUNDWATE	09/13/93	PC-FB7		PC-TB25	PC-ER18
PC-CG3-SB11-SS00-02	SOIL	08/26/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
PC-CG3-SB11-SS04-06	SUBSOIL	08/26/93	PC-FB4	PC-FB5	PC-TB19	PC-ER16
PC-CG3-SB11-SS10-12	SUBSOIL	08/26/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
PC-CG3-SB12-SS00-02	SOIL	08/26/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
PC-CG3-SB12-SS04-06	SUBSOIL	08/26/93	PC-FB4	PC-FB5	PC-TB19	PC-ER16
PC-CG3-SB12-SS10-12	SUBSOIL	08/26/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
PC-CG3-SB13-SS00-02	SOIL	08/26/93	PC-FB4	PC-FB5	PC-TB18	PC-ER16
PC-CG3-SB13-SS04-06	SUBSOIL	08/26/93	PC-FB4	PC-FB5	PC-TB19	PC-ER16
PC-TF4-MW1-GW4	GROUNDWATE	08/17/93	PC-FB6		PC-TB13	PC-ER8
PC-TF4-MW2-GW4	GROUNDWATE	08/11/93	PC-FB6		PC-TB8	PC-ER5F
PC-TF4-MW3-GW4	GROUNDWATE	08/11/93	PC-FB6		PC-TB8	PC-ER5F
PC-TF4-MW4-GW4	GROUNDWATE	08/12/93	PC-FB6		PC-TB9	PC-ER5F
PC-TF4-SD001	SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-ER1
PC-TF4-SD001A	SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-ER1
PC-TF4-SD002A	SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-ER1
PC-TF4-SD002B	SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-ER1
PC-TF4-SD003	SEDIMENT	07/29/93	PC-FB1	PC-FB2	PC-TB2	PC-ER1
PC-TF4-SD004A	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER1
PC-TF4-SD004B	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER1
PC-TF4-SD005A	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER1
PC-TF4-SD005B	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER1
PC-TF4-SD006A	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER3
PC-TF4-SD006B	SEDIMENT	07/30/93	PC-FB1	PC-FB2	PC-TB3	PC-ER3
PC-TF4-SD007	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
PC-TF4-SD008	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
PC-TF4-SD009A	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-TF4-SD009B	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
PC-TF4-SD010A	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
PC-TF4-SD010B	SEDIMENT	07/31/93	PC-FB1	PC-FB2	PC-TB4	PC-ER3
PC-TF4-SD011	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER3
PC-TF4-SD012	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD013	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD014	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD015	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD016	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD017	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SD018	SEDIMENT	08/01/93	PC-FB1	PC-FB2	PC-TB5	PC-ER4
PC-TF4-SW001	SURFACEWAT	07/28/93	PC-FB1F		PC-TB1	PC-ER2F
PC-TF4-SW002	SURFACEWAT	07/28/93	PC-FB1F		PC-TB1	PC-ER2F
PC-TF4-SW003	SURFACEWAT	07/28/93	PC-FB1F		PC-TB1	PC-ER2F
PC-TF4-SW004	SURFACEWAT	07/28/93	PC-FB1F		PC-TB1	PC-ER2F
PC-TF4-SW005	SURFACEWAT	07/30/93	PC-FB1F		PC-TB3	PC-ER2F
PC-TF4-SW006	SURFACEWAT	07/30/93	PC-FB1F		PC-TB3	PC-ER2F
PC-TF4-SW007	SURFACEWAT	07/30/93	PC-FB1F		PC-TB3	PC-ER2F
PC-TF4-SW008	SURFACEWAT	07/30/93	PC-FB1F		PC-TB3	PC-ER2F
PC-SF5-MW1-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-SF5-MW2-GW4	GROUNDWATE	08/24/93	PC-FB5		PC-TB17	PC-ER14
PC-SF5-MW3-GW4	GROUNDWATE	08/24/93	PC-FB6		PC-TB10	PC-ER7
PC-SF5-MW4-GW4	GROUNDWATE	08/24/93	PC-FB5		PC-TB17	PC-ER14
PC-SF5-MW5-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-SF5-MW5-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-SF5-MW6-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-SF5-MW6-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-SF5-MW7-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-SF5-MW7-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-SF5-MW8-GW4	GROUNDWATE	09/13/93	PC-FB7		PC-TB25	PC-ER20

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-SF5-MW9-GW4	GROUNDWATE	09/13/93	PC-FB7		PC-TB25	PC-ER20
PC-LF6-MW1-GW4	GROUNDWATE	08/12/93	PC-FB6		PC-TB9	PC-ER5F
PC-LF6-MW10-GW4	GROUNDWATE	09/16/93	PC-FB7		PC-TB28	PC-ER21
PC-LF6-MW2-GW4	GROUNDWATE	08/11/93	PC-FB6		PC-TB8	PC-ER5F
PC-LF6-MW3-GW4	GROUNDWATE	08/26/93	PC-FB5		PC-TB18	PC-ER14
PC-LF6-MW4-GW4	GROUNDWATE	08/30/93	PC-FB5		PC-TB20	PC-ER17
PC-LF6-MW4-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-LF6-MW5-GW4	GROUNDWATE	08/30/93	PC-FB5		PC-TB20	PC-ER17
PC-LF6-MW5-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-LF6-MW6-GW4	GROUNDWATE	08/30/93	PC-FB5		PC-TB20	PC-ER17
PC-LF6-MW6-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-LF6-MW8-GW4	GROUNDWATE	09/08/93	PC-FB7		PC-TB22	PC-ER18
PC-LF6-MW9-GW4	GROUNDWATE	09/08/93	PC-FB7		PC-TB22	PC-ER18
PC-LF6-SD1	SEDIMENT	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER11
PC-LF6-SD2	SEDIMENT	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER11
PC-LF6-SD3	SEDIMENT	08/17/93	PC-FB3	PC-FB6	PC-TB14	PC-ER11
PC-HN8-MW1-GW4	GROUNDWATE	08/15/93	PC-FB6		PC-TB12	PC-ER8
PC-HN8-MW2-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-HN8-MW2-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-HN8-MW3-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-HN8-MW3-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-HN8-MW4-GW4	GROUNDWATE	08/29/93	PC-FB5		PC-TB20	PC-ER17
PC-HN8-MW4-GW4-RE	GROUNDWATE	09/12/93	PC-FB7		PC-TB25	PC-ER17
PC-HN8-MW5-GW4	GROUNDWATE	09/14/93	PC-FB7		PC-TB26	PC-ER20
PC-HN8-SB2-SS01-02	SUBSOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7
PC-HN8-SB2-SS09-10	SUBSOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7
PC-HN8-SB3-SS01-02	SUBSOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7
PC-HN8-SB3-SS09-11	SUBSOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7
PC-HN8-SB4-SS00-02	SOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7
PC-HN8-SB4-SS12-14	SUBSOIL	08/13/93	PC-FB3	PC-FB6	PC-TB10	PC-ER7

Table J-13 Field QC Cross Reference
MIANG, Alpena CRTC, Alpena, Michigan

Sample ID	Matrix	Date	Field Blank	Field Blank	Trip Blank	Equipment Rinsate
PC-HN8-SB6-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB6-SS12-13	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB7-SS00-02	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB7-SS12-13	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-HN8-SB8-SS01-02	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-HN8-SB8-SS10-12	SUBSOIL	08/17/93	PC-FB3	PC-FB6	PC-TB13	PC-ER10
PC-RT9-MW1-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER17
PC-RT9-MW2-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER14
PC-RT9-MW3-GW4	GROUNDWATE	08/27/93	PC-FB5		PC-TB19	PC-ER14
PC-RT9-MW4-GW4	GROUNDWATE	09/08/93	PC-FB7		PC-TB22	PC-ER18
PC-RT9-MW5-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
PC-RT9-MW6-GW4	GROUNDWATE	09/15/93	PC-FB7		PC-TB27	PC-ER20
PC-BG1-SB1-SS00-01	SOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB1-SS02-03	SUBSOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB1-SS09-10	SUBSOIL	08/09/93	PC-FB3	PC-FB6	PC-TB6	PC-ER7
PC-BG1-SB2-SS00-01	SOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-BG1-SB2-SS02-03	SUBSOIL	08/15/93	PC-FB3	PC-FB6	PC-TB12	PC-ER9
PC-PW-PW1-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ER5F
PC-PW-PW2-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ER5F
PC-PW-PW3-GW4	GROUNDWATE	08/10/93	PC-FB1F		PC-TB7	PC-ER5F

Table J - 14 Analytes Detected in Trip Blanks
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TB01	566832	1,3-Dimethylbenzene	0.18	0.00		ug/l	07/28/93	COMPUCHEM
PC-TB01	566832	1,4-Dimethylbenzene	0.18	0.00		ug/l	07/28/93	COMPUCHEM
PC-TB01	566832	Styrene	0.10	0.00		ug/l	07/28/93	COMPUCHEM
PC-TB02	566977	Methylene chloride	0.26	0.00		ug/l	07/27/93	COMPUCHEM
PC-TB03	567263	Ethylbenzene	0.09	0.00		ug/l	07/29/93	COMPUCHEM
PC-TB04	567575	Methylene chloride	0.35	0.00		ug/l	07/31/93	COMPUCHEM
PC-TB05	567712	Methylene chloride	0.39	0.00		ug/l	08/01/93	COMPUCHEM
PC-TB06	569290	Methylene chloride	0.58	0.00		ug/l	08/09/93	COMPUCHEM
PC-TB06	569290	1,3-Dimethylbenzene	0.06	0.00		ug/l	08/09/93	COMPUCHEM
PC-TB06	569290	1,4-Dichlorobenzene	0.06	0.00		ug/l	08/09/93	COMPUCHEM
PC-TB06	569290	1,4-Dimethylbenzene	0.06	0.00		ug/l	08/09/93	COMPUCHEM
PC-TB06	569290	Benzene	0.06	0.00		ug/l	08/09/93	COMPUCHEM
PC-TB07	569861	Methylene chloride	0.41	0.00		ug/l	08/10/93	COMPUCHEM
PC-TB07	569861	1,4-Dichlorobenzene	0.44	0.00		ug/l	08/10/93	COMPUCHEM
PC-TB08	570212	1,3-Dimethylbenzene	0.05	0.00		ug/l	08/11/93	COMPUCHEM
PC-TB08	570212	1,4-Dimethylbenzene	0.05	0.00		ug/l	08/11/93	COMPUCHEM
PC-TB09	570416	Chloroform	0.15	0.00	J	ug/l	08/12/93	COMPUCHEM
PC-TB09	570416	1,3-Dichlorobenzene	0.08	0.00		ug/l	08/12/93	COMPUCHEM
PC-TB10	570777	1,3-cis-Dichloropropylene	0.20	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	Chloroform	0.08	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	Tetrachloroethylene	0.06	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	1,3-Dichlorobenzene	0.08	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	1,3-Dimethylbenzene	0.05	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	1,4-Dimethylbenzene	0.05	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB10	570777	Ethylbenzene	0.08	0.00		ug/l	08/13/93	COMPUCHEM
PC-TB12	571267	Methylene chloride	0.09	0.00		ug/l	08/15/93	COMPUCHEM
PC-TB12	571267	Toluene	0.12	0.00	L	ug/l	08/15/93	COMPUCHEM
PC-TB13	571711	Chloroform	0.10	0.00	J	ug/l	08/17/93	COMPUCHEM
PC-TB13	571711	Benzene	0.06	0.00		ug/l	08/17/93	COMPUCHEM
PC-TB13	571711	Chlorobenzene	0.09	0.00	J	ug/l	08/17/93	COMPUCHEM

Table J - 14 Analytes Detected in Trip Blanks
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-TB14	571950	1,1,1-Trichloroethane	0.15	0.00	J	ug/l	08/17/93	COMPUCHEM
PC-TB14	571950	Chloroform	0.22	0.00	J	ug/l	08/17/93	COMPUCHEM
PC-TB15	572976	Methylene chloride	0.35	0.00		ug/l	08/23/93	COMPUCHEM
PC-TB15	572975	Methylene chloride	0.48	0.00		ug/l	08/23/93	COMPUCHEM
PC-TB15	572976	1,2-Dimethylbenzene	0.10	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-TB15	572976	Ethylbenzene	0.07	0.00		ug/l	08/23/93	COMPUCHEM
PC-TB15	572976	Styrene	0.08	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-TB16	573652	Methylene chloride	0.34	0.00		ug/l	08/24/93	COMPUCHEM
PC-TB20	575033	Methylene chloride	0.27	0.00	J	ug/l	08/29/93	COMPUCHEM
PC-TB22	576297	1,3-Dimethylbenzene	0.05	0.00		ug/l	09/08/93	COMPUCHEM
PC-TB22	576297	1,4-Dimethylbenzene	0.05	0.00		ug/l	09/08/93	COMPUCHEM
PC-TB22	576297	Toluene	0.19	0.00		ug/l	09/08/93	COMPUCHEM
PC-TB23	576533	Methylene chloride	0.60	0.00		ug/l	09/09/93	COMPUCHEM
PC-TB23	576533	1,3-Dimethylbenzene	0.06	0.00		ug/l	09/09/93	COMPUCHEM
PC-TB23	576533	1,4-Dimethylbenzene	0.06	0.00		ug/l	09/09/93	COMPUCHEM
PC-TB23	576533	Toluene	0.14	0.00		ug/l	09/09/93	COMPUCHEM
PC-TB24	576709	1,3-Dimethylbenzene	0.06	0.00		ug/l	09/10/93	COMPUCHEM
PC-TB24	576709	1,4-Dimethylbenzene	0.06	0.00		ug/l	09/10/93	COMPUCHEM
PC-TB25	576951	1,3-Dimethylbenzene	0.06	0.00		ug/l	09/13/93	COMPUCHEM
PC-TB25	576951	1,4-Dimethylbenzene	0.06	0.00		ug/l	09/13/93	COMPUCHEM
PC-TB26	577551	Benzene	0.21	0.00		ug/l	09/14/93	COMPUCHEM
PC-TB27	577703	Ethylbenzene	0.10	0.00		ug/l	09/15/93	COMPUCHEM
PC-TB27	577703	Toluene	0.16	0.00		ug/l	09/15/93	COMPUCHEM

J.2.2 Field Blanks

Seven FB were collected to provide baseline analytical data for the water used for equipment decontamination. Field blanks were taken for the ASTM Type II water produced onsite using a Barnstead® E-Pure system, and the potable water used in the steam cleaner and as decontamination water. Field blanks were collected by randomly selecting sample containers from the supply, filling them with water from the sample source, and then preserving as appropriate for the required analysis. The blanks were analyzed in the same manner as the associated environmental samples. Low levels of chloroform, bromenated compounds, methylene chloride, lead, arsenic, copper, nickel, and zinc were detected in selected field blanks prepared during the RI. Table J-15 summarizes the concentrations of elements detected in the field blanks collected at Alpena CRTC. The Alpena CRTC RI was conducted in four sampling events separate field blanks were obtained for each sampling event. The low levels of compounds and elements detected in the field blanks are not considered to have contributed to any levels seen in the associated environmental samples.

J.2.3 Equipment Rinseate

Twenty equipment blanks were prepared from rinseates of equipment used to obtain environmental samples. The equipment blanks were prepared by pouring ASTM Type II water produced on site, through or over sampling equipment which had been decontaminated. The equipment blanks were preserved as appropriate for the required analysis and analyzed using the same methods as the associated environmental samples. VOCs such as methylene chloride, chloroform, ethyl benzene, and toluene were detected at concentrations below the CRDL in the equipment rinseates. SVOCs such as bis(2-ethylhexyl)phthalate, diethyl phthalate and phenol were detected in equipment rinseates at concentrations below the CRQL. Table J-16 summarizes the concentrations of elements detected in the equipment blanks collected at Alpena CRTC.

J.2.4 Field Replicates

One replicate environmental sample was collected for every 10 environmental samples, as required by DOE/HWP-65. Sample collection reproducibility and media variability were measured in the laboratory by the analysis of field replicates. Field RPD values were calculated only for compounds and elements detected above the CRDLs in one replicate pair samples and only for those compounds and elements not considered to be common laboratory contaminants (e.g., methylene chloride). The RPD value of the detected compound or parameter was reviewed to assess the sample collection reproducibility and matrix variability. A total of 72 soil samples, 75 water samples, 37 sediment, 9 soil replicate samples, 5 replicate sediment, and 7 duplicate water samples were collected.

Field RPD values were calculated only for compounds and elements detected above the CRDLs in one of the replicate pair samples and only for those compounds and elements not considered to be common laboratory contaminants (e.g., methylene chloride). Increased percent differences were expected for all analytes detected in soil samples, since all samples remained in stainless

Table J - 15 Analytes Detected in Field Blanks
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-FB01	566786	2-Propanone	11.00	0.00		ug/l	07/28/93	COMPUCHEM
PC-FB01	566786	Di-n-butyl phthalate	1.00	0.00		ug/l	07/28/93	COMPUCHEM
PC-FB01	566786	bis(2-Ethylhexyl)phthalate	17.00	0.00		ug/l	07/28/93	COMPUCHEM
PC-FB01	525534-FB1	Lead	3.10	0.00		ug/l	11/12/92	COMPUCHEM
PC-FB02	566978	Bromodichloromethane	2.90	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566978	Bromoform	2.50	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566978	Chloroform	0.92	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566978	Dibromochloromethane	4.10	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566988	Copper	120.00	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566988	Lead	8.40	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566988	Zinc	859.00	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566979	Di-n-butyl phthalate	0.50	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	566979	bis(2-Ethylhexyl)phthalate	3.00	0.00		ug/l	07/29/93	COMPUCHEM
PC-FB02	525534-FB2	Arsenic	4.30	0.00	()	ug/l	11/12/92	COMPUCHEM
PC-FB02	525534-FB2	Lead	5.50	0.00		ug/l	11/12/92	COMPUCHEM
PC-FB03	569858	Bromodichloromethane	1.50	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569858	Bromoform	2.00	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569858	Chloroform	0.36	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569858	Dibromochloromethane	3.30	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569858	Methylene chloride	0.29	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569864	Arsenic	12.10	0.00	J	ug/l	08/10/93	COMPUCHEM
PC-FB03	569864	Zinc	13.30	0.00		ug/l	08/10/93	COMPUCHEM
PC-FB03	569880	Total Petroleum Hydrocarbons	1.60	0.25		mg/l	08/10/93	COMPUCHEM
PC-FB04	572980	Bromodichloromethane	2.10	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-FB04	572980	Bromoform	4.20	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-FB04	572980	Chloroform	0.46	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-FB04	572980	Dibromochloromethane	11.00	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-FB04	572980	Methylene chloride	0.30	0.00	J	ug/l	08/23/93	COMPUCHEM
PC-FB04	572980	Ethylbenzene	0.10	0.00		ug/l	08/23/93	COMPUCHEM
PC-FB04	572985	Zinc	5.30	0.00	()	ug/l	08/23/93	COMPUCHEM

Table J - 15 Analytes Detected in Field Blanks
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-FB04	572981	Total Petroleum Hydrocarbons	1.10	0.25		mg/l	08/23/93	COMPUCHEM
PC-FB05	572986	Methylene chloride	0.47	0.00		ug/l	08/23/93	COMPUCHEM
PC-FB05	572988	Zinc	43.60	0.00		ug/l	08/23/93	COMPUCHEM
PC-FB05	572987	Total Petroleum Hydrocarbons	0.70	0.25		mg/l	08/23/93	COMPUCHEM
PC-FB06	570192	Chloroform	0.09	0.00		ug/l	08/11/93	COMPUCHEM
PC-FB06	570192	1,2-Dichlorobenzene	0.40	0.00	J	ug/l	08/11/93	COMPUCHEM
PC-FB06	570202	Zinc	5.30	0.00		ug/l	08/11/93	COMPUCHEM
PC-FB07	576295	Toluene	0.12	0.00		ug/l	09/07/93	COMPUCHEM
PC-FB07	576664	Total Petroleum Hydrocarbons	3.10	0.25		mg/l	09/10/93	COMPUCHEM

Table J - 16 Analytes Detected in Equipment Rinsates
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER01	567292	Zinc	4.30	0.00	()	ug/l	07/29/93	COMPUCHEM
PC-ER01	567259	bis(2-Ethylhexyl)phthalate	15.00	0.00	J	ug/l	07/29/93	COMPUCHEM
PC-ER03	567576	Methylene chloride	0.16	0.00		ug/l	07/31/93	COMPUCHEM
PC-ER03	567577	Di-n-butyl phthalate	0.80	0.00		ug/l	07/31/93	COMPUCHEM
PC-ER03	567577	Diethyl phthalate	2.00	0.00		ug/l	07/31/93	COMPUCHEM
PC-ER03	567577	Phenol	4.00	0.00		ug/l	07/31/93	COMPUCHEM
PC-ER03	567577	bis(2-Ethylhexyl)phthalate	20.00	0.00		ug/l	07/31/93	COMPUCHEM
PC-ER04	567708	Methylene chloride	0.78	0.00		ug/l	08/01/93	COMPUCHEM
PC-ER04	567709	Phenol	0.90	0.00		ug/l	08/01/93	COMPUCHEM
PC-ER05	570413	Chloroform	0.21	0.00		ug/l	08/12/93	COMPUCHEM
PC-ER05	570413	Methylene chloride	0.09	0.00		ug/l	08/12/93	COMPUCHEM
PC-ER05	570421	bis(2-Ethylhexyl)phthalate	21.00	0.00		ug/l	08/12/93	COMPUCHEM
PC-ER05	570451	Total Petroleum Hydrocarbons	2.00	0.25		mg/l	08/12/93	COMPUCHEM
PC-ER07	571295	Zinc	51.90	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER07	571274	Diethyl phthalate	4.00	0.00	J	ug/l	08/15/93	COMPUCHEM
PC-ER07	571274	Dimethyl phthalate	0.90	0.00	J	ug/l	08/15/93	COMPUCHEM
PC-ER07	571296	Total Petroleum Hydrocarbons	0.40	0.25		mg/l	08/15/93	COMPUCHEM
PC-ER08	571258	Methylene chloride	0.03	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER08	571258	Toluene	0.28	0.00	L	ug/l	08/15/93	COMPUCHEM
PC-ER08	571310	Lead, Dissolved	8.50	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER08	571269	Benzo(a)anthracene	0.90	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER08	571269	Chrysene	1.00	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER08	571269	Diethyl phthalate	0.90	0.00	J	ug/l	08/15/93	COMPUCHEM
PC-ER08	571269	Pentachlorophenol	0.60	0.00	J	ug/l	08/15/93	COMPUCHEM
PC-ER08	571283	Total Petroleum Hydrocarbons	2.00	0.25		mg/l	08/15/93	COMPUCHEM
PC-ER09	571261	1,3-Dimethylbenzene	0.04	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER09	571261	1,4-Dimethylbenzene	0.04	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER09	571288	Zinc	226.00	0.00		ug/l	08/15/93	COMPUCHEM
PC-ER09	571272	Diethyl phthalate	7.00	0.00	J	ug/l	08/15/93	COMPUCHEM
PC-ER09	571272	Dimethyl phthalate	1.00	0.00	J	ug/l	08/15/93	COMPUCHEM

Table J - 16 Analytes Detected in Equipment Rinsates
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER09	571292	Total Petroleum Hydrocarbons	2.00	0.25		mg/l	08/15/93	COMPUCHEM
PC-ER10	571672	Chlorobenzene	0.09	0.00	J	ug/l	08/17/93	COMPUCHEM
PC-ER10	571674	Zinc	4.60	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER10	571673	Di-n-butyl phthalate	1.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER10	571673	Diethyl phthalate	1.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER10	571673	Phenanthrene	0.10	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER10	571673	Phenol	2.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER10	571673	bis(2-Ethylhexyl)phthalate	7.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER11	571952	Chloroform	0.21	0.00	J	ug/l	08/17/93	COMPUCHEM
PC-ER11	571952	Ethylbenzene	0.09	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER11	571957	Zinc	73.30	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER11	571955	Phenol	1.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER11	571955	bis(2-Ethylhexyl)phthalate	4.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER11	571962	Total Petroleum Hydrocarbons	2.50	0.25		mg/l	08/17/93	COMPUCHEM
PC-ER12	571956	Zinc	4.30	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER12	571953	bis(2-Ethylhexyl)phthalate	2.00	0.00		ug/l	08/17/93	COMPUCHEM
PC-ER12	571958	Total Petroleum Hydrocarbons	0.30	0.25		mg/l	08/17/93	COMPUCHEM
PC-ER13	573664	Methylene chloride	0.21	0.00		ug/l	08/24/93	COMPUCHEM
PC-ER13	573664	Ethylbenzene	0.11	0.00		ug/l	08/24/93	COMPUCHEM
PC-ER13	573667	Zinc	6.50	0.00		ug/l	08/24/93	COMPUCHEM
PC-ER13	573666	Total Petroleum Hydrocarbons	1.10	0.25		mg/l	08/24/93	COMPUCHEM
PC-ER14	574399	Zinc, Dissolved	16.80	0.00	(J)	ug/l	08/26/93	COMPUCHEM
PC-ER14	574418	bis(2-Ethylhexyl)phthalate	35.00	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER15	574349	Benzene	0.07	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Chloroform	0.12	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Methyl chloride	0.12	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Tetrachloroethylene	0.09	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Trichloroethylene	0.08	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574366	Toluene	0.22	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574423	4-Chloroaniline	0.60	0.00		ug/l	08/26/93	COMPUCHEM

Table J - 16 Analytes Detected in Equipment Rinsates
MIANG, Alpena CRTC, Alpena, Michigan

Sampleid	Lab No	Analyte	Result	RDL	Qual	Units	Date	Laboratory
PC-ER16	574423	Phenol	1.00	0.00		ug/l	08/26/93	COMPUCHEM
PC-ER16	574426	Total Petroleum Hydrocarbons	0.50	0.25		mg/l	08/26/93	COMPUCHEM
PC-ER17	574973	Toluene	0.21	0.00		ug/l	08/29/93	COMPUCHEM
PC-ER17	574983	Zinc, Dissolved	5.30	0.00	(J)	ug/l	08/29/93	COMPUCHEM
PC-ER17	574975	Total Petroleum Hydrocarbons	0.70	0.25		mg/l	08/29/93	COMPUCHEM
PC-ER19	576962	1,3-Dimethylbenzene	0.04	0.00		ug/l	09/13/93	COMPUCHEM
PC-ER19	576962	1,4-Dimethylbenzene	0.04	0.00		ug/l	09/13/93	COMPUCHEM
PC-ER19	577022	Zinc	8.30	0.00	(J)	ug/l	09/13/93	COMPUCHEM
PC-ER19	576971	Di-n-butyl phthalate	0.80	0.00		ug/l	09/13/93	COMPUCHEM
PC-ER19	576971	Phenol	0.70	0.00		ug/l	09/13/93	COMPUCHEM
PC-ER20	577481	1,3-Dimethylbenzene	0.06	0.00		ug/l	09/14/93	COMPUCHEM
PC-ER20	577481	1,4-Dimethylbenzene	0.06	0.00		ug/l	09/14/93	COMPUCHEM
PC-ER20	577484	Zinc	8.90	0.00	(J)	ug/l	09/14/93	COMPUCHEM
PC-ER20	577482	Diethyl phthalate	0.90	0.00		ug/l	09/14/93	COMPUCHEM
PC-ER20	577482	Phenol	2.00	0.00		ug/l	09/14/93	COMPUCHEM
PC-ER21	578088	Zinc	5.40	0.00	(J)	ug/l	09/15/93	COMPUCHEM
PC-ER21	578094	Zinc, Dissolved	4.00	0.00		ug/l	09/15/93	COMPUCHEM
PC-ER21	578091	Total Petroleum Hydrocarbons	0.80	0.25		mg/l	09/15/93	COMPUCHEM

sleeves (i.e., not mixed) after the sampling equipment was retrieved from the borehole. The field replicate for each soil analyses was obtained from the adjacent sleeve and water samples were split into different sample containers upon sampling.

No relative percent difference values were calculated for VOC water duplicate since no VOCs were detected in either of the replicate samples. Two relative percent difference values for soils were calculated for VOCs. Both values for 2-butanone and 1,4-dichlorobenzene exceeded control limits of 20%. SVOCs were not detected above the CRDL in the replicate soil and water samples collected for SVOCs. Therefore, RPD values were not calculated for SVOCs. Four replicate soil pairs were used to evaluate priority pollutant metals concentrations and to evaluate sample collection reproducibility and matrix variability at the Alpena CRTC. Eighteen of the 36 calculated soil RPD values were greater than 20 percent. The percent difference ranged between 21% and 100%. These results are considered to have little impact on the environmental data quality and considered more likely to be the result of the variability of the soil matrix. Table J-17 summarizes the concentrations of elements detected in the replicate environmental samples collected at the Alpena CRTC.

J.3 LABORATORY QUALITY CONTROL ASSESSMENT

All environmental samples collected at Phelps Collins ANG Base were analyzed using the 3/90 EPA CLP SOW for GC/MS analyses and EPA solid waste test methods and general chemical methodology from the following references:

- ***Statement of Work For Organic Analysis, Multi-Media, Multi-Concentration***, EPA Contract Laboratory Program, 3/90 (SVOCs)
- ***Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods***, SW-846, Third Edition, September 1986, with 1989 revisions (VOCs, priority pollutant metals)
- ***Methods for Chemical Analyses of Water and Wastes***, EPA 600/4-79-020, EPA 1983, with revisions (TPH)
- ***Requirements for Quality Control of Analytical Data***, HAZWRAP, DOE/HWP-65/R1 6/90 (VOCs, SVOCs, priority pollutant metals, and TPH)

HAZWRAP Level C documentation was required and submitted by the laboratory for all analyses. All data were validated and qualified using the guidelines and specifications described in the following documents:

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

	LOCATOR:	SB4		SB4		SB10		SB10		SB3		SB3	
	SAMPLE ID:	PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07	
	DUPLICATE OF:			PC-P1-SB4-SS00-01				PC-MP2-SB10-SS03-04				PC-MP2-SB3-SS04-05	
	COLLECTION DATE:	08/24/93		08/24/93		09/13/93		09/13/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Methylene chloride	ug/kg	1.80	B	5.30	J	5.20	B	4.10	B	1.40	B	1.40	B
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.60	U	0.12	U	1.40	U	1.40	U	1.40	U
1,2-Dimethylbenzene	ug/kg	1.30	U	0.16	B	1.20	U	0.14	B	1.20	U	1.20	U
1,4-Dichlorobenzene	ug/kg	2	U	2.10	U	1.80	U	0.11	B	1.90	U	1.90	U
Benzene	ug/kg	1.50	U	1.60	U	1.40	U	1.40	U	1.40	U	1.40	U
Chlorobenzene	ug/kg	2	U	2.10	U	1.80	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	2	U	2.10	U	1.80	U	1.90	U	1.90	U	1.90	U
Toluene	ug/kg	5.80	U	0.17	B	0.15	B	0.17	B	5.50	U	0.17	
CLP 3/90													
Anthracene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Chrysene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Fluorene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Phenanthrene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	360	U	380	U	340	U	340	U	340	U	340	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Arsenic	mg/kg	0.43	U	0.73	0B	0.75	(L)	0.41	U	0.60	0B	0.49	0B
Barium	mg/kg	-		-		-		-		-		-	
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	1.20		4.40	L	2.50	J	2.80		3.30	L	2.70	L
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.60	U	1.80	U	1.80	0	1.90	0	1.80	0	1.50	U

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SB4		SB4		SB10		SB10		SB3		SB3	
SAMPLE ID:		PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07	
DUPLICATE OF:				PC-P1-SB4-SS00-01				PC-MP2-SB10-SS03-04				PC-MP2-SB3-SS04-05	
COLLECTION DATE:		08/24/93		08/24/93		09/13/93		09/13/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	0.90		3	K	1.10	L	2.90	L	1.40	J	0.82	K
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Nickel	mg/kg	3.80	U	4.20	(L)	3.60	U	3.60	U	5.30	L	3.60	UL
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.33	U	0.35	UL	0.31	U	0.31	U	0.31	U	0.31	U
Sodium	mg/kg	-		-		-		-		-		-	
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	2	0B	4.30	B	15.30		12.70		5.50	B	2.90	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	9.60		10.40		40.60		67		42.60		12	

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SB6		SB6		SB9		SB9		SB11		SB20			
SAMPLE ID:		PC-MP2-SB6-SS00-02		PC-BG1-SB2-SS02-03		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-CG3-SB11-SS00-02		PC-CG3-SB20-SS00-02			
DUPLICATE OF:				PC-MP2-SB6-SS00-02				PC-MP2-SB9-SS03-04				PC-CG3-SB11-SS00-02			
COLLECTION DATE:		08/15/93		08/15/93		08/16/93		08/16/93		08/26/93		08/26/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
8010															
Methylene chloride	ug/kg	17		9.10	J	5.70	B	2	B	4.20	J	9.30	B		
8020															
1,2-Dichlorobenzene	ug/kg	1.50	U	0.79		1.50	UJ	2.50		1.50	U	4.30	U		
1,2-Dimethylbenzene	ug/kg	1.30	U	0.14		1.30	UJ	1.20	U	1.30	U	1.30	U		
1,4-Dichlorobenzene	ug/kg	0.26	B	0.11	B	1.90	UJ	1.90	U	0.15	J	1.90	U		
Benzene	ug/kg	1.50	U	0.04		1.50	UJ	1.40	U	1.50	U	1.50	U		
Chlorobenzene	ug/kg	2	U	2.10	U	1.90	UJ	1.90	U	1.90	U	1.90	U		
Ethylbenzene	ug/kg	2	U	2.10	U	1.90	UJ	1.90	U	1.90	U	1.90	U		
Toluene	ug/kg	0.28	B	5.60		5.50	UJ	5.50	U	0.12	B	5.60	U		
CLP 3/90															
Anthracene	ug/kg	360	U	380	U	340	U	340	U	340	U	76			
Benzo(a)anthracene	ug/kg	360	U	380	U	340	U	340	U	340	U	290			
Benzo(a)pyrene	ug/kg	360	UJ	380	U	340	U	340	U	340	U	170			
Benzo(b)fluoranthene	ug/kg	52	J	380	U	340	U	340	U	340	U	430			
Benzo(ghi)perylene	ug/kg	360	UJ	380	U	340	U	340	U	340	U	140			
Benzo(k)fluoranthene	ug/kg	52	J	380	U	340	U	340	U	340	U	430			
Carbazole	ug/kg	360	U	380	U	340	U	340	U	340	U	60			
Chrysene	ug/kg	360	U	380	U	340	U	340	U	340	U	250			
Fluoranthene	ug/kg	51		380	U	340	U	340	U	340	U	640			
Fluorene	ug/kg	360	U	380	U	340	U	340	U	340	U	39			
Indeno(1,2,3-c,d)pyrene	ug/kg	360	UJ	380	U	340	U	340	U	340	U	160			
Phenanthrene	ug/kg	360	U	380	U	340	U	340	U	340	U	440			
Pyrene	ug/kg	40		380	U	340	U	340	U	340	U	420			
bis(2-Ethylhexyl)phthalate	ug/kg	360	U	380	U	340	U	340	U	340	U	350	U		
METALS															
Aluminum	mg/kg	-		-		-		-		-		-			
Arsenic	mg/kg	1.90	B	1.70	B	0.62	0B	0.57	0B	0.42	U	1.50			
Barium	mg/kg	-		-		-		-		-		-			
Calcium	mg/kg	-		-		-		-		-		-			
Chromium	mg/kg	5		4.50		2.70		3.10		2.90		7			
Cobalt	mg/kg	-		-		-		-		-		-			
Copper	mg/kg	5.10		2.60		2.10	0	1.60	U	1.60	U	6.60			

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SB6		SB6		SB9		SB9		SB11		SB20	
SAMPLE ID:		PC-MP2-SB6-SS00-02		PC-BG1-SB2-SS02-03		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-CG3-SB11-SS00-02		PC-CG3-SB20-SS00-02	
DUPLICATE OF:				PC-MP2-SB6-SS00-02				PC-MP2-SB9-SS03-04				PC-CG3-SB11-SS00-02	
COLLECTION DATE:		08/15/93		08/15/93		08/16/93		08/16/93		08/26/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	31	J	1.40	B	0.84	B	1	B	3.80		13.50	
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Nickel	mg/kg	3.80	U	4.10	U	3.60	U	3.70	U	3.70	U	3.70	
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.32	UL	0.63	L	0.33	(L)	0.32	U	0.32	UL	0.32	U
Sodium	mg/kg	-		-		-		-		-		-	
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	20.30	B	9.60	B	5.40	B	4.60	B	9	B	33.10	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	2120		14.10		18.20		49.40		18		382	

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SB13		SB13		SB2		SB2
SAMPLE ID:		PC-CG3-SB13-SS00-02		PC-CG3-SB13-SS02-04		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03
DUPLICATE OF:				PC-CG3-SB13-SS00-02				PC-HN8-SB2-SS01-02
COLLECTION DATE:		08/26/93		08/26/93		08/13/93		08/13/93
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010									
Methylene chloride	ug/kg	3.10	B	3.10	B	1.40	B	1	B
8020									
1,2-Dichlorobenzene	ug/kg	0.07		2.20	U	1.50	U	0.07	U
1,2-Dimethylbenzene	ug/kg	0.18		1.30	U	0.04	B	0.03	B
1,4-Dichlorobenzene	ug/kg	0.25	B	1.90	U	1.90	U	0.17	U
Benzene	ug/kg	0.02	B	1.50	U	1.40	U	1.50	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	0.14		1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	0.05	J	1.90	U
Toluene	ug/kg	0.18		5.60	U	0.21	B	0.21	B
CLP 3/90									
Anthracene	ug/kg	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	340	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	340	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	340	U	340	U	340	U	340	U
Carbazole	ug/kg	340	U	340	U	340	U	340	U
Chrysene	ug/kg	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	340	U	340	U	340	U	340	U
Fluorene	ug/kg	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	340	U	340	U
Phenanthrene	ug/kg	340	U	340	U	340	U	340	U
Pyrene	ug/kg	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	340	U	37		340	U	340	U
METALS									
Aluminum	mg/kg	-		-		4120		2650	
Arsenic	mg/kg	0.60	0	0.68	0	0.88	(J)	0.44	0
Barium	mg/kg	-		-		17	0	7.60	0
Calcium	mg/kg	-		-		1380		584	
Chromium	mg/kg	5		4.90		6.50		4.20	
Cobalt	mg/kg	-		-		1.40	(J)	1.40	0
Copper	mg/kg	1.90	0	1.90	0	1.60	U	1.60	U

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SB13		SB13		SB2		SB2	
SAMPLE ID:		PC-CG3-SB13-SS00-02		PC-CG3-SB13-SS02-04		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03	
DUPLICATE OF:				PC-CG3-SB13-SS00-02				PC-HN8-SB2-SS01-02	
COLLECTION DATE:		08/26/93		08/26/93		08/13/93		08/13/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Iron	mg/kg	-		-		4490		2520	
Lead	mg/kg	2.10		5.50		1.80	J	1.20	
Magnesium	mg/kg	-		-		637		502	0
Manganese	mg/kg	-		-		133		52.30	
Nickel	mg/kg	3.70	0	3.70	U	4.30		3.60	U
Potassium	mg/kg	-		-		263	(J)	238	U
Selenium	mg/kg	0.31	UL	0.31	UL	0.31	UL	0.31	U
Sodium	mg/kg	-		-		39	0	31	0
Vanadium	mg/kg	-		-		10.30		4.60	0
Zinc	mg/kg	7.10	B	10.70	B	10.10	B	5.60	B
TPH									
Total Petroleum Hydrocarbons	mg/kg	6.30	U	9.90		29.90		11.30	

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

	LOCATOR:	MW14		MW3		MW9		MW5		MW6		MW1	
	SAMPLE ID:	PC-P1-MW14-GW4		PC-FF7-MW3-GW4		PC-MP2-MW9-GW4		PC-MP2-MW5-GW4		PC-MP2-MW6-GW4		PC-FF7-MW1-GW4	
	DUPLICATE OF:			PC-P1-MW14-GW4		PC-MP2-MW5-GW4						PC-MP2-MW6-GW4	
	COLLECTION DATE:	09/15/93		09/15/93		08/16/93		09/16/93		09/09/93		09/09/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U		R	0.35	U	0.35	U
Bromodichloromethane	ug/l	0.63		0.92		0.40	U		R	0.40	U	0.40	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U		R	0.50	U	0.50	U
Chloroform	ug/l	0.68	J	0.75	J	0.18			R	0.35	U	0.35	U
Dibromochloromethane	ug/l	1.90		2.30		0.30	U		R	0.30	U	0.30	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U		R	0.50	U	0.50	U
Methylene chloride	ug/l	0.21	B	0.24	B	0.05			R	0.40		0.32	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U		R	0.30	U	0.09	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U		R	0.30	U	0.12	
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U		R	3.40	B	0.15	U
1,3-Dimethylbenzene	ug/l	0.19		0.09		-		-		0.06		-	
1,4-Dimethylbenzene	ug/l	0.19		0.09		-		-		0.06		-	
Benzene	ug/l	0.11		0.10		0.35	U		R	0.35	U	0.35	U
Ethylbenzene	ug/l	0.22	B	0.20	U	0.20	U		R	0.20	U	0.20	U
Toluene	ug/l	0.20		0.21		0.26	B		R	0.15		0.25	U
LCBNA													
Diethyl phthalate	ug/l	0.60	B	5	U	3	J	5	U	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	0.60	J	5	U	5	U	5	U
Phenol	ug/l	2	B	5	U	5	U	5	U	0.90		0.60	
bis(2-Ethylhexyl)phthalate	ug/l	4	B	11	B	7	B	3	B	2	B	4	B
METALS													
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	(L)	4	U
Beryllium	ug/l	4	U	4	U	1	U	1	U	1	U	1	U
Chromium	ug/l	10	U	10	U	8	U	8	U	8	U	8	U
Copper	ug/l	15	U	15	U	4.50	0B	4	U	4	U	4	U
Lead	ug/l	2	U	2	U	2	U	2	UL	2	U	2	U
Lead, Dissolved	ug/l	2	UL	2	UL	2	U	2	UL	2	UL	2.30	(L)
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	35	U	35	U	18	U	18	U	18	U	18	U
Silver	ug/l	4	U	4	U	4	U	4	U	5.40	0	4	U
Thallium, Dissolved	ug/l	3	UJ	3	UJ	3	UL		R	3	UL	3	UL
Zinc	ug/l	7.50	0	11.70	0	245		254		9.70	0B	4	U
Zinc, Dissolved	ug/l	4	U	6	0	10.40	0	5.10	0B	5.60	(B)	15.30	(B)
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.80	B	0.40		1.10	B	2.30	B	0.25	U

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		MW5		MW9		MW1		MW8		MW4		MW9		
SAMPLE ID:		PC-CG3-MW5-GW4		PC-CG3-MW9-GW4		PC-TF4-MW1-GW4		PC-TF4-MW8-GW4		PC-HN8-MW4-GW4		PC-HN8-MW9-GW4		
DUPLICATE OF:				PC-CG3-MW5-GW4				PC-TF4-MW1-GW4				PC-HN8-MW4-GW4		
COLLECTION DATE:		08/26/93		08/26/93		08/17/93		08/17/93		09/12/93		09/12/93		
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	
8010														
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.18			R		R	0.35	U	0.35	U	
Bromodichloromethane	ug/l	0.40	U	0.40	U		R		R	0.40	U	0.40	U	
Chloroethane	ug/l	0.50	U	0.14			R		R	0.50	U	0.50	U	
Chloroform	ug/l	0.35	U	0.13			R		R	0.33	B	0.35	U	
Dibromochloromethane	ug/l	0.30	U	0.30	U		R		R	0.30	U	0.30	U	
Methyl chloride	ug/l	0.50	U	0.14			R		R	0.50	U	0.50	U	
Methylene chloride	ug/l	0.31	B	0.35	B		R		R	0.83	B	0.66	B	
Tetrachloroethylene	ug/l	0.30	U	0.08			R		R	0.30	U	0.30	U	
Trichloroethylene	ug/l	0.30	U	0.07			R		R	0.30	U	0.30	U	
8020														
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U		R		R	0.15	U	2.20		
1,3-Dimethylbenzene	ug/l	-		-			R	-		-		-		
1,4-Dimethylbenzene	ug/l	-		-			R	-		-		-		
Benzene	ug/l	0.35	U	0.35	U		R		R	0.35	U	0.35	U	
Ethylbenzene	ug/l	0.20	U	0.20	U		R		R	0.20	U	0.20	U	
Toluene	ug/l	0.25	U	0.25	U		R		R	0.20		0.15	B	
LCBNA														
Diethyl phthalate	ug/l	5	U	5	U	5	U	5	U	0.70		5	U	
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U	
Phenol	ug/l	5	U	0.80	B	0.80		5	U	5	U	5	U	
bis(2-Ethylhexyl)phthalate	ug/l	2	B	2	B	5	U	4		7	B	8	B	
METALS														
Arsenic	ug/l	4	U	4	U	15.60	L	23	L	4	U	4	U	
Beryllium	ug/l	1	U	1	U	1.40	0	1.50	0	1	U	1	U	
Chromium	ug/l	8	U	8	U	61.10		67.20		8	U	8	U	
Copper	ug/l	4	U	4	U	79.90		91.20		4	U	4	U	
Lead	ug/l	2	U	2	U	56.60		62.70		2	U	2	U	
Lead, Dissolved	ug/l	2	UL	2	UL	2	U	9.40	B	2	UL	2	UL	
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	
Nickel	ug/l	18	U	18	U	56		59.60		18	U	18	U	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U	
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL	
Zinc	ug/l	8.80	0B	73.20	B	137		163		15.30	0B	6.70	0B	
Zinc, Dissolved	ug/l	20.90	B	21.80	B	4	U	7.10	0B	6.20	0B	11.80	0B	
TPH														
Total Petroleum Hydrocarbons	mg/l	1	B	0.40	B	1.50	B	0.80	B	0.25	U	0.60	B	

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		MW5		MW2	
SAMPLE ID:		PC-HN8-MW5-GW4		PC-FF7-MW2-GW4	
DUPLICATE OF:				PC-HN8-MW5-GW4	
COLLECTION DATE:		09/14/93		09/14/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL
8010					
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U
Bromodichloromethane	ug/l	0.40	U	0.40	U
Chloroethane	ug/l	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U
Methyl chloride	ug/l	0.50	U	0.50	U
Methylene chloride	ug/l	0.21	B	0.16	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U
Trichloroethylene	ug/l	0.30	U	0.30	U
8020					
1,2-Dichlorobenzene	ug/l	0.14	B	0.15	U
1,3-Dimethylbenzene	ug/l	-		-	
1,4-Dimethylbenzene	ug/l	-		-	
Benzene	ug/l	0.35	U	0.09	
Ethylbenzene	ug/l	0.12		0.20	U
Toluene	ug/l	0.17	B	0.36	B
LCBNA					
Diethyl phthalate	ug/l	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U
Phenol	ug/l	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	3	B	2	B
METALS					
Arsenic	ug/l	13.30		17.40	
Beryllium	ug/l	4	U	4	U
Chromium	ug/l	46.30		52.20	
Copper	ug/l	55.60		66.70	
Lead	ug/l	44		58.50	
Lead, Dissolved	ug/l	2	U	2	U
Mercury	ug/l	0.20	U	0.23	
Nickel	ug/l	61.30		74.70	
Silver	ug/l	4	U	4	U
Thallium, Dissolved	ug/l	3	UJ	3	UJ
Zinc	ug/l	137		156	
Zinc, Dissolved	ug/l	4	U	27.80	
TPH					
Total Petroleum Hydrocarbons	mg/l	0.40	B	0.60	B

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SD002		SD004		SD004B		SD104B		SD006B		SD106B			
SAMPLE ID:		PC-P1-SD002		PC-P1-SD004		PC-TF4-SD004B		PC-TF4-SD104B		PC-TF4-SD006B		PC-TF4-SD106B			
DUPLICATE OF:				PC-P1-SD002				PC-TF4-SD004B				PC-TF4-SD006B			
COLLECTION DATE:		09/13/93		09/13/93		07/30/93		07/30/93		07/30/93		07/30/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
8010															
1,1,1-Trichloroethane	ug/kg	3.10	U	2.70		3.60	U	3.60	U	3.90	U	0.43	B		
Methylene chloride	ug/kg	1.40	B	2.70	B	4		3.30	B	2.70	B	3.90	B		
CLP 3/90															
2,2'-Oxybis(1-Chloropropane)	ug/kg	370	U	410	U	430	U	440	U	470	U	120			
4-Methylphenol	ug/kg	370	U	410	U	430	U	440	U	470	U	54	J		
Anthracene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Benzo(a)anthracene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Benzo(a)pyrene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Benzo(b)fluoranthene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Benzo(ghi)perylene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Benzo(k)fluoranthene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Butyl benzyl phthalate	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Carbazole	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Chrysene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Di-n-butyl phthalate	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Fluoranthene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Indeno(1,2,3-c,d)pyrene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Phenanthrene	ug/kg	370	U	410	U	430	U	440	U	470	U	490	U		
Pyrene	ug/kg														
METALS															
Aluminum	mg/kg	-		-		-		-		-		-			
Arsenic	mg/kg	8.50		3.10		1.10	0	0.85	0	0.53	UL	1.30	0		
Barium	mg/kg	-		-		-		-		-		-			
Calcium	mg/kg	-		-		-		-		-		-			
Chromium	mg/kg	3.30		3.70		3.50		3.80		3.60		4.20			
Copper	mg/kg	4.30		6.30		2.10	0B	2.10	0B	1.90	0B	1.90	0B		
Iron	mg/kg	-		-		-		-		-		-			
Lead	mg/kg	3.90	L	2.30	L	1.60	B	1.40	B	1.20	B	1.90	B		
Magnesium	mg/kg	-		-		-		-		-		-			
Manganese	mg/kg	-		-		-		-		-		-			
Nickel	mg/kg	4	U	4.30	U	2.40	U	2.60	0	2.60	U	2.70	U		
Selenium	mg/kg	0.34	UL	0.37	U	0.40	UL	0.40	U	0.43	U	0.45	U		
Sodium	mg/kg	-		-		-		-		-		-			
Vanadium	mg/kg	-		-		-		-		-		-			
Zinc	mg/kg	12.30		19.60		9.10	B	8.50	B	10.50	B	8.30	B		
TPH															
Total Petroleum Hydrocarbons	mg/kg	85.30		41.10		6.30	U	6.30	U	51.90		593			

Table J-17: Compounds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SD015		SD115		SD3		SD4	
SAMPLE ID:		PC-TF4-SD015		PC-TF4-SD115		PC-LF6-SD3		PC-LF6-SD4	
SAMPLE ID:				PC-TF4-SD015				PC-LF6-SD3	
COLLECTION DATE:		08/01/93		08/01/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010									
1,1,1-Trichloroethane	ug/kg	3.60	U	0.37	B	3.90	UJ	0.72	B
Methylene chloride	ug/kg	1.30	U	6.90	B	1.70	B	1.50	B
CLP 3/90									
2,2'-Oxybis(1-Chloropropane)	ug/kg	440	U	430	U	470	U	500	U
4-Methylphenol	ug/kg	440	U	430	U	470	U	500	U
Anthracene	ug/kg	440	U	430	U	470	U	460	
Benzo(a)anthracene	ug/kg	440	U	430	U	470	U	450	
Benzo(a)pyrene	ug/kg	440	U	430	U	470	U	320	
Benzo(b)fluoranthene	ug/kg	440	U	430	U	470	U	690	
Benzo(ghi)perylene	ug/kg	440	U	430	U	470	U	61	
Benzo(k)fluoranthene	ug/kg	440	U	430	U	470	U	690	
Butyl benzyl phthalate	ug/kg	440	U	430	U	55		66	
Carbazole	ug/kg	440	U	430	U	470	U	88	
Chrysene	ug/kg	440	U	430	U	470	U	430	
Di-n-butyl phthalate	ug/kg	440	U	430	U	470	U	64	
Fluoranthene	ug/kg	440	U	430	U	470	U	650	
Indeno(1,2,3-c,d)pyrene	ug/kg	440	U	430	U	470	U	120	
Phenanthrene	ug/kg	440	U	430	U	470	U	460	
Pyrene	ug/kg	440	U	430	U	470	U	420	
METALS									
Aluminum	mg/kg	-		1290		-		-	
Arsenic	mg/kg	0.53	U	0.53		2.80	B	2	B
Barium	mg/kg	-		3.10	0	-		-	
Calcium	mg/kg	-		8570		-		-	
Chromium	mg/kg	2.80		2.10		7.60	L	5	L
Copper	mg/kg	1.40	0B	2	U	11.80		13.80	
Iron	mg/kg	-		1760		-		-	
Lead	mg/kg	0.77	B	0.80	B	19.10	J	62.60	J
Magnesium	mg/kg	-		681		-		-	
Manganese	mg/kg	-		24		-		-	
Nickel	mg/kg	2.40	U	4.60	U	7.90	L	5.30	UL
Selenium	mg/kg	0.40	UL	0.40	U	0.43	UL	0.97	L
Sodium	mg/kg	-		49.50	0	-		-	
Vanadium	mg/kg	-		3.50	0	-		-	
Zinc	mg/kg	14.30	B	5.80	B	80.70	B	67.40	B
TPH									
Total Petroleum Hydrocarbons	mg/kg	22.30		10.30		175		450	

Table J-17: Compouds and Elements Detected in Field Duplicates
MIANG, Alpena CRTC, Alpena, Michigan

LOCATOR:		SW006		SW106	
SAMPLE ID:		PC-TF4-SW006		PC-TF4-SW106	
DUPLICATE OF:				PC-TF4-SW006	
COLLECTION DATE:		07/30/93		07/30/93	
UNITS:		RESULT	QUAL	RESULT	QUAL
8010					
Chloroform	ug/l	0.20		0.28	
Trichloroethylene	ug/l	1.20		1.20	
8020					
1,2-Dichlorobenzene	ug/l	0.16		1	J
METALS					
Arsenic	ug/l	6.30	0	5.30	0
Arsenic, Dissolved	ug/l	4	U	4.40	0
Selenium, Dissolved	ug/l	5.60		3	U
Zinc, Dissolved	ug/l	7.20	0	6.70	0

- ***Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses***, EPA Contract Laboratory Program, June 1991, (Region III modifications. June 1992) (SVOCs)

- ***Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses***, EPA Contract Laboratory Program, February 1988 (priority pollutant metals)

- ***Requirements for Quality Control of Analytical Data,*** Hazardous Waste Remedial Actions Program (DOE/HWP-65/R1), July 1990 (VOCs by GC)

In addition to the above guidelines additional steps were taken to make the data validation process clearer to the reviewer. In the validation processes the "B" qualifier has been used to indicate potential contamination resulting from the laboratory process. An example of the modification of the guidelines is presented for VOCs. According to DOE/HWP-65/R1, July 1990 guidelines for VOC data validation analyzed by Gas Chromatograph, any compound detected in the sample and in the associated blank must be qualified when the result is less than five times the blank concentration. Sample results greater than the CRQL but less than five times the blank concentration should be qualified "U". If the sample result is greater than the CRQL and greater than five times the blank concentration no qualification is required. The use of the "U" qualifier in the first two cases could cause confusion as to the actual presence of the compound for results above the CRQL and possibly for those results below the CRQL. The "B" qualifier clearly indicates that the result may be suspect and may be a result of laboratory contamination. The use of the "B" qualifier is consistently applied to VOCs analyzed by GC methods, inorganic analysis, CLP SVOC, and TPH analysis. The proper application of the five-times and ten-times rule is used where applicable.

While it is a general practice in the validation of CLP organic methods to retain the laboratory added "J" qualifier for sample results below the CRQL, all laboratory added qualifiers are stripped from the data during the validation process. Since the CRQLs are known, or can be easily calculated for soil samples, the use of the "J" qualifier for results below the CRQL does not provide useful information to the reviewer. By removing this qualifier and only applying a "J" qualifier only in cases where specific QC requirements were not met reduces the potential for confusion. In general, in the CLP process where a "U" qualifier would be applied to indicate a result below the CRQL no qualifier has been added solely to indicate a result below the CRQL. Any qualifier added to the results below the CRQL indicates QC concerns.

All data validation qualifiers used were applied to the data as required by the forementioned guidelines. A complete summary of all data obtained and the qualifiers applied to that data is presented in Appendix K.

APPENDIX K: Laboratory Data Validation

Inorganic Data Validation

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: July 1993

Samples in SDG # 936415:

PFB1	P00GPW1	P00GPW2	P00GPW3
P02GMW1	P02GMW2	P04GMW2	P04W001
P04W002	P04W003	P04W004	P04W005
P04W006	P04W007	P04W008	P04W106
PBER1	PBER3	PBER4	PFB2
PFB3			

Overview

Twenty-one water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Antimony, cadmium, copper, and beryllium were detected in or more of the associated method blanks. No target elements were detected in any of the associated field blanks or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS values were within +/- 20%.

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. The MS/MSD was within control limits.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element detects in samples with spike recovery greater then 115% were qualified "K". Spike element non-detects in samples with high spike recovery were not qualified.

ICP Serial Dilution

Five fold dilution of P04W006F was performed in accordance with CLP requirements. Zinc had greater than a 10% difference. No qualifiers added since there were no positive results greater than 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: July 1993

Samples in SDG # 936417:

P04W001F	P04W002F	P04W003F	P04W004F
P04W007F	P04W006F	PB-ER2	P04W005F
P04W106F	P04W008F		

Overview

Ten water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

No target elements were detected in the method blanks.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. The MS/MSD was within control limits.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P04W006F was performed in accordance with CLP requirements. Zinc had greater than a 10% difference. Qualifiers were not add since there were no positive results greater than 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936421:

P00GPW1F	P00GPW2F	P02GMW1F	P00GPW3F
P5MW3GW4F	P2MW3GW4F	PBER08F	P3MW1GW4F
P2MW9GW4F	P5MW1GW4F	P2MW2GW4F	P2MW4GW4F
P8MW1GW4F	P4MW8GW4F	P4MW1GW4F	P02GMW5F

Overview

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

Samples P00GPW1F, P00GPW2F, P02GMW1F, and P00GPW3F were analyzed outside the required 28 day holding time for mercury. Non-detects, in the four samples were qualified "UL". There were no detects for mercury in these samples. All samples were analyzed within required 6 month holding time for other metals.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Antimony, Beryllium, Cadmium, and Arsenic were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All required LCS recovery values were within +/- 20%

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P4MW1GW4F was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 % for Thallium in the matrix spike. Non-detects were qualified "UL". There were no detects for Thallium in any samples in this sample delivery group. The sample was within control limits for the matrix spike duplicate.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified. Non-detects, for the spike element, in samples with a spike recovery less than 10% were qualified "R".

ICP Serial Dilution

Five fold dilution of P00GPW1F was performed in accordance with CLP requirements. Antimony and Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936422:

P04GMW2F	PFB6	P06GMW2	P06GMW2F
P04GMW3	P04GMW3F	P06GMW1	PB-ER5
P02GMW9F	P02GMW9	P04GMW4F	PB-ER5F
P04GMW4	P5MW3GW4	P2MW3GW4	PBER08
P3MW1GW4	P8MW1GW4		

Overview

Eighteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Beryllium, copper and antimony were detected in one or more of the method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

Duplicates

All duplicates were within the appropriate control limits.

Matrix Spike

Sample P04W006F was used for matrix spike/matrix spike duplicate. Thallium reported a low recovery in the matrix spike. Detects for thallium were qualified "L". Non-detects were qualified "UL".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Sample P04W006F was used for the serial dilution. All elements met accuracy criteria.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936424:

PBER9	P2MW9GW4	PBER07	P5MW1GW4
P2MW2GW4	P2MW4GW4	P4MW8GW4	P4MW1GW4
PBER10	P02GMW5	PBER12	PBER11
PFB4	PFB05	P05MW3GW4	PBER13
P03MW2GW4	P03MW3GW4	P03MW4GW4	P05MW4GW4

Overview

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Antimony, cadmium, copper, and silver were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 %, for Thallium in the matrix spike. Thallium reported low spike recovery of 71.8%. Non-detects for thallium were qualified "U". Detects for thallium were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P2MW2GW4 was performed in accordance with CLP requirements. Copper reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936426:

P5MW3GW4F	P3MW2GW4F	P3MW3GW4F	P3MW4GW4F
P5MW4GW4F	P5MW2GW4F	P6MW3GW4F	P3MW5GW4F
PER14F	P3MW9GW4F	P9MW1GW4F	P9MW2GW4F
P9MW3GW4F	P9MW5GW4F	P8MW2GW4F	P6MW5GW4F
P8MW9GW4F	P6MW4GW4F	P5MW6GW4F	PER17F

Overview

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Beryllium was detected in the method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P3MW5GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits of 75 - 125 %, for thallium in the matrix spike. Thallium reported low recovery of 65.2%. Detects were qualified "L". Non-detects for these elements were qualified "UL".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P3MW5GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not add, since there were no positive results greater the 50 times the IDL were qualified with a "J".

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936427:

P05MW2GW4	PER15	P6MW3GW4	P3MW5GW4
PER14	PBER-16	P3MW9GW4	P9MW1GW4
P9MW2GW4	P9MW3GW4	P9MW5GW4	P8MW2GW4
P6MW5GW4	P8MW9GW4	P6MW4GW4	P5MW6GW4
PER17	P8MW3GW4	P8MW4GW4	P6MW6GW4

Overview

Twenty water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within recommended holding times.

Initial Calibration and Continuing Calibration

All calibration results fell within the control limits of 90-110%.

Blanks

Antimony, zinc, beryllium, cadmium, and copper were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All required LCS recovery values were within +/- 20%

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P3MW5GW4 was used for the matrix spike/matrix spike duplicate. All target elements were within CLP control limits for the matrix spike. The sample was found to be outside CLP control limits of 75 - 125%, for selenium in the matrix spike duplicate. Selenium report a high recovery of 127.5%. Non-detects were not qualified. There were no detects for selenium in any samples in this sample delivery group.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet recovery limits for one or more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater then 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P3MW5GW4 was performed in accordance with CLP requirements. Antimony and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936429:

P8MW3GW4F	P8MW4GW4F	P6MW6GW4F	P5MW7GW4F
P5MW5GW4F	P6MW8GW4F	P6MW9GW4F	P9MW4FW4F
P7MW1GW4F	P1MW2GW4F	P2MW7GW4F	P2MW6GW4F
P3MW6GW4F	P1MW3GW4F	PER18F	P1MW4GW4F

Overview

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times. Two samples P5MW7GW4F and PER18F exceeded the allowed pH of 2. Detects in these samples were qualified "L". Non-detects were qualified "UL".

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Antimony was detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS were within control limits.

Duplicates

All duplicates met the required control limits.

Matrix Spike

Sample P2MW6GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for lead and thallium in the matrix spike. Lead and thallium reported low spike recoveries of 73.8% and 34.7% respectively. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P2MW6GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 936430:

P5MW7GW4	P5MW5GW4	P6MW8GW4	P6MW9GW4
P9MW4GW4	PFB07	P7MW1GW4	P1MW2GW4
P2MW7GW4	P2MW6GW4	P3MW6GW4	P1MW3GW4
PER18	P1MW4GW4		

Overview

Fourteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Antimony, copper, selenium, and zinc were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%

Duplicates

All duplicates were within the appropriate control limit.

Matrix Spike

Sample P2MW6GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for thallium and selenium in the matrix spike. Thallium reported low spike recovery of 54.7%, selenium reported high spike recovery of 149%. Non-detects for thallium were qualified "UL". Detects for thallium were qualified "L". Detects for selenium were qualified "K". Non-detects for selenium were not qualified.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P2MW6GW4 was performed in accordance with CLP requirements. Silver and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not add, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: September 1993

Samples in SDG # 936434:

P5MW9GW4F	P5MW8GW4F	P3MW7GW4F	P1M12GW4F
PER20F	P7MW2GW4F	P1M13GW4F	P8MW5GW4F
P1M11GW4F	P1MW1GW4F	P1M14GW4F	P7MW3GW4F
P9MW6GW4F	P1M6GW4F	PER21F	P6M10GW4F

Overview

Sixteen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Cadmium, zinc, antimony, selenium, and arsenic were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

Duplicates

Zinc exceeded the control limits of +/- 20% for sample detects greater than 5 times the CRDL or +/- the CRDL for sample detects less than 5 times the CRDL for the duplicates. Zinc was qualified "J" in all samples.

Matrix Spike

Sample P5MW9GW4F was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for selenium and thallium in the matrix spike. Selenium and thallium reported low recoveries of 28.6 and 68.5% respectively. Detects for selenium were qualified "J", non-detects were qualified "R". Detects for thallium were qualified "L". Non-detects for thallium were qualified "UL".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P5MW9GW4F was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added,

since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: September 1993

Samples in SDG # 936437:

P5MW9GW4	P5MW8GW4	P3MW7GW4	PER19
P1M12GW4	PER20	P7MW2GW4	P1M13GW4
P8MW5GW4	P1M11GW4	P1MW1GW4	P7MW3GW4
P9MW6GW4	P1MW6GW4	PER21	P6M10GW4

Overview

Seventeen water samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times. Two samples P5MW9GW4 and P1M6GW4 exceeded the required pH of 2. Detects in these samples were qualified "L". Non-detects were qualified "UL".

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Selenium was detected in the method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within +/- 20%.

Duplicates

All duplicates within appropriate control limits.

Matrix Spike

Sample P1M14GW4 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for selenium and thallium in the matrix spike. Selenium and thallium reported low recoveries of 41.2 and 33.8% respectively. Detects were qualified "L". Non-detects for these elements were qualified "UL".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element detects in samples with spike recovery greater then 115% were qualified "K".

ICP Serial Dilution

Five fold dilution of P1MW14GW4 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: July 1993

Samples in SDG #937345:

P04D001	P04D001A	P04D002B	P04D002A
P04D003	P04D004A	P04D004B	P04D005A
P04D005B	P04D104B	P04D106B	P04D006B
P04D006A	P04D007	P04D008	P04D009A
P04D010A	P04D010B	P04D015	

Overview

Twenty soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

Arsenic exceeded the upper control limit during the initial and continuing calibrations. Detects for Arsenic were qualified "K". All other initial and continuing calibrations fell within the control limits of 90-110%.

Blanks

Beryllium and zinc were detected in the associated method blanks. Zinc, copper, and lead were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recovery values were within acceptable limits.

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P04D004 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for antimony in the matrix spike. Antimony reported a low spike recovery of 69%. Non-detects for antimony were qualified "UL". Detects for antimony were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P3B120810 was performed in accordance with CLP requirements. Cobalt, copper, and zinc reported greater than 10% difference in the serial analysis. No qualifiers were added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 937349:

P04D017	P04D013	P04D011	P04D012
P04D016	P04D018	P04D014	P04D115
P00B10001	P00B10203	P00B10910	P08B20102
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		

Overview

Eighteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibrations were within the control limits of 90-110%.

Blanks

Iron was detected in one or more of the associated method blanks. Lead, copper, and zinc were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All elements reported acceptable results during the LCS analysis..

Duplicates

All duplicates were within the appropriate control limits.

Matrix Spike

Sample P08B30911 was used for matrix spike/matrix spike duplicate. Antimony and cadmium were outside the control limits of +/- 25%. Antimony and cadmium reported low spike recoveries of 67.9 and 70% respectively. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified.

ICP Serial Dilution

Five fold dilution of P08B30911 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 937352:

P02B60002	P08B61213	P00B20001	P02B70002
P08B71213	P08B60002	P02B40304	P00B20203
P02B80506	P02B80002	P02B70506	P02B60506
P08B70002	P02B90406	P08B81012	P08B80102
P02B90304	P08B80910	P6D2	

Overview

Nineteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Silver, zinc, and arsenic were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recoveries were within +/- 20%.

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125%, for antimony and cadmium in the matrix spike. Antimony and cadmium reported low spike recoveries of 73.5 and 74.7%. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P02B40304 was performed in accordance with CLP requirements. Chromium and zinc reported greater than 10% difference in the serial analysis. No qualifiers were added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 937354:

P6D1	P6D3	P6D4	P02B40002
P02B20405	P02B50405	P02B30405	P02B20002
P02B30507	P02B50002	P02B30002	P02B40405
P1B120002	P1B20002	P1B110304	P1B100002
P1B100304	P1B130304		

Overview

Eighteen soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

Arsenic reported a low percent recovery of 89%. Detects for arsenic were qualified "L". Non-detects were qualified "UL". All other initial and continuing calibrations were within the control limits of 90-110%.

Blanks

Silver and arsenic were detected in one or more of the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

Mercury and thallium exceeded control limits LCS analysis. Mercury reported a high recovery of 131.5%, thallium reported a low recovery of 64.4%. Detects for thallium were qualified "L". Non-detects for cadmium were qualified "UL". Sample detects for mercury were qualified "K", non-detects were not qualified.

Duplicates

Lead exceeded the appropriate control limits of +/- 2xCRDL for sample detects less than 5 times the CRDL or +/- 20% for sample detects greater than 5 times CRDL. Lead was qualified "J" in all samples.

Matrix Spike

Antimony, cadmium, lead, thallium, zinc, and nickel were outside the control limits of +/- 25%. Antimony, chromium, thallium, zinc, and nickel reported low recoveries of 63.4, 62.9, 66.8, 14.1, and 73.8 respectively. Non-detects for elements reporting low recoveries were qualified "UL". Detects were qualified "L". Detects for lead, reporting a recovery of 390.1% were qualified "K". Non-detects for lead were not qualified.

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL". Spike element non-detects in samples with high spike recovery were not qualified.

ICP Serial Dilution

A five fold dilution was performed in accordance with CLP requirements. Chromium and nickel reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 937355:

P1B130002	P01B90304	P01B90002	P01B70304
P01B70002	P01B80002	P01B60304	P01B60002
P01B50002	P01B50304	P01B40001	P01B40203
P01B80304	P3B110002	P3B111012	P3B120002
P3B121012	P3B130002	P3B131012	P3B130204

Overview

Twenty soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

No target elements were detected in the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recoveries were within acceptable limits.

Duplicates

Duplicates were within the appropriate control limits.

Matrix Spike

Sample P1B130002 was used for the matrix spike/matrix spike duplicate. The sample was found to be outside the CLP control limits of 75 - 125% for antimony and cadmium in the matrix spike. Antimony and cadmium reported low spike recoveries of 52.3 and 65.6% respectively. Non-detects for both elements were qualified "UL". Detects for both elements were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P1B130002 was performed in accordance with CLP requirements. Zinc and chromium reported greater than 10% difference in the serial analysis. Qualifiers were not added, since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: August 1993

Samples in SDG # 937356:

P3B200002 P3B110406 P3B120406 P3B130406
P3B120810

Overview

Five soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

Arsenic exceeded the lower control limit during the initial and continuing calibrations. Detects for Arsenic were qualified "L". Non-detects were qualified "UL". All other initial and continuing calibrations fell within the control limits of 90-110%.

Blanks

No target elements were detected in any of the associated method blanks. Zinc was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS recoveries were within acceptable control limits.

Duplicates

All duplicates were within appropriate control limits

Matrix Spike

Sample P3B120810 was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits for antimony, arsenic, and cadmium in the matrix spike. Non-detects for elements displaying a low spike recovery, antimony (68.9%) and cadmium (69.3%) were qualified "UL". Detects for elements with low spike recovery were qualified "L". Non-detects for arsenic (128.1%) were not qualified. Detects for arsenic were qualified "K".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P3B120810 was performed in accordance with CLP requirements. Chromium, copper, and zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Phelps Collins
Alpena, MI
Inorganic Data Validation CLP TAL
Sampling Dates: September 1993

Samples in SDG # 937358:

P2B100810	P2B100001	P2B100304	P1D002
P1D003	P1D004	P1D001	P1D005

Overview

Eight soil samples were validated for inorganic compounds analyzed by CLP TAL in accordance with EPA CLP statement of work 3/90 for priority pollutant metals.

Summary

All samples were successfully analyzed for target compounds. QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All samples were analyzed within required holding times.

Initial Calibration and Continuing Calibration

All initial and continuing calibration results fell within the control limits of 90-110%.

Blanks

Zinc and selenium were detected in the associated method blanks. Sample detects were qualified "B" if the concentration detected was less than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates. Sample non-detects were not qualified. Sample detects with concentrations greater than 5 times the highest concentration detected in any of the associated blanks or equipment rinseates were not qualified.

ICP Interferences Check Samples

All ICP recovery values were within +/- 20%

Laboratory Control Sample (LCS)

All LCS were within the +/- 20%

Duplicates

All duplicates were within appropriate control limits.

Matrix Spike

Sample P2B100810 was used for matrix spike/matrix spike duplicate. The sample was found to be outside CLP control limits for antimony, cadmium, and lead in the matrix spike. Antimony, cadmium, and lead reported low spike recoveries of 69.2, 67.9, and 65.9% respectively. Non-detects were qualified "UL". Detects were qualified "L".

Furnace Atomic Absorption QC Analysis

Several samples failed to meet the recovery limits for one of more of the spikes. Detects, for the spike, in samples with a spike recovery of less than 85% were qualified "L". Spike element non-detects in samples with a spike recovery of less than 85% but greater than 10% were qualified "UL".

ICP Serial Dilution

Five fold dilution of P2B100810 was performed in accordance with CLP requirements. Zinc reported greater than 10% difference in the serial analysis. Qualifiers were not added since there were no positive results greater the 50 times the IDL.

Hexavalent Chromium Data Validation

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Phelps Collins
Alpena, MI
Hexavalent Chromium Data Validation
Sampling Dates: July-September 1993

Phelps Collins Hexavalent Chromium - Soil Samples

Sample Group Dated: 09/29

P3B110002	P3B111012	P3B120002	P3B121012
P3B130002	P3B131012	P3B130204	P3B200002
P3B110406	P3B120406	P3B130406	

Sample Group Dated: 10/13

P2B100810	P2B100001	P2B100304	P1D002
P1D003	P1D004	P1D001	P1D005

Sample Group Dated: 09/23-1

P02B40405	P1B120002	P1B200002	P1B110002
P1B110304			

Sample Group Dated: 09/23

P08B70002	P02B90406	P08B81012	P08B80102
P02B90304	P08B80910	P6D2	P6D3
P6D1	P6D4	P02B40002	P02B20405
P02B50405	P02B30405	P02B20002	P02B30507
P02B50002	P02B30002		

Sample Group Dated: 09/17

P08B20102	P08B20203	P08B20910	P08B30102
P08B30911	P08B40002	P08B41214	P02B60002
P08B61213	P00B20001	P02B70002	P08B71213
P08B60002	P02B40304	P00B20203	P02B80506
P02B80002	P02B70506	P02B60506	

Sample Group Dated: 09/25

P1B100002	P1B100304	P1B130304	P1B130002
P01B90304	P01B90002	P1B70304	P01B70002
P01B80002	P01B60304	P01B60002	P01B50304
P01B40001	P01B40203	P01B80304	

Overview

Seventy-seven soil samples were analyzed according to SW-846 7196a requirements for analysis of Hexavalent Chromium.

Summary

All Sample were successfully analyzed for hexavalent chromium. One sample, P08B20910 contained a hexavalent chromium concentration above the detection limit. the QA/QC level was HAZWRAP Level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were analyzed within allowed holding times

Blanks

There were no detects for hexavalent chromium in any on the associated blanks.

Matrix Spike/Matrix Spike Duplicate

All matrix spike/matrix spike duplicates were within the 75 - 125% recovery criteria.

TPH Data Validation

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Phelps Collins
Alpena, MI
Total Petroleum Hydrocarbons Data Validation
Sampling Dates: July-September 1993

Phelps Collins Total Petroleum Hydrocarbons - Soil Samples

Sample Group Dated: 08/31/-1

P04D001	P04D001A	P04D002B	P04D002A
P04D003	PORD004A	P04D004B	P04D005A
P04D104B	P04D005B		

Sample Group Dated: 08/31-2

P04D106B	P04D006B	P04D006A	P04D007
P04D008	P04D009A	P04D009B	P04D010A
P04D010B	P04D015		

Sample Group Dated: 09/02

P04D017	P04D013	P04D011	P04D012
P04D016	P04D018	P04D014	P04D115

Sample Group Dated: 09/06

P00B10001	P00B10203	P00B10910	P08B20102
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		

Sample Group Dated: 09/16-1

P02B60002	P08B61213	P00B20001	P02B70002
P08B71213	P08B60002	P02B40304	P02B80506

Sample Group Dated: 09/16-2

P02B80002	P02B70506	P02B60506	P08B70002
P02B90406	P08B1012	P08B80102	P02B90304
P08B80910			

Sample Group Dated: 09/17

P02B50002	P02B30002	P02B40405

Sample Group Dated: 09/24-1

P01B70304	P01B70002	P01B80002	P01B60304
P01B60002	P01B50002	P01B50304	P01B40001
P01B40203	P01B80304		

Sample Group Dated: 09/24-2

P02B20405	P02B50405	P02B30405	P02B20002
P02B0507	P1B120002	P1B200002	P1B110002
P1B110304	P1B100002	P1B100304	P1B130304
P1B130002	P01B90304	P01B90002	

Sample Group Dated: 09/24-3

P6D2	P6D3	P6D1	P6D4
P02B40002	P02B20405	P02B50405	P02B30405
P02B20002	P02B30507		

Sample Group Dated: 09/27-1

P3B130406	P3B120810

Sample Group Dated: 09/27-2

P3B110002	P3B111012	P3B120002	P3B121012
P3B130002	P3B131012	P3B130204	P3B200002
P3B110406	P3B120406		

Sample Group Dated: 10/15

P2B100810	P2B100001	P2B100304	P1D002
P1D003	P1D004	P1D001	P1D005

<u>Phelps Collins Total Petroleum Hydrocarbons - Soil Samples</u>

Sample Group Dated: 08/25

PFB1	P04W001	P04W002	P04W003
P04W004			

Sample Group Dated: 08/31

PFB2	P04W007	P04W006	PBER1
P04W005	P04W106	P04W008	PBER3
PBER4			

Sample Group Dated: 09/09

P00GPW1	P00GPW2	PFB3	P02GMW1
P00GPW3	P04GMW2	PFB6	P06GMW2
P04GMW3	P06GMW1		

Sample Group Dated: 09/10

PBER5	P02GMW9	P04GMW4	P5MW3GW4
PBER08	P3MW1GW4	P8MW1GW4	PBER9
P2MW2GW4	P02GMW5		

Sample Group Dated: 09/16

P2MW3GW4	P2MW9GW4	PBER07	P5MW1GW4
P2MW4GW4	P4MW8GW4	P4MW1GW4	PBER10
PBER12	PBER11		

Sample Group Dated: 09/23

PFB3	PFBO5	P05MW3GW4	PBER13
P03MW2GW4	P03MW3GW4	P03MW4GW4	P05MW4GW4
P05MW2GW4			

Sample Group Dated: 09/27

PER15	P6MW3GW4	P3MW5GW4	PER14
PBER16	P3MW9GW4	P9MW2GW4	P9MW1GW4
P9MW3GW4	P9MW5GW4		

Sample Group Dated: 09/30

P5MW5GW4	P6MW8GW4	P6MW9GW4	P9MW4GW4
P7MW1GW4	P1MW2GW4	P2MW7GW4	P2MW6GW4
PFB07	P3MW6GW4		

Sample Group Dated: 09/30-1

P8MW2GW4	P6MW5GW4	P8MW9GW4	P6MW4GW4
P5MW6GW4	PER17	P8MW3GW4	P8MW4GW4
P6MW6GW4	P5MW7GW4		

Sample Group Dated: 10/03

P1MW3GW4

Sample Group Dated: 10/05

PER18	P1MW4GW4	P5MW9GW4	P5MW8GW4
P3MW7GW4	PER19	P9MW6GW4	P1MW6GW4
PER21	P6M10GW4		

Sample Group Dated: 10/15

P1M12GW4	PER20	P7MW2GW4	P1M13GW4
P8MW5GW4	P1M11GW4	P1MW1GW4	P1M14GW4
P7MW3GW4			

Overview

One hundred and thirteen soil and one hundred and three water samples were analyzed according to method 418.1 requirements for analysis of Total Petroleum Hydrocarbons.

Summary

All Samples were successfully analyzed for TPH. Several samples contained TPH concentration above the detection limit. the QA/QC level was HAZWRAP Level C for all

samples.

Major Problems

None

Minor Problems

Holding Times

All samples were analyzed within allowed holding times

Blanks

TPH was detected in several of the associated blanks. Samples with concentration less than 5 times the concentration detected in any of the associated blanks were qualified "B". Sample detects greater than 5 times the blank concentration were not qualified. Non-detects were not qualified.

Matrix Spike/Matrix Spike Duplicate

All matrix spike/matrix spike duplicates were within the 75 - 125% recovery criteria.

Volatile Organic Compound Data Validation

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Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/820
Sampling Dates: July - August 1993

Samples in SDG # 363

P04W001	P04W002	P04W003	P04W004
PTB1	PTB2	PFB2	P04W007
P04W006	PBER1	P04W005	P04W106
P04W008	PTB3	PTB4	PBER3
PBER4	PTB5	PTB6	P00GPW1

Overview

Twenty water samples for SDG # 363 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Nine samples; P04W004, PTB1, PFB2, P04W007, P04W006, PBER1, P04W106, P04W008, and PTB3 required second column confirmation for halogenated compounds organic compounds. Eleven samples; P04W002, P04W003, P04W004, P04W007, P04W006, PBER1, PTB4, PBER3, PBER4, and PTB5 required second column confirmation for aromatic organic compounds. Several of the samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days for preserved samples. The confirmation analysis of sample PTB1 was performed 1 day out of the required holding time of 14 days for preserved samples. Detects in PTB1 were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

Surrogates

Sample P04W007 reported a low surrogate recovery for the surrogate BFB in the halogenated confirmation analysis. There were no associated detects in the sample, associated non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
PFB2	Methylene Chloride
P04W007	Methylene Chloride
P04W006	Methylene Chloride
PBER1	Methylene Chloride
P04W005	Methylene Chloride
P04W106	Methylene Chloride
P04W001	Methylene Chloride

SAMPLE	COMPOUND
P04W002	Methylene Chloride
P04W003	Methylene Chloride
P04W004	Methylene Chloride
P04W008	Methylene Chloride
P04W007	Chloroform
P04W004	1,1,1-Trichloroethane
P04W001	Toluene
P04W002	Toluene
P04W003	Toluene
P04W004	Toluene
PTB3	Toluene
PTB4	Toluene
PBER3	Toluene
PBER4	Toluene
PTB5	Toluene
PTB6	Toluene
P00GPW1	Toluene
P04W004	Benzene
PTB2	1,3-Dichlorobenzene
P04W001	1,4-Dichlorobenzene
PTB1	1,4-Dichlorobenzene
P04WO01	1,2-Dichlorobenzene
PTB1	1,2-Dichlorobenzene
PTB3	1,2-Dichlorobenzene
PBER4	1,2-Dichlorobenzene
PTB6	1,2-Dichlorobenzene
P00GPW1	1,2-Dichlorobenzene

Matrix Spike

Sample P04W001was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated and aromatic MS/MSD. All of the relative percent recovery (RPD) met accuracy criteria for the halogenated MS/MSD. Three of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 365

P04D001	P04D001A	P04D002B	P04D002A
P04D003	P04D004A	P04D004B	P04D005A
P04D104B	P04D005B	P04D106B	P04D006B
P04D006A	P04D007	P04D008	P04D009A
P04D009B	P04D010A	P04D010B	P04D015

Overview

Twenty soil samples for SDG# 365 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Eighteen samples; P04D001, P04D001A, P04D002B, P04D002A, P04D003, P04D004A, P04D004B, P04D005A, P04D104B, P04D005B, P04D006B, P04D007, P04D008, P04D009A,P04D009B, P04D010A, P04D010B and P04D015 required second column confirmation for halogenated volatile organics. Four samples; P04D009A, P04D010A, P04D010B, and P04D015 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days samples. Nine samples; P04D001, P04D002A, P04D007, P04D008, P04D009A, P04D009B, P04D010A, P04D010B and P04D015 requiring second column confirmation, for halogenated target compounds, were analyzed 1 to 11 days out of the required holding time. All four samples; P04D009A, P04D010A, P04D010B, and P04D015 requiring second column analysis for aromatic target compounds were analyzed 3 to 11 days out of the required holding time. All target analytes detected out of holding time were qualified "J" for estimated. Non-detects that corresponded to a detect in the initial analysis were qualified "UJ".

Surrogates

Samples P04D005A, P04D005B, and P04D006A reported high recovery for the surrogate TCFM in the initial halogenated analysis. Samples P04D009A, P04D009B, P04D010A, and P04D010B reported low recovery for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P04D009A, P04D010A, and P04D010B reported low surrogate recovery for BFB in either the initial and/or the confirmation aromatic analysis. Samples that reported high surrogate recoveries were not qualified. Associated detects in samples that reported low surrogate recoveries were qualified "J" for estimated. Associated non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P04D001	Methylene Chloride
P04D002A	Methylene Chloride
P04D106B	Methylene Chloride
P04D006B	Methylene Chloride
P04D006A	Methylene Chloride
P04D007	Methylene Chloride
P04D008	Methylene Chloride
P04D009A	Methylene Chloride
P04D009B	Methylene Chloride
P04D010A	Methylene Chloride
P04D010B	Methylene Chloride
P04D015	Methylene Chloride
P04D001	Chloroform
P04D001A	Chloroform
P04D002B	Chloroform
P04D002A	Chloroform
P04D003	Chloroform
P04D004A	Chloroform
P04D004B	Chloroform
P04D005A	Chloroform
P04D104B	Chloroform
P04D005B	Chloroform
P04D106B	Chloroform
P04D006B	Chloroform
P04D006A	Chloroform
P04D007	Chloroform
P04D008	Chloroform
P04D009A	Chloroform
P04D009B	Chloroform

SAMPLE	COMPOUND
P04D010A	Chloroform
P04D010B	Chloroform
P04D015	Chloroform
P04D002A	1,1,1-Trichloroethane
P04D106B	1,1,1-Trichloroethane
P04D006A	1,1,1-Trichloroethane
P04D010B	1,1,1-Trichloroethane
P04D001	1,2-Dichlorobenzene
P04D003	1,2-Dichlorobenzene
P04D007	1,2-Dichlorobenzene
P04D008	1,2-Dichlorobenzene
P04D009B	1,2-Dichlorobenzene
P04D010B	1,2-Dichlorobenzene
P04D010B	Toluene
P04D010B	1,4-Dichlorobenzene
P04D010B	Dibromochloromethane

Matrix Spikes

Sample P04D004 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for the halogenated MS/MSD. RPD failed to meet accuracy criteria for 3 of the aromatic spike compounds. Data was not qualified solely on matrix spike/matrix spike duplicate data

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 368

P04D017	P04D013	P04D011	P04D012
P04D016	P04D018	P04D014	P04D015
P00B10001	P00B10203	P00B10910	P08B20102
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		

Overview

Eighteen soil samples for SDG# 368 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Fifteen samples; P04D017, P04D013, P04D011, P04D012, P04D016, P04D018, P04D014,P04D015, P00B10001, P00B10910, P08B20102, P08B30102, P08B30911, P08B40002 and P08B41214 required second column confirmation for halogenated volatile organics. Two samples P04D017 and P08B10001 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

The initial halogenated analysis for samples P04D017 and P08B10001 were performed 3 days out of holding times. The initial aromatic analysis for samples P04D017 and P08B10001 were performed 3 and 2 days respectively, out of the required holding time of 14 days. Fourteen samples; P04D017, P04D013, P04D011, P04D012, P04D016, P04D018, P04D014,P04D015, P00B10001, P00B10910, P08B30102, P08B30911, P08B40002, P08B41214 were confirmed for halogenated analytes out of required holding times by 3 to 26 days. P04D017 and P08B10001 were confirmed for aromatic compounds 26 and 3 days respectively, out of the required holding time. All target analytes detected out of holding time were qualified "J" for estimated. Non-detects, in samples confirmed out of holding times, that corresponded to a detect in the initial analysis was qualified "UJ". All other samples were analyzed within the required holding time.

Surrogates

Samples P08B30911, P08B40002, P08B41214 and P08B20102 reported the surrogate TCFM out of control limits in either the initial and/or the confirmation halogenated analysis. Samples P04D017, P08B30102, P08B10001, and P08B20102 failed to met required surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P04D017 and P08B10001 reported low surrogate recovery for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. No qualifiers were added for samples that reported high surrogate recovery. Detects associated with low surrogate recovery were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all surrogate recovery limits for both halogenated and aromatic surrogates.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P04D014	Methylene Chloride
P04D115	Methylene Chloride
P00B10001	Methylene Chloride
P00B10203	Methylene Chloride
P00B10910	Methylene Chloride
P08B20102	Methylene Chloride
P04D017	Methylene Chloride
P04D013	Methylene Chloride
P04D011	Methylene Chloride
P04D012	Methylene Chloride
P04D016	Methylene Chloride
P04D018	Methylene Chloride
P08B20203	Methylene Chloride
P08B20910	Methylene Chloride
P08B30102	Methylene Chloride
P08B30911	Methylene Chloride
P08B40002	Methylene Chloride
P08B41214	Methylene Chloride
P04D013	Chloroform
P04D011	Chloroform
P04D012	Chloroform
P04D016	Chloroform
P04D018	Chloroform
P04D014	Chloroform
P04D115	Chloroform
P00B10203	Chloroform
P00B10910	Chloroform
P08B20102	Chloroform
P08B20203	Chloroform

SAMPLE	COMPOUND
P08B20910	Chloroform
P08B30102	Chloroform
P08B30911	Chloroform
P08B40002	Chloroform
P08B41214	Chloroform
P04D011	1,1,1-Trichloroethane
P04D018	1,1,1-Trichloroethane
P04D014	1,1,1-Trichloroethane
P04D115	1,1,1-Trichloroethane
P00B10001	1,1,1-Trichloroethane
P00B10203	1,1,1-Trichloroethane
P00B10910	1,1,1-Trichloroethane
P08B20102	1,1,1-Trichloroethane
P08B20203	1,1,1-Trichloroethane
P08B20910	1,1,1-Trichloroethane
P08B30102	1,1,1-Trichloroethane
P08B30911	1,1,1-Trichloroethane
P08B40002	1,1,1-Trichloroethane
P04D017	Toluene
P08B20102	Toluene
P08B20203	Toluene
P08B20910	Toluene
P08B30911	Toluene
P08B40002	Toluene
P08B41214	Toluene
P08B20102	o-Xylene
P08B20203	o-Xylene
P08B30102	o-Xylene
P08B30911	o-Xylene

SAMPLE	COMPOUND
P08B40002	o-Xylene
P08B41214	o-Xylene
P08B309111	Styrene
P04D017	1,3-Dichlorobenzene
P08B30911	1,3-Dichlorobenzene
P08B20910	1,4-Dichlorobenzene
P0830102	1,4-Dichlorobenzene
P08B30102	Dibromochloromethane
P08B30102	Bromoform

Matrix Spikes

Sample P04D011 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for methylene chloride in the matrix spike and matrix spike duplicate. Spike recovery met all accuracy criteria for the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 369

P00GPW2	PFB3	P02GMW1	P00GMW1
PTB7	P04GMW2	PFB6	P06GMW2
P04GMW3	PTB8	P06GMW1	PB-ER5
P02GMW9	P04GMW4	P-TB9	P5MW3GW4
PTB10			

Overview

Seventeen water samples for SDG# 369 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Five samples;PFB3, P00GPW3, PTB9, P5MW3GW4, and P06GMW1 required second column confirmation for halogenated volatile organics. Five samples; PTB7, PTB9, P5MW3GW4, PFB6, and P04GMW3 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days for preserved samples. One sample, PFB3, requiring second column conformation analysis was analyzed 1 day out of required holding times. Based on professional judgement qualifiers were not added to confirmation results which did not indicate compound loss, between the initial and conformation analysis.

Surrogates

Samples P06GMW1, PTB9, and P5MW3GW4 failed to meet the surrogate recovery limits for TCFM in either the initial or conformation analysis. Samples which reported high surrogate recoveries were not qualified. Detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P00GPW3	Methylene Chloride
PFB6	Methylene Chloride
PTB8	Methylene Chloride
P-TB9	Methylene Chloride
P5MW3GW4	Methylene Chloride
PTB10	Methylene Chloride
PFB6	1,1,1-Trichloroethane
P00GPW2	Toluene
PFB3	Toluene
P02GMW1	Toluene
P00GPW3	Toluene
PTB7	Toluene
P04GMW2	Toluene
P06GMW2	Toluene
P04GMW3	Toluene
PTB8	Toluene
P06GMW1	Toluene
PB-ER5	Toluene
P02GMW9	Toluene
P04GMW4	Toluene
PTB9	Toluene
PTB10	Toluene
PFB6	1,3-Dichlorobenzene
PB-ER5	1,3-Dichlorobenzene
P02GMW9	1,3-Dichlorobenzene
P04GMW4	1,3-Dichlorobenzene
P04GMW2	1,4-Dichlorobenzene
P06GMW1	1,4-Dichlorobenzene

SAMPLE	COMPOUND
PB-ER5	1,4-Dichlorobenzene
P02GMW9	1,4-Dichlorobenzene
P04GMW4	1,4-Dichlorobenzene
P00GPW2	1,4-Dichlorobenzene
P02GMW1	1,4-Dichlorobenzene
P00GPW3	1,4-Dichlorobenzene
P00GPW2	1,2-Dichlorobenzene
PFB3	1,2-Dichlorobenzene
P02GMW1	1,2-Dichlorobenzene
P00GPW3	1,2-Dichlorobenzene
P06GMW3	1,2-Dichlorobenzene
P06GMW1	1,2-Dichlorobenzene
PB-ER5	1,2-Dichlorobenzene
P02GMW9	1,2-Dichlorobenzene
P04GMW4	1,2-Dichlorobenzene

Matrix Spikes

Sample P00GPW3 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) and relative percent difference (RPD) values met accuracy criteria.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 372

P2MW3GW4	PBER08	P3MW1GW4	P8MW1GW4
PBER9	P2MW9GW4	PBER07	P5MW1GW4
P2MW2GW4	P2MW4GW4	PTB12	TB

Overview

Twelve water samples for SDG# 372 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Sample P8MW1GW4 required second column confirmation for halogenated volatile organics. Six samples; PBER07, PTB12, TB, PBER08, P3MW1GW4, and P2MW9GW4 required second column confirmation for aromatic volatile organics. Sample P5MW1GW4 required dilution and reanalysis for the aromatic analysis. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days for preserved samples. The aromatic confirmation analysis for samples PTB12, TB, and PBER08 were performed 1 to 29 days out of the required holding time. All other samples were analyzed within holding time.

Surrogates

Sample P8MW1GW4 and P2MW2GW4 reported high surrogate recovery for the halogenated surrogate TCFM in the initial analysis. Samples reporting high surrogate recoveries were not qualified. All other samples met all required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed to met required precision criteria (RSD < 20%, %D<15) during the initial and/or the continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P8MW1GW4	Methylene Chloride
PBER07	Toluene
P5MW1GW4	Toluene
P2MW2GW4	Toluene
P2MW4GW4	Toluene
PTB12	Toluene
TB	Toluene
P2MW3GW4	Toluene
PBER08	Toluene
P3MW1GW4	Toluene
PBER9	Toluene
P2MW9GW4	Toluene
P2MW3GW4	1,3-Dichlorobenzene
P3MW1GW4	1,3-Dichlorobenzene
P8MW1GW4	1,3-Dichlorobenzene
P5MW1GW4RE	1,3-Dichlorobenzene
P2MW4GW4	1,4-Dichlorobenzene
P2MW2GW4	1,2-Dichlorobenzene
P2MW4GW4	1,2-Dichlorobenzene
P2MW3GW4	1,2-Dichlorobenzene
PBER9	1,2-Dichlorobenzene

Matrix Spikes

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. 2-CEVE was not detected in the halogenated matrix spike or matrix spike duplicate. Spike recovery (SR) values met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Relative percent difference (RPD) met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation 601/602
Sampling Dates: August 1993

Samples in SDG # 372A

PBER10	PTB113	PTB14	PBER12
PBER11			

Overview

Five water samples for SDG # 372A were validated for volatile organic compounds analyzed by 601/602 methodology.

Summary

All samples were successfully analyzed for target compounds. Four samples; PBER10, PBER11, PTB13, and PTB14 required second column confirmation for halogenated compounds organic compounds. Four samples, PBER11, PBER12, PTB13, and PTB14 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

Due to an error at the laboratory the samples were analyzed using 601/602 methodology and not the required 8010/8020 methodology.

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days for preserved samples. All confirmation analysis were performed 1 to 15 days out of holding times. Detects in the sample confirmed out of holding times were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

Surrogates

All samples met required surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
PBER10	Methylene Chloride
PBER11	Methylene Chloride
PBER12	Methylene Chloride
PTB13	Methylene Chloride
PTB14	Methylene Chloride
PBER11	Benzene
PBER12	Benzene
PTB13	Benzene
PTB14	Benzene
PBER10	Toluene
PBER11	Toluene
PBER12	Toluene
PTB13	Toluene
PTB14	Toluene
PBER10	1,4-Dichlorobenzene
PTB13	1,4-dichlorobenzene
PBER10	1,2-Dichlorobenzene
PTB13	1,2-Dichlorobenzene

Matrix Spike

Sample P2MW2GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to met accuracy criteria for two halogenated MS/MSD. All spike recoveries met accuracy criteria for the aromatic MS/MSD. All relative percent recoveries (RPD) met accuracy criteria for the halogenated MS/MSD. Three RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 373

P02B60002	P08B61213	P00B20001	P02B70002
P08B71213	P08B60002	P02B40304	P00B20203
P02B80506	P02B80002	P02B70506	P02B60506
P08B70002	P02B90406	P08B81012	P08B80102
P02B90304	P08B80910	P6D2	

Overview

Nineteen soil samples for SDG# 373 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Sixteen samples; P02B60002, P08B61213, P00B20001, P0870002, P08B60002, P02B40304, P00B20203, P0280506, P02B80002, P02B70506, P02B60506, P02B70002, P08B81012, P08B80102, P08B90304, and P6D2 required second column confirmation for halogenated volatile organics. Five samples; P08B61213, P08B60002, P08B80102, P02B90304, and P6D2 required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

The initial halogenated and aromatic analysis for sample P02B40304 were performed 1 day out of holding time. The initial aromatic analysis for P02B90304 was performed 11 days out of holding time. All other initial analysis were performed within the required holding time of 14 days. All confirmation analysis were performed from 9 to 26 days out of the required holding time.

Surrogates

Samples P02B90406, P00B20203, P02B80506, P02B70506, P02B60506, P02B60002, and P6D2 failed to meet required surrogate recovery limits for the surrogate TCFM in either the initial and/or the confirmation halogenated analysis. Samples P08B70002, P08B81012, P08B80102, P08B61213, P02B70002, P08B60002, and P6D2 failed to meet required surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P08B80102, P08B61213, P08B60002, and P6D2 failed surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. Samples were not qualified for surrogates reporting high recoveries. Samples with detects associated with low surrogate recovery were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P02B40304	Methylene Chloride
P02B80506	Methylene Chloride
P02B80002	Methylene Chloride
P02B70506	Methylene Chloride
P02B60506	Methylene Chloride
P08B61213	Methylene Chloride
P00B20001	Methylene Chloride
P08B70002	Methylene Chloride
P08B71213	Methylene Chloride
P02B70002	Methylene Chloride
P02B90406	Methylene Chloride
P08B81012	Methylene Chloride
P08B80102	Methylene Chloride
P08B80910	Methylene Chloride
P6D2	Methylene Chloride
P02B40304	Chloroform
P00B20203	Chloroform
P02B80506	Chloroform
P02B80002	Chloroform
P02B70506	Chloroform
P02B60506	Chloroform
P02B60002	Chloroform
P08B61213	Chloroform
P00B20001	Chloroform
P08B70002	Chloroform
P08B71213	Chloroform
P08B60002	Chloroform
P02B70002	Chloroform
P02B90406	Chloroform

SAMPLE	COMPOUND
P08B81012	Chloroform
P08B80102	Chloroform
P02B90304	Chloroform
P08B80910	Chloroform
P6D2	Chloroform
P00B20203	1,1,1-Trichloroethane
P02B80506	1,1,1-Trichloroethane
P02B0002	1,1,1-Trichloroethane
P02B70506	1,1,1-Trichloroethane
P00B20001	1,1,1-Trichloroethane
P08B71213	1,1,1-Trichloroethane
P08B60002	1,1,1-Trichloroethane
P02B70002	1,1,1-Trichloroethane
P08B80102	1,1,1-Trichloroethane
P02B90304	1,1,1-Trichloroethane
P02B40304	Toluene
P02B80506	Toluene
P02B80002	Toluene
P02B70506	Toluene
P02B60506	Toluene
P02B60002	Toluene
P00B20001	Toluene
P08B70002	Toluene
P08B71213	Toluene
P02B70002	Toluene
P00B20203	1,4-Dichlorobenzene
P02B80506	1,4-Dichlorobenzene
P02B60506	1,4-Dichlorobenzene
P02B60002	1,4-Dichlorobenzene

SAMPLE	COMPOUND
P6D2	1,2-Dichlorobenzene

Matrix Spikes

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values met all accuracy criteria for both the halogenated and the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/820
Sampling Dates: August 1993

Samples in SDG # 374

P6D3	P6D1	P6D4	P02B40002
P02B20405	P02B50405	P02B30405	P02B20002
P02B30507	P02B50002	P02B30002	P02B40405
P1B120002	P1B20002	P1B110002	P1B110304
P1B100002	P1B100304	P1B130304	P1B130002

Overview

Twenty soil samples for SDG # 374 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Twelve samples; P6D3, P6D4, P1B12002, P1B1200002, P1B110304, P1B100002, P1B100304, P02B20002, P02B50002, P1B130304 and P1B130002 required second column confirmation for halogenated organic compounds. Five samples; P6D3, P6D1, P6D4, P02B20002, and P02B50002 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days. The halogenated confirmation analysis for samples; P6D3, P6D4, P02B20002, and P02B0002 was performed 10 to 14 days out of holding time. The aromatic confirmation for samples; P6D3, P6D1, P6D4, P02B20002, and P02B50002 requiring confirmation was performed 10 to 17 days out of holding time. Detects in the samples confirmed out of holding times were qualified with a "J" for estimated. Non-detects associated with compounds detected in the initial analysis were qualified "UJ".

Surrogates

Samples P1B20002, P1B110002, P1B100304, P02B20002,P6D3, and P6D4 failed to met surrogate recovery limits for TCFM in either the initial and/or the confirmation halogenated analysis for the surrogate TCFM. Samples P1B10002, P1B100304, P02B2002, P02B50002, P6D3, and P6d4 failed to met surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation halogenated analysis. Samples P02B20002, P02B50002, P6D3, and P6D4 failed to met surrogate recovery limits for the surrogate BFB in either the initial and/or the confirmation aromatic analysis. Samples which reported high surrogate recoveries were not qualified. Associated detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

Internal Standards

TCFM was outside the retention window in samples P1B130304, P1B13002, P1B12002, P1B11002, and P1B10304 no qualifiers were added because TCFM is not a target analyte and the samples were not significantly outside the retention times. All other internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P6D3	Methylene Chloride
P6D1	Methylene Chloride
P6D4	Methylene Chloride
P02B40002	Methylene Chloride
P02B20405	Methylene Chloride
P02B50405	Methylene Chloride
P1B110304	Methylene Chloride
P02B30405	Methylene Chloride
P02B20002	Methylene Chloride
P02B50002	Methylene Chloride
P02B30002	Methylene Chloride
P02B40405	Methylene Chloride
P1B130002	Methylene Chloride
P6D3	Chloroform
P6D1	Chloroform
P6D4	Chloroform
P02B40002	Chloroform
P02B20405	Chloroform
P02B50405	Chloroform
P1B120002	Chloroform
P1B200022	Chloroform
P1B110002	Chloroform
P1B110304	Chloroform
P1B100002	Chloroform
P1B100304	Chloroform
P02B30405	Chloroform
P02B20002	Chloroform
P02B30507	Chloroform
P02B50002	Chloroform

SAMPLE	COMPOUND
P02B30002	Chloroform
P02B40405	Chloroform
P1B130304	Chloroform
P1B130002	Chloroform
P6D1	1,1,1-Trichloroethane
P6D4	1,1,1-Trichloroethane
P02B20405	1,1,1-Trichloroethane
P02B50405	1,1,1-Trichloroethane
P1B120002	1,1,1-Trichloroethane
P1B200002	1,1,1-Trichloroethane
P1B110002	1,1,1-Trichloroethane
P1B100304	1,1,1-Trichloroethane
P02B30405	1,1,1-Trichloroethane
P02B20002	1,1,1-Trichloroethane
P02B30507	1,1,1-Trichloroethane
P02B50002	1,1,1-Trichloroethane
P1B130304	1,1,1-Trichloroethane
P1B120002	Toluene
P1B200002	Toluene
P1B110002	Toluene
P1B120002	Chlorobenzene
P1B120002	o-Xylene
P1B200002	o-Xylene
P1B110002	o-Xylene
P1B120002	Styrene
P1B110002	Styrene
P1B120002	1,3-Dichlorobenzene
P1B110002	1,4-Dichlorobenzene
P1B120002	1,2-Dichlorobenzene

SAMPLE	COMPOUND
P1B110002	1,2Dichlorobenzene
P6D3	Chloroform
P02B50405	1,3-Dichlorobenzene

Matrix Spike

Sample P6D3 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for 3 halogenated and 1 aromatic spike compound for the MS/MSD. All of the relative percent recovery (RPD) met accuracy criteria for the halogenated MS/MSD. Four of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 377

P01B90304	P01B90002	P01B70304	P01B70002
P01B80002	P01B60304	P01B60002	P01B50002
P01B50304	P01B40001	P01B40203	P01B80304
P3B110002	P3B111012	P3B120002	P3B121012
P3B130002	P3B131012	P3B130204	P3B200002

Overview

Twenty soil samples for SDG# 377 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Eighteen samples; P01B90304, P01B90002, P01B70304, P01B70002, P01B80002, P01B80304, P3B110002, P3B111012, P3B120002, P3B121012, P01B60002, P01B50002, P01B50304, P01B40001, P01B40203, P01B60304, P3B130204, and P3B200002 required second column confirmation for halogenated volatile organics. No sample required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial and confirmation analysis were performed within the required holding time of 14 days.

Surrogates

Samples P01B90002, P01B70002, P01B50002, P01B50304, P01B60304, P3B111012, P3B120002, P3B121012, and P3B130204 failed to meet the halogenated surrogate recovery limits for TCFM and/or BFB in either the initial or conformation analysis. Samples P01B70002 and P3B120002 failed to meet aromatic surrogate recovery limits for BFB. Samples which reported high surrogate recoveries were not qualified. Detects in samples which reported low surrogate recoveries were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

Internal Standards

TCFM was reported outside of the required retention window for sample P08B60304. No qualifiers were added since TCFM is not a target analyte and the retention window was not grossly exceeded. All other internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P01B90304	Methylene Chloride
P01B90002	Methylene Chloride
P01B70304	Methylene Chloride
P01B80002	Methylene Chloride
P01B80304	Methylene Chloride
P01B60002	Methylene Chloride
P01B50002	Methylene Chloride
P01B50304	Methylene Chloride
P01B40001	Methylene Chloride
P01B40203	Methylene Chloride
P03B11002	Methylene Chloride
P3B111012	Methylene Chloride
P3B120002	Methylene Chloride
P3B121012	Methylene Chloride
P3B130002	Methylene Chloride
P3B131012	Methylene Chloride
P3B130204	Methylene Chloride
P3B200002	Methylene Chloride
P01B90304	Chloroform
P01B90002	Chloroform
P01B70304	Chloroform
P01B80002	Chloroform
P01B80304	Chloroform
P01B60002	Chloroform
P01B50002	Chloroform
P01B50304	Chloroform
P01B40001	Chloroform
P01B40203	Chloroform

SAMPLE	COMPOUND
P01B60304	Chloroform
P3B110002	Chloroform
P3B111012	Chloroform
P3B120002	Chloroform
P3B121012	Chloroform
P3B131002	Chloroform
P3B131012	Chloroform
P3B130204	Chloroform
P3B200002	Chloroform
P01B90304	1,1,1-Trichloroethane
P01B70304	1,1,1-Trichloroethane
P01B70002	1,1,1-Trichloroethane
P01B80002	1,1,1-Trichloroethane
P01B80304	1,1,1-Trichloroethane
P01B60002	1,1,1-Trichloroethane
P01B50304	1,1,1-Trichloroethane
P01B40001	1,1,1-Trichloroethane
P01B40203	1,1,1-Trichloroethane
P01B60304	1,1,1-Trichloroethane
P3B121012	1,1,1-Trichloroethane
P3B130002	1,1,1-Trichloroethane
P3B131012	1,1,1-Trichloroethane
P3B131012	Trichloroethene
P3B131012	Trichloroethene
P3B131012	Trichloroethene
P3B131012	Trichloroethene
P3B131012	Trichloroethene
P01B90304	Toluene

SAMPLE	COMPOUND
P01B90002	Toluene
P01B70304	Toluene
P01B80002	Toluene
P01B60002	Toluene
P01B50002	Toluene
P01B40203	Toluene
P3B110002	Toluene
P3B130002	Toluene
P01B90304	o-Xylene
P01B90002	o-Xylene
P01B70304	o-Xylene
P01B80002	o-Xylene
P01B60002	o-Xylene
P3B130002	Styrene
P01B80002	1,3-Dichlorobenzene
P01B80304	1,3-Dichlorobenzene
P01B50002	1,3-Dichlorobenzene
P01B50304	1,3-Dichlorobenzene
P01B40203	1,3-Dichlorobenzene
P01B50304	1,4-Dichlorobenzene
P3B130002	1,4-Dichlorobenzene

Matrix Spikes

Sample P01B90304 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria in both the halogenated and aromatic MS/MSD. Relative percent difference (RPD) values failed on 2 of the 35 spiking compounds for the halogenated MS/MSD and 1 of the 12 spiking compounds for the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 379

PTB	PFB4	PFB05	PTB16
P05MW3GW4	PBER13	P03MW2GW4	P3MW3GW4
P03MW4GW4	P05MW4GW4	P05MW2GW4	PTB17
PER15	P6MW3GW4	P3MW5GW4	PER14
PBER-16	P3MW9GW4	PTB18	P9MW1GW4

Overview

Twenty water samples for SDG# 379 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Five samples; PFB4, P6MW3GW4, P03MW2GW4, PTB17, and P9MW1GW4 required second column confirmation for halogenated volatile organics. Sample PFB05 required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

The initial halogenated analysis for sample PFB4 was performed 4 days out of holding times. Two halogenated confirmation for samples, P03MW2GW4 and PTB17 and the aromatic confirmation for PFB05 was performed out of the required holding time by 1 to 3 days. All other samples were analyzed within holding time of 14 days for preserved samples. Detects in samples initially analyzed out of holding times were qualified "J" for estimated. Non-detects were not qualified. Detects in samples confirmed out of holding times were qualified "J" for estimated. Non-detects corresponding to detects in the initial analysis were qualified "UJ".

Surrogates

Sample PFB4 reported low halogenated surrogate recovery for TCFM in the initial analysis. Sample P03MW2GW4 reported low halogenated surrogate recovery for BFB in the initial analysis. Detects for target compounds in samples relating to the surrogates were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met all required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

All compounds met required precision criteria (RSD < 20%) for initial calibration. Several compounds failed precision criteria (%D < 15) during continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
PFB4	Methylene Chloride
P03MW2GW4	Methylene Chloride
P03MW3GW4	Methylene Chloride
P03MW4GW4	Methylene Chloride
P05MW4GW4	Methylene Chloride
PP05MW2GW4	Methylene Chloride
PTB17	Methylene Chloride
PER15	Methylene Chloride
P6MW3GW4	Methylene Chloride
P3MW5GW4	Methylene Chloride
PER14	Methylene Chloride
PBER-16	Methylene Chloride
P3MW9GW4	Methylene Chloride
PTB18	Methylene Chloride
P9MW1GW4	Methylene Chloride
PTB17	Chloroform
P3MW5GW4	1,1,1-Trichloroethane
PER14	1,1,1-Trichloroethane
PBER-16	1,1,1-Trichloroethane
P3MW9GW4	1,1,1-Trichloroethane
PFB05	Benzene
PTB	Toluene
PFB4	Toluene
PFB05	Toluene
PTB16	Toluene
P05MW3GW4	Toluene
PBER13	Toluene
P03MW2GW4	Toluene
P03MW3GW4	Toluene

SAMPLE	COMPOUND
P03MW4GW4	Toluene
P05MW4GW4	Toluene
P05MW2GW4	Toluene
PTB17	Toluene
PER15	Toluene
P05MW4GW4	Ethylbenzene
P05MW2GW4	Ethylbenzene
PER15	Ethylbenzene
PTB	1,4-Dichlorobenzene
PBER13	1,4-Dichlorobenzene
P03MW2GW4	1,2-Dichlorobenzene
P03MW3GW4	1,2-Dichlorobenzene
P03MW4GW4	1,2-Dichlorobenzene
P05MW4GW4	1,2-Dichlorobenzene
P05MW2GW4	1,2-Dichlorobenzene
PTB17	1,2-Dichlorobenzene
PER15	1,2-Dichlorobenzene

Matrix Spikes

Sample P3MW5GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values failed for two spiking compounds in the halogenated MS/MSD. Spike recovery met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) failed on 1 compound in the halogenated matrix spike/matrix spike duplicate. RPD values met all accuracy criteria for the aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 381

P3B110406 P3B120406 P3B120810 P3B130406

Overview

Four soil samples for SDG# 381 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Sample P3B120810 required second column confirmation for halogenated volatile organics. No sample required second column confirmation for aromatic volatile organics. All samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial and confirmation analysis were performed within the required holding time of 14 days.

Surrogates

Sample P3B120810 reported low halogenated surrogate recovery for BFB in the confirmation analysis. Detects for target compounds in sample P3B120810 relating to the surrogate BFB were qualified "J" for estimated, non-detects were qualified "UJ". All other samples met required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P3B110406	Methylene Chloride
P3B120406	Methylene Chloride
P3B120810	Methylene Chloride
P3B130406	Methylene Chloride
P3B110406	Chloroform
P3B120406	Chloroform
P3B120810	Chloroform
P3B130406	Chloroform
P3B110406	1,1,1-Trichloroethane
P3B120406	1,1,1-Trichloroethane
P3B120810	1,1,1-Trichloroethane
P3B130406	Toluene
P3B110406	Toluene
P3B120406	Toluene
P3B120810	Toluene
P3B130406	Toluene
P3B110406	o-Xylene
P3B120406	o-Xylene
P3B130810	o-Xylene
P3B130406	o-Xylene
P3B120810	1,4-Dichlorobenzene
P3B130406	1,4-Dichlorobenzene
PCB110406	1,2-Dichlorobenzene
P3B120810	1,2-Dichlorobenzene

Matrix Spikes

Sample P3B110406 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) values failed on methylene chloride in both the matrix spike and duplicate for the halogenated MS/MSD. Spike recovery met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD. Qualifiers were not added solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: September 1993

Samples in SDG # 383

PTB22	P7MW1GW4	P1MW2GW4	P2MW7GW4
P2MW6GW4	PTB23	P3MW6GW4	P1MW3GW4
PER18	P1MW4GW4	PTB24	PTB25
P5MW9GW4	P5MW8GW4	P3MW7GW4	PER19
P1M12GW4	PER20	P7MW2GW4	P1M13GW4

Overview

Twenty water samples for SDG# 383 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Five samples; PTB22, P2MW7GW4, P5MW8GW4, P3MW7GW4, and PER19 required second column confirmation for halogenated volatile organics. Three samples; P3MW6GW4, PER18, and P7MW2GW4 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial and confirmation analysis were performed within the required holding time of 14 days for preserved samples.

Surrogates

All samples met required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD <20%, %D<15) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P5MW9GW4	Methylene Chloride
P5MW8GW4	Methylene Chloride
P3MW7GW4	Methylene Chloride
PER19	Methylene Chloride
P1M12GW4	Methylene Chloride
PER20	Methylene Chloride
PER18	Methylene Chloride
P1MW4GW4	Methylene Chloride
PTB24	Methylene Chloride
PTB25	Methylene Chloride
PTB22	Methylene Chloride
P7MW1GW4	Methylene Chloride
P2MW7GW4	Methylene Chloride
P2MW2GW4	Methylene Chloride
P1M13GW4	Methylene Chloride
PER19	chloroform
P7MW1GW4	1,1,1-Trichloroethane
P5MW9GW4	Toluene
P5MW8GW4	Toluene
P3MW7GW4	Toluene
PER19	Toluene
P1M12GW4	Toluene
PER20	Toluene
PER18	Toluene
P1MW1GW4	Toluene
PTB24	Toluene
PTB25	Toluene
P7MW2GW4	Toluene
P1MW13GW4	Toluene

SAMPLE	COMPOUND
P5MW8GW4	1,3-Dichlorobenzene
PER19	1,3-Dichlorobenzene
PER20	1,3-Dichlorobenzene
P3MW6GW4	1,3-Dichlorobenzene
P1MW3GW4	1,3-Dichlorobenzene
PER18	1,3-Dichlorobenzene
P1MW4GW4	1,3-Dichlorobenzene
PTB25	1,3-Dichlorobenzene
PTB22	1,3-Dichlorobenzene
P7MW1GW4	1,3-Dichlorobenzene
P1MW2GW4	1,3-Dichlorobenzene
P2MW6GW4	1,3-Dichlorobenzene
PTB23	1,3-Dichlorobenzene
P7MW2GW4	1,3-Dichlorobenzene
P1MW13GW4	1,3-Dichlorobenzene
P5MW8GW4	1,4-Dichlorobenzene
PER19	1,4-Dichlorobenzene
P1M12GW4	1,4-Dichlorobenzene
PER20	1,4-Dichlorobenzene
P1MW3GW4	1,4-Dichlorobenzene
P1MW4GW4	1,4-Dichlorobenzene
PTB24	1,4-Dichlorobenzene
PTB25	1,4-Dichlorobenzene
PTB22	1,4-Dichlorobenzene
P1MW2GW4	1,4-Dichlorobenzene
P2MW7GW4	1,4-Dichlorobenzene
P2MW6GW4	1,4-Dichlorobenzene
PTB23	1,4-Dichlorobenzene
P1MW13GW4	1,4-Dichlorobenzene

SAMPLE	COMPOUND
P5MW9GW4	1,2-Dichlorobenzene
P5MW8GW4	1,2-Dichlorobenzene
P3MW7GW4	1,2-Dichlorobenzene
P3MW6GW4	1,2-Dichlorobenzene
P1MW3GW4	1,2-Dichlorobenzene
PER18	1,2-Dichlorobenzene
P1MW4GW4	1,2-Dichlorobenzene
PTB24	1,2-Dichlorobenzene
PTB22	1,2-Dichlorobenzene
P1MW2GW4	1,2-Dichlorobenzene
P2MW7GW4	1,2-Dichlorobenzene
P2MW6GW4	1,2-Dichlorobenzene
PTB23	1,2-Dichlorobenzene

Matrix Spikes

Sample P2MW6GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: August 1993

Samples in SDG # 382

P9MW2GW4	P9MW3GW4	P9MW5GW4	PTB19
P8MW2GW4	P6MW5GW4	P8MW9GW4	P6MW4GW4
P5MW6GW4	PER17	P8MW3GW4	P8MW4GW4
P6MW6GW4	P5MW7GW4	P5MW5GW4	PTB20
P6MW8GW4	P6MW9GW4	P9MW4GW4	PFB07

Overview

Twenty water samples for SDG# 382 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Five samples; P8MW2GW4, P6MW5GW4, P8MW3GW4, P6MW6GW4, and P9MW4GW4 required second column confirmation for halogenated volatile organics. Two samples P6MW5GW4 and P6MW8GW4 required second column confirmation for aromatic volatile organics. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

All initial analysis were performed within the required holding time of 14 days for preserved samples. Two samples P8MW2GW4 and P6MW5GW4 requiring second column confirmation, for halogenated target compounds, were confirmed 4 and 5 days out of holding times respectively. Sample P6MW5GW4 requiring second column analysis for aromatic target compounds was confirmed 5 days out of holding time. All target analytes that were detected out of holding time were qualified "J" for estimated. Non-detects in samples confirmed out of holding times that corresponded to a detect in the initial analysis was qualified "UJ".

Surrogates

Sample PFB07 reported high surrogate recovery for BFB in the aromatic surrogate recovery. Qualifiers were not added for high surrogate recovery. All other samples met all surrogate recovery limits for both halogenated and aromatic surrogates.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD $<20\%$, $\%D<15$) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P9MW3GW4	Methylene Chloride
P9MW5GW4	Methylene Chloride
PTB19	Methylene Chloride
P8MW2GW4	Methylene Chloride
P6MW5GW4	Methylene Chloride
P8MW9GW4	Methylene Chloride
P6MW4GW4	Methylene Chloride
PER17	Methylene Chloride
P8MW3GW4	Methylene Chloride
P8MW4GW4	Methylene Chloride
P6MW6GW4	Methylene Chloride
P5MW7GW4	Methylene Chloride
P6MW8GW4	Methylene Chloride
P6MW9GW4	Methylene Chloride
P9MW4GW4	Methylene Chloride
PFB07	Methylene Chloride
PER17	Chloroform
P8MW3GW4	Chloroform
P8MW4GW4	Chloroform
P5MW5GW4	Chloroform
P9MW3GW4	1,1,1-Trichloroethane
PER17	1,1,1-Trichloroethane
P5MW5GW4	1,1,1-Trichloroethane
P9MW5GW4	Toluene
PTB19	Toluene
P8MW2GW4	Toluene
P8MW9GW4	Toluene
P6MW8GW4	1,3-Dichlorobenzene
P6MW9GW4	1,3-Dichlorobenzene

SAMPLE	COMPOUND
P9MW4GW4	1,3-Dichlorobenzene
PFB07	1,3-Dichlorobenzene
P9MW5GW4	1,4-Dichlorobenzene
PTB19	1,4-Dichlorobenzene
P8MW2GW4	1,4-Dichlorobenzene
P6MW8GW4	1,4-Dichlorobenzene
P6MW9GW4	1,4-Dichlorobenzene
PFB07	1,4-Dichlorobenzene
P6MW5GW4	1,2-Dichlorobenzene
P6MW8GW4	1,2-Dichlorobenzene
P6MW9GW4	1,2-Dichlorobenzene
PFB07	1,2-Dichlorobenzene

Matrix Spikes

Sample P9MW2GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated MS/MSD and aromatic MS/MSD. Relative percent difference (RPD) values met all accuracy criteria for both the halogenated and aromatic MS/MSD.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/820
Sampling Dates: September 1993

Samples in SDG # 385

P2B100810	P2B100001	P2B100304	P1D002
P1D003	P1D004	P1D001	P1D005

Overview

Eight soil samples for SDG # 385 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Six samples; P2B100810, P2B100001, P2B100304, P1D002, P1D003, and P1D001 required second column confirmation for halogenated compounds organic compounds. Sample P2B100001 required second column confirmation for aromatic organic compounds. Several samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All initial and confirmation analysis were performed within the required holding time of 14 days.

Surrogates

Samples P1D003 and P1D001 reported a high surrogate recovery for the surrogate TCFM in the halogenated confirmation analysis. Samples P2B100001 and P2B100304 reported low surrogate recovery for the surrogate BFB in the initial and/or confirmation halogenated analysis. Sample P2B100001 reported low surrogate recovery for BFB in the initial aromatic analysis. There were no associated detects in the samples, associated non-detects were qualified "UJ". All other samples met all required surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P2B100810	Methylene Chloride
P2B100001	Methylene Chloride
P2B100304	Methylene Chloride
P1D002	Methylene Chloride
P1D003	Methylene Chloride
P1D004	Methylene Chloride
P1D001	Methylene Chloride
P1D005	Methylene Chloride
P2B100810	Chloroform
P2B100001	Chloroform
P2B100304	Chloroform
P1D002	Chloroform
P1D003	Chloroform
P1D003	Chloroform
P1D001	Chloroform
P1D005	Chloroform
P2B100810	Toluene
P1D005	Toluene
P2B100304	Toluene
P1D002	Toluene
P1D003	Toluene
P1D004	Toluene
P1D001	Toluene
P1D005	Toluene
P2B100810	o-Xylene
P1D003	o-Xylene
P1D004	o-Xylene
P1D001	o-Xylene
P1D005	o-Xylene

SAMPLE	COMPOUND
P2B100810	1,4-Dichlorobenzene
P1D001	1,4-Dichlorobenzene
P1D005	1,4-Dichlorobenzene

Matrix Spike

Sample P2B100810 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) met all accuracy criteria for both the halogenated and aromatic MS/MSD. Two of the relative percent recoveries (RPD) failed to meet accuracy criteria for the halogenated MS/MSD. One of the RPD's failed to meet accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/8020
Sampling Dates: September 1993

Samples in SDG # 386

P8MW5GW4	PTB26	P1M11GW4	P1MW1GW4
P1M14GW4	P7MW3GW4	P9MW6GW4	PTB27
PTB28	P1MW6GW4	PER21	P6M10GW4

Overview

Twelve water samples for SDG# 386 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Six samples; P1M14GW4, P7MW3GW4, P9MW6GW4, PTB27, PTB28 and PER21 required second column confirmation for halogenated volatile organics. Five samples; P1M11GW4, P1MW1GW4, P1M14GW4, P7MW3GW4, and PTB27 required second column confirmation for aromatic volatile organics. Sample P9MW6GW4 required dilution for volatile aromatic analysis. Several samples contained detects for various target compounds below the Contract Required Quanitation Limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

None.

Minor Problems

Holding Times

The initial aromatic analysis for PTB28 was performed 2 days out of the required holding time of 14 days for preserved samples. The halogenated confirmation analysis for samples P9MW6GW4 and PTB28 were performed 8 days and 2 days, respectively, out of holding time. The dilution of sample P9MW6GW4, for aromatic analysis, was performed 12 days out of holding time. All other samples were analyzed within holding time. Detects in samples initially analyzed out of holding times were qualified "J" for estimated. Non-detects were not qualified. Detects in confirmation analysis performed out of holding times were qualified "J" for estimated. Non-detects corresponding to detects in the initial analysis were qualified "UJ".

Surrogates

Sample P1MW6GW4 reported high surrogate recovery for the surrogate BFB in the halogenated confirmation analysis. Samples reporting high surrogate recoveries were not qualified. All other samples met all required halogenated and aromatic surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

All compounds met the required precision criteria (RSD < 20%) during the initial calibrations. Several compounds failed to met required precision criteria (%D<15) during the continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P8MW5GW4	Methylene Chloride
PTB26	Methylene Chloride
P1M11GW4	Methylene Chloride
P1MW1GW4	Methylene Chloride
P1M14GW4	Methylene Chloride
P7MW3GW4	Methylene Chloride
P9MW6GW4	Methylene Chloride
PTB27	Methylene Chloride
PTB28	Methylene Chloride
P1MW6GW4	Methylene Chloride
PER21	Methylene Chloride
P6M10GW4	Methylene Chloride
P8MW5GW4	Toluene
PTB26	Toluene
PTB27	Toluene
P9MW6GW4	1,3-Dichlorobenzene
PTB28	1,3-Dichlorobenzene
PTB26	1,4-Dichlorobenzene
PTB27	1,4-Dichlorobenzene
P8MW5GW4	1,2-Dichlorobenzene
PTB26	1,2-Dichlorobenzene
P1M14GW4	Ethylbenzene

Matrix Spikes

Sample P1M14GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to met accuracy criteria for 5 spiking compounds for the halogenated MS/MSD. SR values met all accuracy criteria in the aromatic MS/MSD. Relative percent difference (RPD) met all accuracy criteria in both the halogenated and the aromatic MS/MSD. Samples were not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Volatile Organic Data Validation SW 846 8010/820
Sampling Dates: August 1993

Samples in SDG # 387

P02GMW5 P4MW8GW4 P4MW1GW4

Overview

Three water samples for SDG # 387 were validated for volatile organic compounds analyzed by SW-846 8010/8020 methodology.

Summary

All samples were successfully analyzed for target compounds. Samples P4MW8GW4 and P4MW1GW4 required second column confirmation for halogenated volatile organic compounds. No sample required second column confirmation for aromatic organic compounds. Several of the samples contained detects for various target compounds below the Contract Required Quanitation limits (CRQL). QA/QC level was HAZWRAP level C for all samples.

Major Problems

All holding times were exceeded by 33 days. All data was qualified "R"

Minor Problems

Holding Times

All initial and confirmation analysis were performed outside of the required holding time of 14 days for preserved samples.

Surrogates

All samples met all required surrogate recovery limits.

Internal Standards

All internal standards met QC limits for area counts and retention times.

Calibration Criteria

Several compounds failed precision criteria (RSD < 20%, %D < 15%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. Non-detects were not qualified.

Blanks

Sample detects for the common laboratory contaminants, methylene chloride, acetone, toluene, and 2-butanone, were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks. Sample detects for other compounds were qualified "B", if the detected concentration was less than 5 times the concentration detected in any of the associated blanks. Detects were not qualified if the concentration was greater than 10 times the concentration of the common laboratory contaminants or 5 times the concentration of other contaminants detected in all of the associated blanks. Non-detects were not qualified. The following sample detects were qualified "B" because of contamination in associated equipment rinseate, method blank, field blank and/or trip blank.

SAMPLE	COMPOUND
P02GMW5	Methylene Chloride
P4MW8GW4	Methylene Chloride
P4MW1GW4	Methylene Chloride
P4MW8GW4	Benzene
P4MW8GW4	Toluene
P4MW1GW4	1,2-Dichlorobenzene

Matrix Spike

Sample P4MW1GW4 was used for the matrix spike/matrix spike duplicate. Spike recovery (SR) failed to meet accuracy criteria for two spiking compounds in the halogenated MS/MSD. All spike recovery criteria was met for the aromatic MS/MSD. One relative percent recoveries (RPD) failed to meet accuracy criteria for the halogenated MS/MSD. All RPD's met accuracy criteria for the aromatic MS/MSD. Data was not qualified solely on matrix spike/matrix spike duplicate data.

No other problems were noted during the data validation.

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Semi-Volatile Organic Compound Data Validation-CLP

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Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date September 1993

Samples in SDG # 1065

P5MW5GW4	P5MW6GW4	P5MW7GW4	P6MW4GW4
P6MW5GW4	P6MW6GW4	P8MW2GW4	P8MW3GW4
P8MW4GW4	P8MW9GW4	PER17	

Overview

Eleven water samples for SDG# 1065 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

4-Chloroaniline failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

The associated method blank contained bis(2-Ethylhexyl)phthalate. No target analytes were detected in the associated field blanks or equipment rinseates. Sample detects for the common phthalate contaminant were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminant detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Laboratory Control Sample

The laboratory control sample met all recovery criteria.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date September 1993

Samples in SDG # 1101

P1D001	P1D002	P1D003	P1D004
P1D005	P2B100001	P2B100304	P2B100810

Overview

Eight soil samples for SDG# 1101 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). No sample contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compounds failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

No target compounds were detected in the associated method blanks. Phenol and di-n-butyl phthalate were detected in one or more of the associated field blanks and or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Matrix Spike/Matrix Spike Duplicate

Sample P2B1003004 was used for the matrix spike/matrix spike duplicate. One of the twenty-two spike compounds was out of control limits for spike recovery. Eight of the eleven compounds were outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date September 1993

Samples in SDG # 1146

P1M11GW4	P1M12GW4	P1M13GW4	P1M14GW4
P1M6GW4	P1MW1GW4	P2MW5GW4	P6M10GW4
P7MW2GW4	P7MW3GW4	P8MW5GW4	P9MW5GW4
P9MW6GW4	PER20	PER21	

Overview

Fifteen water samples for SDG# 1146 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. Two samples; P1M6GW4 and P9MW6GW4, contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained various target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

Several compounds failed precision criteria (RSD <30%, %D<25%) during initial and/or continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

Bis(2-Ethylhexyl) phthalate was detected in all the associated method blanks. Phenol and Di-n-butylphthalate was also detected in one of the method blanks. Phenol, di-ethylphthalate, and bis(2-Ethylhexyl)phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

Surrogate recovery criteria was met in all samples.

Laboratory Control Sample

The laboratory control sample met all accuracy criteria.

Internal Standards

All internal standards were within QC limits.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 161

P00B10001	P00B10203	P00B10910	P04D011
P04D012	P04D13	P04D014	P04D015
P04D016	P04D018	P04D115	P08B20102
P08B20203	P08B20910	P08B30102	P08B30911
P08B40002	P08B41214		

Overview

Eighteen soil samples for SDG# 161 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). No sample contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

No target compounds were detected in the associated method blanks. Di-n-butyl-phthalate, bis-(2-Ethylhexyl)phthalate, phenol, and Diethylphthalate were detected in the associated field blanks and/or equipment rinseates. Non-detects were not qualified.

Surrogates

One surrogate, 2-fluorobiphenly, failed to met recovery criteria for P08B20910. Since only one surrogate was out of control limits no qualifiers were added.

Matrix Spike/Matrix Spike Duplicate

Sample P04D015 was used for the matrix spike/matrix spike duplicate. Three of the twenty-two spike compounds were out of control limits for spike recovery. One of the eleven compounds was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date July 1993

Samples in SDG # 2

P04W001	P04W002	P04W003	P04W004
P04W005	P04W006	P04W007	P04W008
P04W106	PB-ER1	PB-ER3	PBER4
PFB2			

Overview

Thirteen water samples for SDG# 2 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. Three samples, P04W001, PB-ER1, and PB-ER3 contained bis(2-Ethylhexyl)phthalate above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

Sample PB-ER1 was extracted one day out of required holding time and analyzed within holding required holding time. Non-detects, in samples analyzed out of holding times, were qualified "UJ" and detects were qualified "J" for estimated. All other samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

Two associated method blanks contained bis(2-Ethylhexyl)phthalate. No contaminants were detected in the associated field blank or equipment rinseate. Detects for the common phthalate contaminants were qualified "B", if the concentration detected was less than 10 times the concentration detected in the associated blanks or equipment rinseates. Detects were not qualified if the sample concentration was greater than 10x the concentration found in the associated blanks or equipment rinseate. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Laboratory Control Sample

4-Chloroaniline exceeded quality control limits in the laboratory control sample. Data was not qualified based on the laboratory control sample.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 209

P00GPW1	P00GPW2	P00GPW3	P02GMW1
P02GMW9	P04GMW2	P04GMW3	P04GMW4
P06GMW1	P06GMW2	P2MW3GW4	P2MW9GW4
P3MW1GW4	P5MW3GW4	P8MW1GW4	PB-ER5
PBER08	PBER9	PFB3	PFB6

Overview

Twenty water samples for SDG# 209 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. Sample, PBER5, contained bis(2-Ethylhexyl)phthalate above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times. Sample PFB3 was re-extracted out of holding times and reanalyzed within holding times. Based on professional judgement qualifiers were not added

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

Bis(2-Ethylhexyl)phthalate was detected in two of the method blanks. One blank also contained phenol. Di-n-butylphthalate, bis-(2-Ethylhexyl)phthalate, benzo(a)anthracene,and chrysene were detected in one or more of the associated field blanks and/or equipment rinseate. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

Three acid surrogates; D5-phenol, 2-fluorophenol, and 2,4,6-tribromophenol, were outside recovery criteria for samples, PFB3 and PFB3RE. Detects for target compounds associated with these surrogates were qualified "L", non-detects were qualified "UL". All other surrogates meet recovery criteria.

Laboratory Control Sample

The laboratory control sample met all recovery criteria.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date July 1993

Samples in SDG # 28

P04D001	P04D001A	P04D002A	P04D002B
P04D003	P04D004A	P04D004B	P04D005A
P04D005B	P04D006A	P04D006B	P04D007
P04D008	P04D009A	P04D009B	P04D010A
P04D010B	P04D017	P04D104B	P04D106B

Overview

Twenty soil samples for SDG# 28 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. No samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

One method blank contained bis(2-Ethylhexyl) phthalate. Di-n-butyl phthalate, bis(2-Ethylhexyl) phthalate, phenol, and/or diethylphthalate were detected one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Matrix Spike/Matrix Spike Duplicate

Sample P04D004B was used for the matrix spike/matrix spike duplicate. Phenol was out of control limits in the matrix spike for spike recovery. No compound was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 447

P02B60002	P08B61213	P00B20001	P02B70001
P08B71213	P08B60002	P02B40304	P00B20203
P02B80506	P02B80002	P02B70506	P02B60506
P08B70002	P02B90406	P08B81012	P08B80102
P02B90304	P08B80910	P6D2	

Overview

Nineteen soil samples for SDG# 447 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. Three samples; P02B60002, P08B80102, and P6D2, were outside control limits for the sixth internal standard and were reanalyzed within holding times. No samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained various target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compounds failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

No target compounds were detected in the associated method blanks. Phenol, diethylphthalate, phenanthrene, carbazole, and bis(2-Ethylhexyl)phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

One acid surrogate, 2,4,6-tribromophenol, failed to meet recovery criteria for P08B00102 and P08B00102RE. Since only one surrogate was out of control limits qualifiers were not added.

Matrix Spike/Matrix Spike Duplicate

Sample P02B40304 was used for the matrix spike/matrix spike duplicate. None of the spike compounds were out of control limits for spike recovery. Five of the eleven compounds were outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

Internal Standards

The sixth internal standard, D-12 perylene failed control criteria for samples P02B60002, P08B80102, P6D, and their reanalysis. The target compounds associated with the sixth internal standard was qualified "UJ" for non detects and "J" for detects.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 523

P2MW2GW4	P2MW4GW4	P4MW1GW4	P4MW8GW4
P5MW1GW4	PBER07	PBER10	PBER11
PBER12			

Overview

Nine water samples for SDG# 523 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

One of the associated method blanks contained bis(2-Ethylhexyl)phthalate. No target analytes were detected in any of the associated field blanks or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Laboratory Control Sample

The laboratory control sample met all recovery criteria.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 606

P02B20002	P02B20405	P02B30002	P02B30405
P02B30507	P02B40002	P02B40405	P02B50002
P02B50405	P1B100002	P1B100304	P1B110002
P1B110304	P1B120002	P1B130002	P1B130304
P1B20002	P6D1	P6D3	P6D4

Overview

Twenty soil samples for SDG# 606 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. Sample, P6D4, contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed the precision criteria, RSD <30% during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

No target compounds were detected in the associated method blanks. Bis(2-Ethylhexyl)phthalate, phenol, diethylphthalate, phenanthrene, and carbazole were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Matrix Spike/Matrix Spike Duplicate

Four of the twenty-two spike recoveries failed high for the matrix spike/matrix spoke duplicate. All of the relative percent differences were within control limits. The data was not qualified based on the matrix spike/matrix spike duplicate data.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 674

P03MW2GW4	P03MW3GW4	P03MW4GW4	P05MW2GW4
P05PW3GW4	P05MW4GW4	P3MW5GW4	P3MW9GW4
P6MW3GW4	P9MW1GW4	P9MW2GW4	P9MW3GW4
P9MW5GW4	PBER-16	PBER-13	PER14
PER15	PFB05	PFB4	

Overview

Nineteen water samples for SDG# 674 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. Several samples contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times. Sample PBER16 was re-extracted out of holding time and reanalyzed within holding times. Based on professional judgement qualifiers were not added.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibration. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

Several target compounds were detected in the method blanks. bis (2-Ethylhexyl)phthalate was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

Six surrogates; D5-nitrobenzene, 2-fluorobiphenyl, terphenyl, D5-phenol, 2-fluorophenol and 2,4,6-tribromophenol, were outside recovery criteria for sample P9MW5GW4. Recovery was less than 10% for all surrogates and all non-detects were qualified "R", all detects were qualified "L". Four surrogates; ,D5-nitrobenzene, 2-fluorobiphenyl, terphenyl, and 2,4,6-tribromophenol were outside recovery limits for sample PBER-16. All recoveries were low but greater than 10%, all associated non-detects were qualified "UL" and all detects qualified "L". Two surrogates; D5-phenol and 2-fluorophenol, were outside recovery criteria for PFB4 and PFB4RE. Recovery for D5-phenol was 0% recovery for 2-fluorophenol was low but greater than 10%. . Non-detects for associated target compounds were qualified "R" detects were qualified "L". All other surrogates met recovery criteria.

Laboratory Control Sample

The laboratory control sample met all recovery criteria.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date July 1993

Samples in SDG # 708

P01B40001	P01B40203	P01B50002	P01B50304
P01B60002	P01B60304	P01B70002	P01B70304
P01B80002	P01B80304	P01B90002	P01B90304
P3B110002	P3B111012	P3B120002	P3B120810
P3B121012	P3B130002	P3B130204	P3B131012

Overview

Twenty soil samples for SDG# 708 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. Sample P3B120810, contained eight target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

No compound failed precision criteria, RSD <30%, during initial calibration. Several compounds failed precision criteria, %D <25%, during continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

No target compounds were detected in the associated method blanks. Phenol was detected in one or more of the associated field blanks and/or equipment rinseate. Sample detects for phenol were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects for phenol were not qualified "B", if the sample concentration was greater than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

One surrogate, terphenyl-d14, was outside recovery criteria for two samples, P3B110002 and P3B121012. Qualifiers were not added since only one surrogate was outside control limits. All other surrogates met recovery criteria.

Matrix Spike/Matrix Spike Duplicate

Sample P3B120810 was used for the matrix spike/matrix spike duplicate. Pyrene was outside control limits in both the matrix spike and matrix spike duplicate. No compound was outside control limits for ,RPD, relative percent difference. The samples were not qualified based on matrix spike/matrix spike duplicate data.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date August 1993

Samples in SDG # 912

P3B110406 P3B120406 P3B130406 P3B200002

Overview

Four soil samples for SDG# 912 were validated for semi-volatile organic compounds analyzed using CLP methodology.

Summary

All samples were successfully analyzed for target compounds. Sample P3B200002 contained several target compounds above the Contact Required Quantitation Limit (CRQL). Sample P3B200002 contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

Several compounds were saturated during initial calibration. None of these compounds were detected in the associated sample and no qualifiers were added. Several compounds failed precision criteria (RSD <30%, %d <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

One of the associated method blanks contained Di-n-Butylphthalate. Phenol was detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogate met recovery criteria.

Matrix Spike/Matrix Spike Duplicate

Sample P3B110406 was used for the matrix spike/matrix spike duplicate. All spike recoveries (SR) and relative percent differences (RPD) were within quality control limits for the matrix spike/matrix spike duplicate.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Phelps Collins
Alpena, MI
Semi-Volatile Organic Date Validation CLP
Sampling Date September 1993

Samples in SDG # 992

P1MW2GW4	P1MW3GW4	P1MW4GW4	P2MW6GW4
P2MW7GW4	P3MW6GW4	P3MW7GW4	P5MW8GW4
P5MW9GW4	P6MW8GW4	P6MW9GW4	P7MW4GW4
P9MW4GW4	PER18	PER19	PFB07

Overview

Sixteen water samples for SDG# 992 were validated for semi-volatile organic compounds analyzed using LCBNA 10/92 methodology.

Summary

All samples were successfully analyzed for target compounds. No sample contained target compounds above the Contact Required Quantitation Limit (CRQL). Several samples contained target compounds below the contract Required Quantitation Limit. The QA/QC level was HAZWRAP level C for all samples.

Major Problems

None

Minor Problems

Holding Times

All samples were extracted and analyzed within recommended holding times.

GC/MS Tune

No problems were associated with the GC/MS instrument performance check.

Calibration Criteria

Several compounds failed precision criteria (RSD <30%, %D <25%) during initial and continuing calibrations. Detects for these compounds were qualified "J" for estimated. The quantitation limits for non-detects were not qualified

Blanks

All associated method blanks contained bis(2-Ethylhexyl)phthalate, one method blank also contained Di-n-butylphthalate. Phenol and di-ethyl phthalate were detected in one or more of the associated field blanks and/or equipment rinseates. Sample detects for the common phthalate contaminants were qualified "B", if the detected concentration was less than 10 times the concentration detected in any of the associated blanks or equipment rinseates. Sample detects for other contaminants were qualified "B" if the detected concentration was less than 5 times the concentration detected in any of the associated blanks or equipment rinseates. Detects were not qualified "B", if the sample concentration was greater than 10x the concentration of the common laboratory contaminants or 5 times the concentration of the other contaminants detected in any of the associated blanks or equipment rinseates. Non-detects were not qualified.

Surrogates

All surrogates met recovery criteria.

Laboratory Control Sample

The laboratory control sample meet all recovery criteria. Bis (2-Ethylhexyl)phthalate was outside control limits, but is not a spike compound therefore no corrective action was taken.

Internal Standards

No problems were associated with the internal standards.

No other problems were noted during the data validation.

Inorganic Compound Data Validation

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APPENDIX L: Analytical Results; Site 5 Soils Data (collected 1991 and 1993) and RI Laboratory Data

Site 5 Soils Data (collected 1991 and 1993)

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Site:	PC-SF5				PC-SF5				PC-SF5				PC-SF5				MOST
Locator:	SB5				SB5				SB6 (dup of SB5)				SB6 (dup of SB5)				STRINGENT
Collect Date:	18-OCT-91				18-OCT-91				18-OCT-91				18-OCT-91				STATE
Depth:	0 inches-6 inches				48 inches-54 inches				48 inches-54 inches				0 inches-6 inches				ARAR
Lab Name:	CompuChem Labs				CompuChem Labs				CompuChem Labs				CompuChem Labs				
Station Number:	PC-SF5-SB5-SS06				PC-SF5-SB5-SS48-54				PC-SF5-SB6-SS48-54				PC-SF5-SB6-SS06				
	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	
Methylene Chloride	23	B	3.1	ug/kg	25	B	3.1	ug/kg	4	B	3.1	ug/kg	23	B	3.1	ug/kg	100 ug/kg
Butylbenzylphthalate	0	U	350	ug/kg	0	U	340	ug/kg	0	U	340	ug/kg	0	UJ	360	ug/kg	20000 ug/kg
Diethyl Phthalate	0	U	350	ug/kg	53	J		ug/kg	0	U	340	ug/kg	1200	B	360	ug/kg	1.2e5 ug/kg
Pentachlorophenol	0	UL	840	ug/kg	0	U	820	ug/kg	0	U	820	ug/kg	0	U	870	ug/kg	6 ug/kg
bis(2-Ethylhexyl)phthalate	0	U	350	ug/kg	40	B		ug/kg	0	U	340	ug/kg	0	U	360	ug/kg	40 ug/kg
Aluminum	4820			mg/kg	1810			mg/kg	1050			mg/kg	2450			mg/kg	Local Background
Arsenic	[0.99]			mg/kg	0	U	0.53	mg/kg	0	U	0.52	mg/kg	0	U	0.52	mg/kg	Local Background
Barium	[10.9]			mg/kg	[4]			mg/kg	[3.5]			mg/kg	[6.2]			mg/kg	40 mg/kg
Calcium	753			mg/kg	[234]	J		mg/kg	[183]	J		mg/kg	1320	J		mg/kg	
Chromium	3.5			mg/kg	2.9			mg/kg	2.7			mg/kg	3.2			mg/kg	Local Background
Cobalt	[0.72]			mg/kg	[1.2]			mg/kg	[0.66]			mg/kg	[0.8]			mg/kg	
Copper	[1.5]	K		mg/kg	[1.3]			mg/kg	[1.7]	K		mg/kg	[2.3]	K		mg/kg	20 mg/kg
Iron	3950			mg/kg	1810			mg/kg	1490			mg/kg	2020			mg/kg	Local Background
Lead	1.7			mg/kg	1.2			mg/kg	0.88			mg/kg	1.9			mg/kg	Local Background*
Magnesium	[277]			mg/kg	[379]			mg/kg	[333]			mg/kg	657			mg/kg	
Manganese	13.4			mg/kg	12.8			mg/kg	10.9			mg/kg	17.9			mg/kg	Local Background
Nickel	[1.3]			mg/kg	[2.2]			mg/kg	[2.2]			mg/kg	[2.1]			mg/kg	Local Background
Potassium	0	U	81.3	mg/kg	[97.4]			mg/kg	0	U	76	mg/kg	[131]			mg/kg	
Selenium	0	U	0.33	mg/kg	0	U	0.32	mg/kg	0	U	0.31	mg/kg	0	U	0.31	mg/kg	0.8 mg/kg
Silver	0	U	0.67	mg/kg	0	U	0.63	mg/kg	0	U	0.62	mg/kg	0	U	0.63	mg/kg	0.8 mg/kg
Sodium	[49.9]	B		mg/kg	[43.5]	B		mg/kg	[41.6]	B		mg/kg	[42.7]	B		mg/kg	3000 mg/kg
Thallium	0	U	0.22	mg/kg	0	U	0.21	mg/kg	0	U	0.21	mg/kg	0	U	0.21	mg/kg	Local Background
Vanadium	7.9			mg/kg	[3.9]			mg/kg	[2.9]			mg/kg	[4.1]			mg/kg	
Zinc	4.9	J		mg/kg	11.7	J		mg/kg	2.8	J		mg/kg	4.8	J		mg/kg	20 mg/kg or bkgrd
Total Petroleum Hydrocarbons	0	U	25	mg/kg	0	U	25	mg/kg	0	U	25	mg/kg	0	U	25	mg/kg	100 mg/kg

Only those analytes which were positively detected in one or more samples are shown

* - Currently under Review

Key to Qualifiers:

B - Blank Contamination

U- Non Detect

J-Result estimated

[]- Result between Contract Required Detection Limit and Instrument Detection Limit

UJ-Quantitation Limit Estimated

UL- Quantitation Limit Biased Low

R- Quantitation Limit Unreliable

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Site:	PC-SF5				PC-SF5				PC-SF5				PC-SF5				MOST
Locator:	SB3				SB3				SB4				SB4				STRINGENT
Collect Date:	18-OCT-91				18-OCT-91				18-OCT-91				18-OCT-91				STATE
Depth:	0 inches-6 inches				48 inches-54 inches				48 inches-54 inches				0 inches-6 inches				ARAR
Lab Name:	CompuChem Labs				CompuChem Labs				CompuChem Labs				CompuChem Labs				
Station Number:	PC-SF5-SB3-SS06				PC-SF5-SB3-SS48-54				PC-SF5-SB4-SS48-54				PC-SF5-SB4-SS06				
	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	
Methylene Chloride	31	B	3.1	ug/kg	26	B	3.1	ug/kg	17	B	3.1	ug/kg	30	B	3.1	ug/kg	100 ug/kg
Butylbenzylphthalate	0	U	350	ug/kg	40	BJ		ug/kg	0	U	340	ug/kg	55	BJ		ug/kg	20000 ug/kg
Diethyl Phthalate	0	U	350	ug/kg	0	U	380	ug/kg	0	U	340	ug/kg	0	U	380	ug/kg	1.2e5 ug/kg
Pentachlorophenol	0	U	840	ug/kg	0	U	930	ug/kg	0	U	830	ug/kg	0	U	930	ug/kg	6 ug/kg
bis(2-Ethylhexyl)phthalate	0	U	350	ug/kg	51	J		ug/kg	0	U	340	ug/kg	39	J		ug/kg	40 ug/kg
Aluminum	3180			mg/kg	2090			mg/kg	1040			mg/kg	2820			mg/kg	Local Background
Arsenic	[0.82]	L	0.5	mg/kg	0	UL	0.54	mg/kg	0	UL	0.52	mg/kg	0	UL	0.57	mg/kg	Local Background
Barium	[6.1]		0.1	mg/kg	[5]		0.1	mg/kg	[3.7]		0.1	mg/kg	[8.9]		0.1	mg/kg	40 mg/kg
Calcium	[168]	J		mg/kg	[194]	J		mg/kg	[189]	J		mg/kg	[454]	J		mg/kg	
Chromium	4		0.4	mg/kg	3.2	J	0.4	mg/kg	6.2	J	0.4	mg/kg	3.2	J	0.4	mg/kg	Local Background
Cobalt	[1.3]		0.5	mg/kg	[0.94]		0.5	mg/kg	0	U	0.51	mg/kg	0	U	0.57	mg/kg	
Copper	[1.8]		0.6	mg/kg	3		0.6	mg/kg	4		0.6	mg/kg	4.7		0.6	mg/kg	20 mg/kg
Iron	2180			mg/kg	2040			mg/kg	1440			mg/kg	1830			mg/kg	Local Background
Lead	1.4		0.2	mg/kg	1.2		0.2	mg/kg	0.81		0.2	mg/kg	3.7		0.2	mg/kg	Local Background*
Magnesium	[383]		3.5	mg/kg	[340]		3.5	mg/kg	[367]		3.5	mg/kg	[282]		3.5	mg/kg	
Manganese	20		0.1	mg/kg	16.1		0.1	mg/kg	12.3		0.1	mg/kg	21.7		0.1	mg/kg	Local Background
Nickel	[2.7]		0.8	mg/kg	[1.9]		0.8	mg/kg	4.7		0.8	mg/kg	[2.3]		0.8	mg/kg	Local Background
Potassium	[135]		73	mg/kg	[199]		73	mg/kg	[166]		73	mg/kg	[223]		73	mg/kg	
Selenium	0	R	0.31	mg/kg	0	R	0.33	mg/kg	0.59	L	0.3	mg/kg	[0.49]	L	0.3	mg/kg	0.8 mg/kg
Silver	0	U	0.62	mg/kg	0	U	0.66	mg/kg	0	U	0.61	mg/kg	0	U	0.68	mg/kg	0.8 mg/kg
Sodium	[56.5]	B		mg/kg	[66.6]	B		mg/kg	[56.8]	B		mg/kg	[70]	B		mg/kg	3000 mg/kg
Thallium	0	U	0.21	mg/kg	0	U	0.22	mg/kg	3.9	J	0.2	mg/kg	0	U	0.23	mg/kg	Local Background
Vanadium	[4.9]		0.6	mg/kg	[4.5]		0.6	mg/kg	[3.5]		0.6	mg/kg	[3.8]		0.6	mg/kg	
Zinc	6.1			mg/kg	28.8			mg/kg	5.6			mg/kg	17.5			mg/kg	20 mg/kg or bkgrd
Total Petroleum Hydrocarbons	0	BDL	25	mg/kg	0	BDL	25	mg/kg	0	BDL	25	mg/kg	0	BDL	25	mg/kg	100 mg/kg

Only those analytes which were positively detected in one or more samples are shown
* - Currently under Review
Key to Qualifiers:
B - Blank Contamination
U- Non Detect
J-Result estimated
[]- Result between Contract Required Detection Limit and Instrument Detection Limit
UJ-Quantitation Limit Estimated
UL- Quantitation Limit Biased Low
R- Quantitation Limit Unreliable

SUMMARY OF 1991 SOIL SAMPLING RESULTS - SITE 5
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Site:	PC-SF5				PC-SF5				PC-SF5				PC-SF5				MOST STRINGENT STATE ARAR
Locator:	SB1				SB1				SB2				SB2				
Collect Date:	17-OCT-91				17-OCT-91				17-OCT-91								
Depth:	0 inches-6 inches				48 inches-54 inches				48 inches-54 inches				0 inches-6 inches				
Lab Name:	CompuChem Labs				CompuChem Labs				CompuChem Labs				CompuChem Labs				
Station Number:	PC-SF5-SB1-SS06				PC-SF5-SB1-SS48-54				PC-SF5-SB2-SS48-54				PC-SF5-SB2-SS06				
	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	Result	Qual	DL	Units	
Methylene Chloride	20	B	3.1	ug/kg	9.6	B	3.1	ug/kg	31	B	3.1	ug/kg	39	B	3.1	ug/kg	100 ug/kg
Butylbenzylphthalate	120	BJ		ug/kg	0	U	390	ug/kg	110	BJ	350	ug/kg	0	U	350	ug/kg	20000 ug/kg
Diethyl Phthalate	0	U	380	ug/kg	0	U	390	ug/kg	0	U	350	ug/kg	0	U	350	ug/kg	1.2e5 ug/kg
Pentachlorophenol	0	U	910	ug/kg	130			ug/kg	0	U	850	ug/kg	0	U	850	ug/kg	6 ug/kg
bis(2-Ethylhexyl)phthalate	0	U	380	ug/kg	110	B		ug/kg	0	U	350	ug/kg	40	BJ	350	ug/kg	40 ug/kg
Aluminum	3180			mg/kg	1600			mg/kg	1230			mg/kg	2590			mg/kg	Local Background
Arsenic	1.3			mg/kg	0	U	0.54	mg/kg	0	U	0.54	mg/kg	1.6			mg/kg	Local Background
Barium	[12.7]			mg/kg	[12.1]			mg/kg	[6.1]			mg/kg	[14.2]			mg/kg	40 mg/kg
Calcium	2190	J		mg/kg	[448]	J		mg/kg	[334]	J		mg/kg	51300			mg/kg	
Chromium	4.1			mg/kg	3.2			mg/kg	3.1			mg/kg	2.8			mg/kg	Local Background
Cobalt	[1.4]			mg/kg	[0.83]			mg/kg	[0.98]			mg/kg	[1.1]			mg/kg	
Copper	14.8	K		mg/kg	[1.8]	K		mg/kg	3.2	K		mg/kg	16.7	K		mg/kg	20 mg/kg
Iron	2580			mg/kg	1660			mg/kg	2010			mg/kg	2360			mg/kg	Local Background
Lead	52.5			mg/kg	11.5			mg/kg	1.1			mg/kg	5.9			mg/kg	Local Background*
Magnesium	525			mg/kg	[469]			mg/kg	[481]			mg/kg	8970			mg/kg	
Manganese	22.1			mg/kg	14.2			mg/kg	18.4			mg/kg	60.2			mg/kg	Local Background
Nickel	[2.7]			mg/kg	[2.2]			mg/kg	[2.6]			mg/kg	[3.2]			mg/kg	Local Background
Potassium	[137]			mg/kg	[207]			mg/kg	[223]			mg/kg	[268]			mg/kg	
Selenium	0	U	0.31	mg/kg	0	U	0.33	mg/kg	0	U	0.32	mg/kg	0	U	0.32	mg/kg	0.8 mg/kg
Silver	1.1	J		mg/kg	0	UJ	0.65	mg/kg	0	UJ	0.64	mg/kg	0	U	0.64	mg/kg	0.8 mg/kg
Sodium	[52.6]	B		mg/kg	[57.4]	B		mg/kg	[47.4]	B		mg/kg	[90.7]			mg/kg	3000 mg/kg
Thallium	0	U	0.21	mg/kg	0	U	0.22	mg/kg	0	U	0.21	mg/kg	0	U	0.21	mg/kg	Local Background
Vanadium	[4.7]			mg/kg	[3.7]			mg/kg	[4.5]			mg/kg	5.4			mg/kg	
Zinc	43.9	J		mg/kg	23.9	J		mg/kg	4.6	J		mg/kg	17	J		mg/kg	20 mg/kg or bkgrd
Total Petroleum Hydrocarbons	130		25	mg/kg	1400		25	mg/kg	26		25	mg/kg	0	U	25	mg/kg	100 mg/kg

Only those analytes which were positively detected in one or more samples are shown

* - Currently under Review

Key to Qualifiers:

B - Blank Contamination

U- Non Detect

J-Result estimated

[]- Result between Contract Required Detection Limit and Instrument Detection Limit

UJ-Quantitation Limit Estimated

UL- Quantitation Limit Biased Low

R- Quantitation Limit Unreliable

Data Summary Table - Soils Site 5 Second Fire Training Area
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Sample Number:	P05B60103	P05B60407	P05B70103	P05B70407	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 3'	4'- 7'	1'- 3'	4'- 7'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate	460 B	280 B	360 B		20,000
bis(2-ethylhexyl)phthalate	130	66	400	270	40
2-methylnapthalene					200
Lead (ppm)	6.0	8.6	54.1	13.9	7.0
TPH 418.1 (ppm)	211	*	2680	2820	100

Notes:
Blank spaces indicate compound not detected above CRQL.

Data Summary Table - Soils Site 5 Second Fire Training Area
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Sample Number:	P05B8010 3 (1)	P05B8020 4 (1)	P05B8040 7	P05B9010 3	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 3'	2'- 4'	4'- 7'	1'- 3'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate	250 B	300 B	390 B	430 B	20,000
bis(2-ethylhexyl)phthalate					40
2-methylnapthalene			56		200
Lead (ppm)	4.4	2.6	2.6	2.9	7.0
TPH 418.1 (ppm)	122	33	47.9	123	100

Notes:

Blank space indicates compound not detected above CRQL.
(1) Field duplicate pair
B - Blank contamination

Data Summary Table - Soils Site 5 Second Fire Training Area
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Sample Number:	P05B90407	P5B100103[1]	P5B100204[1]	P5B100407	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	4'- 7'	1'- 3'	2'- 4'	1'- 3'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate		290	300 B	85 B	20,000
bis(2-ethylhexyl)phthalate		85	57		40
2-methylnapthalene					200
Lead (ppm)	2.1	11.2	44.6 J	4.8 J	7.0
TPH 418.1 (ppm)	572	104	58.0	38.6	100

Notes:

Blank space indicates compound not detected above CRQL
(1) Field duplicate pair
B - Blank contamination
J - Estimated value

Data Summary Table - Soils Site 5 Second Fire Training Area
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Sample Number:	P5B11010 3	P5B11040 7	P5B12010 4	P5B12060 9	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 3'	4'- 7'	1'- 4'	6'- 9'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate				37	20,000
bis(2-ethylhexyl)phthalate					40
2-methylnapthalene					200
Lead (ppm)	5.1 J	1.3 J	2.2 J	1.1	7.0
TPH 418.1 (ppm)	74.5	121	35.1		100

Notes:

Blank space indicates compound not detected above CRQL
J - Estimated value

Data Summary Table - Soils Site 5 Second Fire Training Area
MIANG, CRTC, PHELPS COLLINS AIRPORT
ALPENA, MICHIGAN

Sample Number:	P5B130104	P5B130611	P5B140103	P5B140612	MDNR Cleanup Level
Date:	1/21/93	1/21/93	1/21/93	1/21/93	
Depth:	1'- 4'	6'- 11'	1'- 3'	6'- 12'	
SVOCs: CLP 3/90 (ppb)					
Butylbenzylphthalate					20,000
bis(2-ethylhexyl)phthalate					40
2-methylnapthalene					20
Lead (ppm)	1.1	1.5	1.1	1.1	7.0
TPH 418.1 (ppm)				13.1	100

Notes:
Blank space indicates compound not detected above CRQL

RI Laboratory Data

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	EB01		EB02		ER01		ER02		ER03		ER04	
SAMPLE ID:	PC-EB01		PC-EB02		PC-ER01		PC-ER02		PC-ER03		PC-ER04	
COLLECTION DATE:	11/12/92		11/12/92		07/29/93		07/29/93		07/31/93		08/01/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010												
1,1,1,2-Tetrachloroethane ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,1,1-Trichloroethane ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,1,2,2-Tetrachloroethane ug/l	0.40	U	0.40	U	0.40	U	-		0.40	U	0.40	U
1,1,2-Trichloroethane ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U
1,1-Dichloroethane ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,1-Dichloroethylene ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,2,3-Trichloropropane ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,2-Dibromoethane ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
1,2-Dichlorobenzene ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U
1,2-Dichloroethane ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U
1,2-Dichloroethylene ug/l	-		-		-		-		-		-	
1,2-Dichloropropane ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U
1,2-trans-Dichloroethylene ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U
1,3-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U	-		0.20	U	0.20	U
1,3-cis-Dichloropropylene ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U
1,3-trans-Dichloropropylene ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U
1,4-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U	-		0.20	U	0.20	U
2-Butanone ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether ug/l	0.40	U	0.40	U	0.40	U	-		0.40	U	0.40	U
2-Chlorotoluene ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U
2-Hexanone ug/l	-		-		-		-		-		-	
2-Propanone ug/l	-		-		-		-		-		-	
4-Chlorotoluene ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
4-Methyl-2-pentanone ug/l	-		-		-		-		-		-	
Benzene ug/l	-		-		-		-		-		-	
Bromobenzene ug/l	0.85	U	0.85	U	0.85	U	-		0.85	U	0.85	U
Bromochloromethane ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U
Bromodichloromethane ug/l	0.40	U	0.40	U	0.40	U	-		0.40	U	0.40	U
Bromoform ug/l	0.50	U	0.50	U	0.50	U	-		0.50	U	0.50	U
Carbon Disulfide ug/l	-		-		-		-		-		-	
Carbon Tetrachloride ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
Chlorobenzene ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U
Chloroethane ug/l	0.50	U	0.50	U	0.50	U	-		0.50	U	0.50	U
Chloroform ug/l	0.17	B	0.20	B	0.35	U	-		0.35	U	0.35	U
Dibromochloromethane ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	EB01		EB02		ER01		ER02		ER03		ER04			
	SAMPLE ID:	PC-EB01		PC-EB02		PC-ER01		PC-ER02		PC-ER03		PC-ER04			
	COLLECTION DATE:	11/12/92		11/12/92		07/29/93		07/29/93		07/31/93		08/01/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	-		0.40	U	0.40	U		
Ethylbenzene	ug/l	-		-		-		-		-		-			
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	-		0.45	U	0.45	U		
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	-		0.50	U	0.50	U		
Methylene chloride	ug/l	2.40	B	2.60	B	0.11	B	-		0.16		0.78			
Styrene	ug/l	-		-		-		-		-		-			
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U		
Toluene	ug/l	-		-		-		-		-		-			
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	-		0.30	U	0.30	U		
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	-		0.55	U	0.55	U		
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-			
8020															
1,2-Dichlorobenzene	ug/l	0.28	U	0.15	U	0.15	U	-		0.15	U	0.07	B		
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	-		0.20	U	0.20	U		
1,3-Dichlorobenzene	ug/l	0.33	U	0.20	U	0.20	U	-		0.20	U	0.20	U		
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-			
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	-		0.50	U	0.50	U		
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	-		0.15	U	0.15	U		
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-			
Benzene	ug/l	0.35	U	0.35	U	0.35	U	-		0.35	U	0.35	U		
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U		
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	-		0.20	U	0.20	U		
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	-		5	U	5	U		
Styrene	ug/l	0.25	U	0.25	U	0.25	U	-		0.25	U	0.25	U		
Toluene	ug/l	0.25	U	0.25	U	0.25	U	-		0.13	B	0.29	B		
CLP 3/90															
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U		
1,2-Dichlorobenzene	ug/l	-		-		-		-		-		-			
1,3-Dichlorobenzene	ug/l	-		-		-		-		-		-			
1,4-Dichlorobenzene	ug/l	-		-		-		-		-		-			
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	UJ	-		5	U	5	U		
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	UJ	-		20	U	20	U		
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U		
2,4-Dichlorophenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U		

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		EB01		EB02		ER01		ER02		ER03		ER04	
SAMPLE ID:		PC-EB01		PC-EB02		PC-ER01		PC-ER02		PC-ER03		PC-ER04	
COLLECTION DATE:		11/12/92		11/12/92		07/29/93		07/29/93		07/31/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2,4-Dimethylphenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	UJ	-		20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	UJ	-		20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
2-Nitroaniline	ug/l	20	U	20	UJ	20	UJ	-		20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	UJ	5	UJ	5	UJ	-		5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	UJ	-		20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	UJ	5	UJ	-		5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	UJ	-		20	U	20	U
4-Nitrophenol	ug/l	20	U	20	UJ	20	UJ	-		20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Anthracene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	UJ	5	UJ	-		5	U	5	U
Carbazole	ug/l	-		-		-		-		-		-	
Chrysene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	UJ	-		0.80		5	U
Di-n-octyl phthalate	ug/l	5	UJ	5	UJ	5	UJ	-		5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Diethyl phthalate	ug/l	5	U	2	B	5	UJ	-		2		5	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	EB01		EB02		ER01		ER02		ER03		ER04	
	SAMPLE ID:	PC-EB01		PC-EB02		PC-ER01		PC-ER02		PC-ER03		PC-ER04	
	COLLECTION DATE:	11/12/92		11/12/92		07/29/93		07/29/93		07/31/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Fluorene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	UJ	5	UJ	-		5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Isophorone	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	UJ	-		20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
Phenol	ug/l	5	U	5	U	5	UJ	-		4		0.90	
Pyrene	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	UJ	-		5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	69	B	3	B	15	J	-		20		9	B
METALS													
Antimony	ug/l	60	U	60	U	35	U	45	U	35	U	35	U
Antimony, Dissolved	ug/l	-		-		-		-		-		-	
Arsenic	ug/l	4	U	4	UW	4	U	4	U	4	U	4	U
Arsenic, Dissolved	ug/l	-		-		-		-		-		-	
Beryllium	ug/l	1	U	1	U	1	U	4	U	1	U	1	U
Beryllium, Dissolved	ug/l	-		-		-		-		-		-	
Cadmium	ug/l	5	U	5	U	3	U	5	U	3	U	3	U
Cadmium, Dissolved	ug/l	-		-		-		-		-		-	
Chromium	ug/l	6	U	6	U	8	U	10	U	8	U	8	U
Chromium, Dissolved	ug/l	-		-		-		-		-		-	
Copper	ug/l	5	U	5	U	4	U	15	U	4.60	0B	4	U
Copper, Dissolved	ug/l	-		-		-		-		-		-	
Lead	ug/l	2	U	5.50		2	U	2	U	2	U	2	U
Lead, Dissolved	ug/l	-		-		-		-		-		-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	EB01		EB02		ER01		ER02		ER03		ER04	
	SAMPLE ID:	PC-EB01		PC-EB02		PC-ER01		PC-ER02		PC-ER03		PC-ER04	
	COLLECTION DATE:	11/12/92		11/12/92		07/29/93		07/29/93		07/31/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	-		-		-		-		-		-	
Nickel	ug/l	11	U	11	U	18	U	35	U	18	U	18	U
Nickel, Dissolved	ug/l	-		-		-		-		-		-	
Selenium	ug/l	4	U	4	UWN	3	UL	3	U	3	U	3	U
Selenium, Dissolved	ug/l	-		-		-		-		-		-	
Silver	ug/l	6	U	6	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	-		-		-		-		-		-	
Thallium	ug/l	2	U	2	U	3	U	3	UL	3	U	3	U
Thallium, Dissolved	ug/l	-		-		-		-		-		-	
Zinc	ug/l	5.30	0B	5.30	0B	4.30	0	5	U	4	U	4	U
Zinc, Dissolved	ug/l	-		-		-		-		-		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	-		-		0.25	U	-		0.25	U	0.25	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER05		ER07		ER08		ER09		ER10		ER11	
SAMPLE ID:		PC-ER05		PC-ER07		PC-ER08		PC-ER09		PC-ER10		PC-ER11	
COLLECTION DATE:		08/12/93		08/15/93		08/15/93		08/15/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	-		-	
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	-		-	
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	-		-	
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		-		-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	-		-	
2-Hexanone	ug/l	-		-		-		-		-		-	
2-Propanone	ug/l	-		-		-		-		-		-	
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	-		-	
4-Methyl-2-pentanone	ug/l	-		-		-		-		-		-	
Benzene	ug/l	-		-		-		-		-		-	
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	-		-	
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	-		-	
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide	ug/l	-		-		-		-		-		-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.21		0.35	U	0.35	U	0.35	U	0.35	U	0.21	J
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER05		ER07		ER08		ER09		ER10		ER11	
SAMPLE ID:		PC-ER05		PC-ER07		PC-ER08		PC-ER09		PC-ER10		PC-ER11	
COLLECTION DATE:		08/12/93		08/15/93		08/15/93		08/15/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	-		-	
Ethylbenzene	ug/l	-		-		-		-		-		-	
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.09		1	U	0.03		1	U	0.76	B	0.99	B
Styrene	ug/l	-		-		-		-		-		-	
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Toluene	ug/l	-		-		-		-		-		-	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-	
8020													
1,2-Dichlorobenzene	ug/l	0.29	B	0.15	U	0.15	UJ	1.40	B	0.40	B	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	UJ	0.20	U	-		-	
1,3-Dichlorobenzene	ug/l	0.07	B	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		0.04		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	UJ	-		-		-	
1,4-Dichlorobenzene	ug/l	0.62	B	0.15	U	0.15	UJ	0.15	U	0.37	B	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		-		0.04		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U	0.08	B
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.09	J	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	UJ	0.20	U	0.20	U	0.09	
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	UJ	5	U	-		-	
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	-		-	
Toluene	ug/l	0.16	B	0.25	B	0.28	L	0.18	B	0.12	B	0.39	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/l	-		-		-		-		-		-	
1,3-Dichlorobenzene	ug/l	-		-		-		-		-		-	
1,4-Dichlorobenzene	ug/l	-		-		-		-		-		-	
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		ER05		ER07		ER08		ER09		ER10		ER11	
LOCATOR:		ER05		ER07		ER08		ER09		ER10		ER11	
SAMPLE ID:		PC-ER05		PC-ER07		PC-ER08		PC-ER09		PC-ER10		PC-ER11	
COLLECTION DATE:		08/12/93		08/15/93		08/15/93		08/15/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	0.90		5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Carbazole	ug/l	-		-		-		-		-		-	
Chrysene	ug/l	5	U	5	U	1		5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U	5	U	1		5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	4	J	0.90	J	7	J	1		5	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		ER05		ER07		ER08		ER09		ER10		ER11	
LOCATOR:		PC-ER05		PC-ER07		PC-ER08		PC-ER09		PC-ER10		PC-ER11	
SAMPLE ID:		08/12/93		08/15/93		08/15/93		08/15/93		08/17/93		08/17/93	
COLLECTION DATE:													
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	ug/l	5	U	0.90	J	5	U	1	J	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	0.60	J	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	0.10		5	U
Phenol	ug/l	5	U	5	U	5	U	5	U	2		1	
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	21		3	B	8	B	4	B	7		4	
METALS													
Antimony	ug/l	60.50	B	35	U	35	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	36.20	0B	-		76.90	B	-		-		-	
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	UL	4	U
Arsenic, Dissolved	ug/l	4	U	-		4	U	-		-		-	
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	-		1	U	-		-		-	
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	-		3	U	-		-		-	
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	-		8	U	-		-		-	
Copper	ug/l	4	U	4	U	4	U	4	U	4.50	0B	4.50	0B
Copper, Dissolved	ug/l	4	U	-		4	U	-		-		-	
Lead	ug/l	2	U	2	U	2	U	2	U	2	U	2	U
Lead, Dissolved	ug/l	2	U	-		8.50		-		-		-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	ER05		ER07		ER08		ER09		ER10		ER11			
	SAMPLE ID:	PC-ER05		PC-ER07		PC-ER08		PC-ER09		PC-ER10		PC-ER11			
	COLLECTION DATE:	08/12/93		08/15/93		08/15/93		08/15/93		08/17/93		08/17/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U		
Mercury, Dissolved	ug/l	0.20	U	-		0.20	U	-		-		-			
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	18	U		
Nickel, Dissolved	ug/l	18	U	-		18	U	-		-		-			
Selenium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U		
Selenium, Dissolved	ug/l	3	UL	-		3	U	-		-		-			
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U		
Silver, Dissolved	ug/l	4	U	-		4	U	-		-		-			
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL		
Thallium, Dissolved	ug/l	3	UL	-		3	UL	-		-		-			
Zinc	ug/l	4	U	51.90		4	U	226		4.60		73.30			
Zinc, Dissolved	ug/l	4	U	-		4	U	-		-		-			
TPH															
Total Petroleum Hydrocarbons	mg/l	2		0.40		2		2		0.25	U	2.50			

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER12		ER13		ER14		ER15		ER16		ER17	
SAMPLE ID:		PC-ER12		PC-ER13		PC-ER14		PC-ER15		PC-ER16		PC-ER17	
COLLECTION DATE:		08/17/93		08/24/93		08/26/93		08/26/93		08/26/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	-		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.07	B	0.35	U	0.10	B	0.25	B
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	-		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	-		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		-		-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	-		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	ug/l	-		-		-		-		-		-	
2-Propanone	ug/l	-		-		-		-		-		-	
4-Chlorotoluene	ug/l	-		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone	ug/l	-		-		-		-		-		-	
Benzene	ug/l	-		-		-		-		-		-	
Bromobenzene	ug/l	-		0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	-		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide	ug/l	-		-		-		-		-		-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.12		0.17	B
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER12		ER13		ER14		ER15		ER16		ER17	
SAMPLE ID:		PC-ER12		PC-ER13		PC-ER14		PC-ER15		PC-ER16		PC-ER17	
COLLECTION DATE:		08/17/93		08/24/93		08/26/93		08/26/93		08/26/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l	-		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Ethylbenzene	ug/l	-		-		-		-		-		-	
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.12		0.50	U
Methylene chloride	ug/l	0.98	B	0.21		0.29	B	0.15	B	0.29	B	0.79	B
Styrene	ug/l	-		-		-		-		-		-	
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.09		0.30	U
Toluene	ug/l	-		-		-		-		-		-	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.08		0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-	
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.66	B	0.15	U	0.15	U
1,2-Dimethylbenzene	ug/l	-		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	-		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.25	B	0.15	U	0.07	U	0.15	U	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-	
Benzene	ug/l	0.07	B	0.35	U	0.35	U	0.07		0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.11		0.20	U	0.10	B	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	-		5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	-		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.28	B	0.19	B	0.25	U	0.17	B	0.22		0.21	
CLP 3/90													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	ug/l	-		-		-		-		-		-	
1,3-Dichlorobenzene	ug/l	-		-		-		-		-		-	
1,4-Dichlorobenzene	ug/l	-		-		-		-		-		-	
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		ER12		ER13		ER14		ER15		ER16		ER17	
LOCATOR:		PC-ER12		PC-ER13		PC-ER14		PC-ER15		PC-ER16		PC-ER17	
SAMPLE ID:		08/17/93		08/24/93		08/26/93		08/26/93		08/26/93		09/12/93	
COLLECTION DATE:													
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	0.60		5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	-		-		-		-		-		-	
Carbazole	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	1	B	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	1	B	5	U	5	U	5	U
Diethyl phthalate	ug/l												

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER12		ER13		ER14		ER15		ER16		ER17	
SAMPLE ID:		PC-ER12		PC-ER13		PC-ER14		PC-ER15		PC-ER16		PC-ER17	
COLLECTION DATE:		08/17/93		08/24/93		08/26/93		08/26/93		08/26/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	5	B	5	U	1		5	U
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2		5	B	35		8	B	15	B	5	B
METALS													
Antimony	ug/l	35	U	35	U	35	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	-		-		35	U	-		-		35	U
Arsenic	ug/l	4	UL	4	U	4	U	4	U	4	U	4	U
Arsenic, Dissolved	ug/l	-		-		4	U	-		-		4	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	-		-		1	U	-		-		1	U
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	-		-		3	U	-		-		3	U
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	-		-		8	U	-		-		8	U
Copper	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Copper, Dissolved	ug/l	-		-		5.70	B	-		-		4	U
Lead	ug/l	2	U	2	U	2	U	2	U	2	U	2	U
Lead, Dissolved	ug/l	-		-		2	U	-		-		2	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER12		ER13		ER14		ER15		ER16		ER17	
SAMPLE ID:		PC-ER12		PC-ER13		PC-ER14		PC-ER15		PC-ER16		PC-ER17	
COLLECTION DATE:		08/17/93		08/24/93		08/26/93		08/26/93		08/26/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	-		-		0.20	U	-		-		0.20	U
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	-		-		18	U	-		-		18	U
Selenium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Selenium, Dissolved	ug/l	-		-		3	U	-		-		3	UL
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	-		-		4	U	-		-		4	U
Thallium	ug/l	3	UL	3	UL	3	U	3	U	3	U	3	U
Thallium, Dissolved	ug/l	-		-		3	UL	-		-		3	UL
Zinc	ug/l	4.30		6.50	0	5.80	0B	21.40	B	8.80	0B	8.50	0B
Zinc, Dissolved	ug/l	-		-		16.80	0	-		-		5.30	0
TPH													
Total Petroleum Hydrocarbons	mg/l	0.30		1.10		0.25	U	0.25	U	0.50		0.70	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER18		ER19		ER20		ER21		FB01		FB02	
SAMPLE ID:		PC-ER18		PC-ER19		PC-ER20		PC-ER21		PC-FB01		PC-FB02	
COLLECTION DATE:		09/10/93		09/13/93		09/14/93		09/15/93		07/28/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	10	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	10	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	10	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	10	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	10	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	10	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		10	U	-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	10	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	10	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	10	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		10	U	-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	ug/l	-		-		-		-		10	U	-	
2-Propanone	ug/l	-		-		-		-		11		-	
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone	ug/l	-		-		-		-		10	U	-	
Benzene	ug/l	-		-		-		-		10	U	-	
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	10	U	2.90	
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	10	U	2.50	
Carbon Disulfide	ug/l	-		-		-		-		10	U	-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	10	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	10	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	10	U	0.50	U
Chloroform	ug/l	0.35	U	0.17	B	0.35	U	0.35	U	10	U	0.92	
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	10	U	4.10	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER18		ER19		ER20		ER21		FB01		FB02					
SAMPLE ID:		PC-ER18		PC-ER19		PC-ER20		PC-ER21		PC-FB01		PC-FB02					
COLLECTION DATE:		09/10/93		09/13/93		09/14/93		09/15/93		07/28/93		07/29/93					
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL				
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U				
Ethylbenzene	ug/l	-		-		-		-		10	U	-					
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	10	U	0.45	U				
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	10	U	0.50	U				
Methylene chloride	ug/l	0.30	B	0.77	B	0.30	B	0.60	B	2	B	0.14	B				
Styrene	ug/l	-		-		-		-		10	U	-					
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	10	U	0.30	U				
Toluene	ug/l	-		-		-		-		10	U	-					
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	10	U	0.30	U				
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	10	U	0.55	U				
Xylenes (TOTAL)	ug/l	-		-		-		-		10	U	-					
8020																	
1,2-Dichlorobenzene	ug/l	0.38	B	0.15	U	0.20	U	0.15	U	1.40	B	0.15	U				
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U				
1,3-Dichlorobenzene	ug/l	0.18	B	0.18	B	0.15	B	0.44	U	0.20	U	0.20	U				
1,3-Dimethylbenzene	ug/l	-		0.04		0.06		-		-		-					
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	-		-		0.50	U	0.50	U	0.50	U				
1,4-Dichlorobenzene	ug/l	0.15	U	0.59	B	0.37	B	0.15	U	0.15	U	0.15	U				
1,4-Dimethylbenzene	ug/l	-		0.04		0.06		-		-		-					
Benzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U				
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U				
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U				
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U				
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U				
Toluene	ug/l	0.39	B	0.22	B	0.24	B	0.25	U	0.22	B	0.25	U				
CLP 3/90																	
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U				
1,2-Dichlorobenzene	ug/l	-		-		-		-		10	U	-					
1,3-Dichlorobenzene	ug/l	-		-		-		-		10	U	-					
1,4-Dichlorobenzene	ug/l	-		-		-		-		10	U	-					
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	10	U	5	U				
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	25	U	20	U				
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U				
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U				

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER18		ER19		ER20		ER21		FB01		FB02	
SAMPLE ID:		PC-ER18		PC-ER19		PC-ER20		PC-ER21		PC-FB01		PC-FB02	
COLLECTION DATE:		09/10/93		09/13/93		09/14/93		09/15/93		07/28/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Carbazole	ug/l	-		-		-		-		10	U	-	
Chrysene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Di-n-butyl phthalate	ug/l	5	U	0.80		5	U	5	U	1		0.50	
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Diethyl phthalate	ug/l	5	U	5	U	0.90		5	U	10	U	5	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER18		ER19		ER20		ER21		FB01		FB02	
SAMPLE ID:		PC-ER18		PC-ER19		PC-ER20		PC-ER21		PC-FB01		PC-FB02	
COLLECTION DATE:		09/10/93		09/13/93		09/14/93		09/15/93		07/28/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	25	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
Phenol	ug/l	5	U	0.70		2		5	U	10	U	5	U
Pyrene	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	10	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	10	B	14	B	5	B	4	B	17		3	
METALS													
Antimony	ug/l	35	U	45	U	45	U	45	U	35	U	40.40	B
Antimony, Dissolved	ug/l	35	UL	-		35	U	35	U	-		-	
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Arsenic, Dissolved	ug/l	4	UL	-		4	U	4	U	-		-	
Beryllium	ug/l	1	U	4	U	4	U	4	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	UL	-		1	U	1	U	-		-	
Cadmium	ug/l	3	U	5	U	5	U	5	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	UL	-		3	U	3	U	-		-	
Chromium	ug/l	8	U	10	U	10	U	10	U	8	U	8	U
Chromium, Dissolved	ug/l	8	UL	-		8	U	8	U	-		-	
Copper	ug/l	4	U	15	U	15	U	15	U	4.10	0B	120	
Copper, Dissolved	ug/l	4	UL	-		4	U	4	U	-		-	
Lead	ug/l	2	UL	2	U	2	U	2	U	2	U	8.40	
Lead, Dissolved	ug/l	2	UL	-		2	U	2	U	-		-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		ER18		ER19		ER20		ER21		FB01		FB02	
SAMPLE ID:		PC-ER18		PC-ER19		PC-ER20		PC-ER21		PC-FB01		PC-FB02	
COLLECTION DATE:		09/10/93		09/13/93		09/14/93		09/15/93		07/28/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	UL	-		0.20	U	0.20	U	-		-	
Nickel	ug/l	18	U	35	U	35	U	35	U	18	U	18	U
Nickel, Dissolved	ug/l	18	UL	-		18	U	18	U	-		-	
Selenium	ug/l	3	U	3	UL	3	UL	3	UL	3	U	3	UL
Selenium, Dissolved	ug/l	3	UL	-		R	R	-		-			
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	UL	-		4	U	4	U	-		-	
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	U	3	UL
Thallium, Dissolved	ug/l	3	UL	-		3	UJ	3	UJ	-		-	
Zinc	ug/l	6.80	0B	8.30	0	8.90	0	5.40	0	0	U	859	
Zinc, Dissolved	ug/l	4	UL	-		4	U	4		-		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.25	U	0.25	U	0.80		0.25	U	0.25	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	FB03		FB04		FB05		FB06		FB07		TB01	
SAMPLE ID:	PC-FB03		PC-FB04		PC-FB05		PC-FB06		PC-FB07		PC-TB01	
COLLECTION DATE:	08/10/93		08/23/93		08/23/93		08/11/93		09/10/93		07/28/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010												
1,1,1,2-Tetrachloroethane ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane ug/l	0.35	U	0.35	UJ	0.35	U	0.21	B	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene ug/l	-		-		-		-		-		-	
1,2-Dichloropropane ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene ug/l	0.20	U	0.20	UJ	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene ug/l	0.20	U	0.20	UJ	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone ug/l	-		-		-		-		-		-	
2-Propanone ug/l	-		-		-		-		-		-	
4-Chlorotoluene ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone ug/l	-		-		-		-		-		-	
Benzene ug/l	-		-		-		-		-		-	
Bromobenzene ug/l	0.85	U	0.85	UJ	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane ug/l	1.50		2.10	J	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform ug/l	2		4.20	J	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide ug/l	-		-		-		-		-		-	
Carbon Tetrachloride ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane ug/l	0.50	U	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform ug/l	0.36		0.46	J	0.35	U	0.09		0.35	U	0.35	U
Dibromochloromethane ug/l	3.30		11	J	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	FB03		FB04		FB05		FB06		FB07		TB01	
		SAMPLE ID:	PC-FB03		PC-FB04		PC-FB05		PC-FB06		PC-FB07		PC-TB01	
		COLLECTION DATE:	08/10/93		08/23/93		08/23/93		08/11/93		09/10/93		07/28/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l		0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
Ethylbenzene	ug/l		-		-		-		-		-		-	
Methyl bromide	ug/l		0.45	U	0.45	UJ	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l		0.29		0.30	J	0.47		0.14	B	0.58	B	0.25	B
Styrene	ug/l		-		-		-		-		-		-	
Tetrachloroethylene	ug/l		0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
Toluene	ug/l		-		-		-		-		-		-	
Trichloroethylene	ug/l		0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l		0.55	U	0.55	UJ	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l		-		-		-		-		-		-	
8020														
1,2-Dichlorobenzene	ug/l		0.24	B	0.68	U	0.15	UJ	0.40	J	0.36	B	0.36	B
1,2-Dimethylbenzene	ug/l		0.20	U	0.20	U	0.20	UJ	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	UJ	0.34	U	0.26	B	0.15	U
1,3-Dimethylbenzene	ug/l		-		-		-		-		-		0.18	
1,3/1,4-Dimethylbenzene	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	-	
1,4-Dichlorobenzene	ug/l		0.15	U	0.15	U	0.15	UJ	0.15	U	0.23	B	0.13	B
1,4-Dimethylbenzene	ug/l		-		-		-		-		-		0.18	
Benzene	ug/l		0.35	U	0.35	U	0.06	B	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l		0.20	U	0.10		0.20	UJ	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l		0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U	0.10	
Toluene	ug/l		0.14	B	0.11	B	0.40	B	0.25	U	0.12		0.25	U
CLP 3/90														
1,2,4-Trichlorobenzene	ug/l		5	UL	5	U	5	U	5	U	5	U	-	
1,2-Dichlorobenzene	ug/l		-		-		-		-		-		-	
1,3-Dichlorobenzene	ug/l		-		-		-		-		-		-	
1,4-Dichlorobenzene	ug/l		-		-		-		-		-		-	
2,2'-Oxybis(1-Chloropropane)	ug/l		5	U	5	U	5	U	5	U	5	U	-	
2,4,5-Trichlorophenol	ug/l		20	U	R	20	U	20	U	20	U	-		
2,4,6-Trichlorophenol	ug/l		5	UL	R	5	U	5	U	5	U	-		
2,4-Dichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	FB03		FB04		FB05		FB06		FB07		TB01	
SAMPLE ID:	PC-FB03		PC-FB04		PC-FB05		PC-FB06		PC-FB07		PC-TB01	
COLLECTION DATE:	08/10/93		08/23/93		08/23/93		08/11/93		09/10/93		07/28/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2,4-Dimethylphenol ug/l	5	UL	R	5	U	5	U	5	U	-		
2,4-Dinitrophenol ug/l	20	U	R	20	U	20	U	20	U	-		
2,4-Dinitrotoluene ug/l	5	U	5	U	5	U	5	U	5	U	-	
2,6-Dinitrotoluene ug/l	5	U	5	U	5	U	5	U	5	U	-	
2-Chloronaphthalene ug/l	5	U	5	U	5	U	5	U	5	U	-	
2-Chlorophenol ug/l	5	U	R	5	U	5	U	5	U	-		
2-Methyl-4,6-Dinitrophenol ug/l	20	UL	R	20	U	20	U	20	U	-		
2-Methylnaphthalene ug/l	5	U	5	U	5	U	5	U	5	U	-	
2-Methylphenol ug/l	5	U	R	5	U	5	U	5	U	-		
2-Nitroaniline ug/l	20	U	20	U	20	U	20	U	20	U	-	
2-Nitrophenol ug/l	5	UL	R	5	U	5	U	5	U	-		
3,3'-Dichlorobenzidine ug/l	5	U	5	U	5	U	5	U	5	U	-	
3-Nitroaniline ug/l	20	U	20	U	20	U	20	U	20	U	-	
4-Bromophenyl phenyl ether ug/l	5	U	5	U	5	U	5	U	5	U	-	
4-Chloro-3-methyl phenol ug/l	5	UL	R	5	U	5	U	5	U	-		
4-Chloroaniline ug/l	5	U	5	U	5	U	5	U	5	U	-	
4-Chlorophenyl phenyl ether ug/l	5	U	5	U	5	U	5	U	5	U	-	
4-Methylphenol ug/l	5	U	R	5	U	5	U	5	U	-		
4-Nitroaniline ug/l	20	U	20	U	20	U	20	U	20	U	-	
4-Nitrophenol ug/l	20	UL	R	20	U	20	U	20	U	-		
Acenaphthene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Acenaphthylene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Anthracene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Benzo(a)anthracene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Benzo(a)pyrene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Benzo(b)fluoranthene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Benzo(ghi)perylene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Benzo(k)fluoranthene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Butyl benzyl phthalate ug/l	5	U	5	U	5	U	5	U	5	U	-	
Carbazole ug/l	-		-		-		-		-		-	
Chrysene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Di-n-butyl phthalate ug/l	5	U	5	U	5	U	5	U	5	U	-	
Di-n-octyl phthalate ug/l	5	U	5	U	5	U	5	U	5	U	-	
Dibenzo(a,h)anthracene ug/l	5	U	5	U	5	U	5	U	5	U	-	
Dibenzofuran ug/l	5	U	5	U	5	U	5	U	5	U	-	
Diethyl phthalate ug/l	5	U	5	U	5	U	5	U	5	U	-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		FB03		FB04		FB05		FB06		FB07		TB01	
SAMPLE ID:		PC-FB03		PC-FB04		PC-FB05		PC-FB06		PC-FB07		PC-TB01	
COLLECTION DATE:		08/10/93		08/23/93		08/23/93		08/11/93		09/10/93		07/28/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	-	
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	-	
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Pentachlorophenol	ug/l	20	UL	R	20	U	20	U	20	U	-		
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
Phenol	ug/l	5	UL	R	5	U	5	U	5	U	-		
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	-	
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	-	
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	-	
bis(2-Ethylhexyl)phthalate	ug/l	5	U	4	B	11	B	9	B	6	B	-	
METALS													
Antimony	ug/l	35	U	35	U	35	U	35	U	35	U	-	
Antimony, Dissolved	ug/l	-		-		-		-		-		-	
Arsenic	ug/l	12.10		4	U	4	U	4	U	4	U	-	
Arsenic, Dissolved	ug/l	-		-		-		-		-		-	
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	-	
Beryllium, Dissolved	ug/l	-		-		-		-		-		-	
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	-	
Cadmium, Dissolved	ug/l	-		-		-		-		-		-	
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	-	
Chromium, Dissolved	ug/l	-		-		-		-		-		-	
Copper	ug/l	7.90	0B	4	U	4.50	0B	4	U	4	U	-	
Copper, Dissolved	ug/l	-		-		-		-		-		-	
Lead	ug/l	2	U	2	UL	2	U	2	U	2	U	-	
Lead, Dissolved	ug/l	-		-		-		-		-		-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	FB03		FB04		FB05		FB06		FB07		TB01	
	SAMPLE ID:	PC-FB03		PC-FB04		PC-FB05		PC-FB06		PC-FB07		PC-TB01	
	COLLECTION DATE:	08/10/93		08/23/93		08/23/93		08/11/93		09/10/93		07/28/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	-	
Mercury, Dissolved	ug/l	-		-		-		-		-		-	
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	-	
Nickel, Dissolved	ug/l	-		-		-		-		-		-	
Selenium	ug/l	3	U	3	U	3	U	3	U	8.10	B	-	
Selenium, Dissolved	ug/l	-		-		-		-		-		-	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	-	
Silver, Dissolved	ug/l	-		-		-		-		-		-	
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	-	
Thallium, Dissolved	ug/l	-		-		-		-		-		-	
Zinc	ug/l	13.30	0	5.30	0	43.60		5.30		4	U	-	
Zinc, Dissolved	ug/l	-		-		-		-		-		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	1.60		1.10		0.70		0.25	U	3.10		-	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	TB02		TB03		TB04		TB05		TB06		TB07	
SAMPLE ID:	PC-TB02		PC-TB03		PC-TB04		PC-TB05		PC-TB06		PC-TB07	
COLLECTION DATE:	07/27/93		07/29/93		07/31/93		08/01/93		08/09/93		08/10/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010												
1,1,1,2-Tetrachloroethane ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene ug/l	-		-		-		-		-		-	
1,2-Dichloropropane ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone ug/l	-		-		-		-		-		-	
2-Propanone ug/l	-		-		-		-		-		-	
4-Chlorotoluene ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone ug/l	-		-		-		-		-		-	
Benzene ug/l	-		-		-		-		-		-	
Bromobenzene ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide ug/l	-		-		-		-		-		-	
Carbon Tetrachloride ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Dibromochloromethane ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB02		TB03		TB04		TB05		TB06		TB07	
SAMPLE ID:		PC-TB02		PC-TB03		PC-TB04		PC-TB05		PC-TB06		PC-TB07	
COLLECTION DATE:		07/27/93		07/29/93		07/31/93		08/01/93		08/09/93		08/10/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Ethylbenzene	ug/l	-		-		-		-		-		-	
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.26		1	U	0.35		0.39		0.58		0.41	
Styrene	ug/l	-		-		-		-		-		-	
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Toluene	ug/l	-		-		-		-		-		-	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-	
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.67	B	0.15	U	0.15	U	0.56	B	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.09	B	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		-		0.06		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	-		0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.15	U	0.06		0.44	
1,4-Dimethylbenzene	ug/l	-		-		-		-		0.06		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.06		0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.09		0.20	U	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.25	U	0.12	B	0.47	B	0.16	B	0.12	B	0.40	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB08		TB09		TB10		TB12		TB13		TB14	
SAMPLE ID:		PC-TB08		PC-TB09		PC-TB10		PC-TB12		PC-TB13		PC-TB14	
COLLECTION DATE:		08/11/93		08/12/93		08/13/93		08/15/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	-		-	
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.15	J
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	-		-	
1,2-Dibromoethane	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	-		-	
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		-		-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	UJ	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	UJ	0.20		0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	UJ	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	-		-	
2-Hexanone	ug/l	-		-		-		-		-		-	
2-Propanone	ug/l	-		-		-		-		-		-	
4-Chlorotoluene	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	-		-	
4-Methyl-2-pentanone	ug/l	-		-		-		-		-		-	
Benzene	ug/l	-		-		-		-		-		-	
Bromobenzene	ug/l	0.85	U	0.85	UJ	0.85	U	0.85	U	-		-	
Bromochloromethane	ug/l	0.25	U	0.25	UJ	0.25	U	0.25	U	-		-	
Bromodichloromethane	ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide	ug/l	-		-		-		-		-		-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.15	J	0.08		0.35	U	0.10	J	0.22	J
Dibromochloromethane	ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	TB08		TB09		TB10		TB12		TB13		TB14	
	SAMPLE ID:	PC-TB08		PC-TB09		PC-TB10		PC-TB12		PC-TB13		PC-TB14	
	COLLECTION DATE:	08/11/93		08/12/93		08/13/93		08/15/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l	0.40	U	0.40	UJ	0.40	U	0.40	U	-		-	
Ethylbenzene	ug/l	-		-		-		-		-		-	
Methyl bromide	ug/l	0.45	U	0.45	UJ	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.17	B	0.24	B	0.05	B	0.09		0.57	B	0.74	B
Styrene	ug/l	-		-		-		-		-		-	
Tetrachloroethylene	ug/l	0.30	U	0.30	UJ	0.06		0.30	U	0.30	U	0.30	U
Toluene	ug/l	-		-		-		-		-		-	
Trichloroethylene	ug/l	0.30	U	0.30	UJ	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	UJ	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-	
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.15	UJ	0.19	B	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	-		-	
1,3-Dichlorobenzene	ug/l	0.20	U	0.08		0.08		0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	0.05		-		0.05		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	-		0.50	U	-		0.50	U	-		-	
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.15	UJ	0.49	B	0.15	U
1,4-Dimethylbenzene	ug/l	0.05		-		0.05		-		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.06		0.09	B
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.09	J	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.08		0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	UJ	-		-	
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	-		-	
Toluene	ug/l	0.19	B	0.22	U	0.22	B	0.12	L	0.38	B	0.31	B

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB15		TB16		TB17		TB18		TB19		TB20	
SAMPLE ID:		PC-TB15		PC-TB16		PC-TB17		PC-TB18		PC-TB19		PC-TB20	
COLLECTION DATE:		08/23/93		08/24/93		08/24/93		08/26/93		08/27/93		08/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		-		-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	ug/l	-		-		-		-		-		-	
2-Propanone	ug/l	-		-		-		-		-		-	
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone	ug/l	-		-		-		-		-		-	
Benzene	ug/l	-		-		-		-		-		-	
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide	ug/l	-		-		-		-		-		-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.09	B	0.35	U	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB15		TB16		TB17		TB18		TB19		TB20	
SAMPLE ID:		PC-TB15		PC-TB16		PC-TB17		PC-TB18		PC-TB19		PC-TB20	
COLLECTION DATE:		08/23/93		08/24/93		08/24/93		08/26/93		08/27/93		08/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Ethylbenzene	ug/l	-		-		-		-		-		-	
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.35		0.34		0.67	B	0.42	B	0.26	B	0.27	J
Styrene	ug/l	-		-		-		-		-		-	
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Toluene	ug/l	-		-		-		-		-		-	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l	-		-		-		-		-		-	
8020													
1,2-Dichlorobenzene	ug/l	0.35	U	3.10	U	1.70	B	0.15	U	0.15	U	0.15	U
1,2-Dimethylbenzene	ug/l	0.10	J	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.10	U	0.20	U	0.20	U	0.58	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.26	B	0.15	U	0.15	U	0.15	U	0.50	B	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.07		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.08	J	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.24	B	0.15	B	0.21	B	0.25	U	0.23	B	0.25	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB22		TB23		TB24		TB25		TB26		TB27	
SAMPLE ID:		PC-TB22		PC-TB23		PC-TB24		PC-TB25		PC-TB26		PC-TB27	
COLLECTION DATE:		09/08/93		09/09/93		09/10/93		09/13/93		09/14/93		09/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloroethylene	ug/l	-		-		-		-		-		-	
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Butanone	ug/l	-		-		-		-		-		-	
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
2-Hexanone	ug/l	-		-		-		-		-		-	
2-Propanone	ug/l	-		-		-		-		-		-	
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
4-Methyl-2-pentanone	ug/l	-		-		-		-		-		-	
Benzene	ug/l	-		-		-		-		-		-	
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Disulfide	ug/l	-		-		-		-		-		-	
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	TB22		TB23		TB24		TB25		TB26		TB27	
		SAMPLE ID:	PC-TB22		PC-TB23		PC-TB24		PC-TB25		PC-TB26		PC-TB27	
		COLLECTION DATE:	09/08/93		09/09/93		09/10/93		09/13/93		09/14/93		09/15/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Dibromomethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Ethylbenzene	ug/l		-		-		-		-		-		-	
Methyl bromide	ug/l		0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l		0.52	B	0.60		0.58	B	0.36	B	0.39	B	0.18	B
Styrene	ug/l		-		-		-		-		-		-	
Tetrachloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Toluene	ug/l		-		-		-		-		-		-	
Trichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l		0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U
Xylenes (TOTAL)	ug/l		-		-		-		-		-		-	
8020														
1,2-Dichlorobenzene	ug/l		0.51	B	0.25	B	0.15	B	0.15	U	0.32	B	0.15	U
1,2-Dimethylbenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l		0.30	B	0.11	B	0.20	U	0.11	B	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l		0.05		0.06		0.06		0.06		-		-	
1,3/1,4-Dimethylbenzene	ug/l		-		-		-		-		0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l		0.27	B	0.27	B	0.32	B	0.70	B	0.21	B	0.30	B
1,4-Dimethylbenzene	ug/l		0.05		0.06		0.06		0.06		-		-	
Benzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.21		0.35	U
Chlorobenzene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.10	
Methyl-t-Butyl Ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l		0.19		0.14		0.14	B	0.18	B	0.19	B	0.16	

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	TB28
SAMPLE ID:	PC-TB28
COLLECTION DATE:	09/15/93

	UNITS:	RESULT	QUAL
8010			
1,1,1,2-Tetrachloroethane	ug/l	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U
1,1-Dichloroethane	ug/l	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U
1,2-Dibromoethane	ug/l	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U
1,2-Dichloroethane	ug/l	0.25	U
1,2-Dichloroethylene	ug/l	-	
1,2-Dichloropropane	ug/l	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U
2-Butanone	ug/l	-	
2-Chloroethylvinyl ether	ug/l	0.40	U
2-Chlorotoluene	ug/l	0.25	U
2-Hexanone	ug/l	-	
2-Propanone	ug/l	-	
4-Chlorotoluene	ug/l	0.35	U
4-Methyl-2-pentanone	ug/l	-	
Benzene	ug/l	-	
Bromobenzene	ug/l	0.85	U
Bromochloromethane	ug/l	0.25	U
Bromodichloromethane	ug/l	0.40	U
Bromoform	ug/l	0.50	U
Carbon Disulfide	ug/l	-	
Carbon Tetrachloride	ug/l	0.35	U
Chlorobenzene	ug/l	0.35	U
Chloroethane	ug/l	0.50	U
Chloroform	ug/l	0.35	U
Dibromochloromethane	ug/l	0.30	U

Appendix L - QC Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		TB28	
SAMPLE ID:		PC-TB28	
COLLECTION DATE:		09/15/93	
	UNITS:	RESULT	QUAL
Dibromomethane	ug/l	0.40	U
Ethylbenzene	ug/l	-	
Methyl bromide	ug/l	0.45	U
Methyl chloride	ug/l	0.50	U
Methylene chloride	ug/l	0.67	B
Styrene	ug/l	-	
Tetrachloroethylene	ug/l	0.30	U
Toluene	ug/l	-	
Trichloroethylene	ug/l	0.30	U
Vinyl chloride	ug/l	0.55	U
Xylenes (TOTAL)	ug/l	-	
8020			
1,2-Dichlorobenzene	ug/l	0.15	UJ
1,2-Dimethylbenzene	ug/l	0.20	UJ
1,3-Dichlorobenzene	ug/l	0.58	B
1,3-Dimethylbenzene	ug/l	-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	UJ
1,4-Dichlorobenzene	ug/l	0.15	UJ
1,4-Dimethylbenzene	ug/l	-	
Benzene	ug/l	0.35	UJ
Chlorobenzene	ug/l	0.25	UJ
Ethylbenzene	ug/l	0.20	UJ
Methyl-t-Butyl Ether	ug/l	5	UJ
Styrene	ug/l	0.25	UJ
Toluene	ug/l	0.25	UJ

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB2		SB4		SB20		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS00-01		PC-BG1-SB2-SS00-01		PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-P1-SB5-SS00-02		PC-P1-SB6-SS00-02	
COLLECTION DATE:		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.96	UJ	1.20	U	0.98	U	1	UJ	0.93	UJ	0.97	U
1,1,1-Trichloroethane	ug/kg	0.07	B	0.05	B	0.26	B	0.36	B	2.80	UJ	0.05	B
1,1,2,2-Tetrachloroethane	ug/kg	0.64	UJ	0.77	U	0.65	U	0.70	UJ	0.62	UJ	0.65	U
1,1,2-Trichloroethane	ug/kg	0.90	UJ	1.10	U	0.92	U	0.99	UJ	0.88	UJ	0.91	U
1,1-Dichloroethane	ug/kg	0.80	UJ	0.96	U	0.82	U	0.87	UJ	0.77	UJ	0.81	U
1,1-Dichloroethylene	ug/kg	0.90	UJ	1.10	U	0.92	U	0.99	UJ	0.88	UJ	0.91	U
1,2,3-Trichloropropane	ug/kg	0.96	UJ	1.20	U	0.98	U	1	UJ	0.93	UJ	0.97	U
1,2-Dibromoethane	ug/kg	1.40	UJ	1.70	U	1.40	U	1.50	UJ	1.30	UJ	1.40	U
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.80	U	1.50	U	1.60	U	1.40	U	1.50	U
1,2-Dichloroethane	ug/kg	0.69	UJ	0.83	U	0.71	U	0.76	UJ	0.67	UJ	0.70	U
1,2-Dichloropropane	ug/kg	0.69	UJ	0.83	U	0.71	U	0.76	UJ	0.67	UJ	0.70	U
1,2-trans-Dichloroethylene	ug/kg	1.20	UJ	1.40	U	1.20	U	1.30	UJ	1.10	UJ	1.20	U
1,3-Dichlorobenzene	ug/kg	1.20	UJ	1.40	U	1.20	U	1.30	U	1.10	U	1.20	U
1,3-cis-Dichloropropylene	ug/kg	1	UJ	1.20	U	1	U	1.10	UJ	0.98	UJ	1	U
1,3-trans-Dichloropropylene	ug/kg	0.90	UJ	1.10	U	0.92	U	0.99	UJ	0.88	UJ	0.91	U
1,4-Dichlorobenzene	ug/kg	1.50	UJ	1.80	U	1.50	U	1.60	U	1.40	U	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.20	UJ	1.40	U	1.20	U	1.30	UJ	1.10	UJ	1.20	U
2-Chlorotoluene	ug/kg	1.10	UJ	1.30	U	1.10	U	1.20	U	1	U	1.10	U
4-Chlorotoluene	ug/kg	1.20	UJ	1.40	U	1.20	U	1.30	U	1.10	U	1.20	U
Bromobenzene	ug/kg	0.80	UJ	0.96	U	0.82	U	0.87	U	0.77	U	0.81	U
Bromochloromethane	ug/kg	0.96	UJ	1.20	U	0.98	U	1	UJ	0.93	UJ	0.97	U
Bromodichloromethane	ug/kg	1.10	UJ	1.30	U	1.10	U	1.20	UJ	1	UJ	1.10	U
Bromoform	ug/kg	0.96	UJ	1.20	U	0.98	U	1	UJ	0.93	UJ	0.97	U
Carbon Tetrachloride	ug/kg	0.69	UJ	0.83	U	0.71	U	0.76	UJ	0.67	UJ	0.70	U
Chlorobenzene	ug/kg	0.96	UJ	1.20	U	0.98	U	1	U	0.93	U	0.97	U
Chloroethane	ug/kg	2.80	UJ	3.30	U	2.80	U	3	UJ	2.70	UJ	2.80	U
Chloroform	ug/kg	1	B	0.79	B	0.41	B	0.63	B	0.70	B	0.61	B
Dibromochloromethane	ug/kg	0.85	UJ	1	U	0.87	U	0.93	UJ	0.82	UJ	0.86	U
Dibromomethane	ug/kg	0.96	UJ	1.20	U	0.98	U	1	UJ	0.93	UJ	0.97	U
Methyl bromide	ug/kg	3	UJ	3.60	U	3	U	3.30	UJ	2.90	UJ	3	U
Methyl chloride	ug/kg	2.70	UJ	3.20	U	2.70	U	2.90	UJ	2.60	UJ	2.70	U
Methylene chloride	ug/kg	3	B	3.40	B	1.80	B	5.30	J	4.90	B	5.90	B
Tetrachloroethylene	ug/kg	0.85	UJ	1	U	0.87	U	0.93	UJ	0.82	UJ	0.86	U
Trichloroethylene	ug/kg	0.85	UJ	1	U	0.87	U	0.93	UJ	0.82	UJ	0.86	U
Vinyl chloride	ug/kg	2.80	UJ	3.30	U	2.80	U	3	UJ	2.70	UJ	2.80	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB2		SB4		SB20		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS00-01		PC-BG1-SB2-SS00-01		PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-P1-SB5-SS00-02		PC-P1-SB6-SS00-02	
COLLECTION DATE:		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.80	U	1.50	U	1.60	U	1.40	U	0.08	U
1,2-Dimethylbenzene	ug/kg	1.30	UJ	1.50	U	1.30	U	0.16	B	1.20	U	0.25	B
1,3-Dichlorobenzene	ug/kg	1.90	UJ	2.30	U	2	U	2.10	U	0.45	B	1.90	U
1,3/1,4-Dimethylbenzene	ug/kg	3.40	UJ	4.10	U	3.50	U	3.70	U	3.30	U	3.40	U
1,4-Dichlorobenzene	ug/kg	1.90	UJ	2.30	U	2	U	2.10	U	1.90	U	0.11	U
Benzene	ug/kg	1.50	UJ	1.80	U	1.50	U	1.60	U	1.40	U	1.50	U
Chlorobenzene	ug/kg	1.90	UJ	2.30	U	2	U	2.10	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	UJ	2.30	U	2	U	2.10	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	12	UJ	14	U	12	U	13	U	11	U	12	U
Styrene	ug/kg	1.60	UJ	1.90	U	1.60	U	1.70	U	1.50	U	1.60	U
Toluene	ug/kg	5.60	UJ	0.25	B	5.80	U	0.17	B	0.22	B	0.16	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
1,2-Dichlorobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
1,3-Dichlorobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
1,4-Dichlorobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,4,5-Trichlorophenol	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
2,4,6-Trichlorophenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,4-Dichlorophenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,4-Dimethylphenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,4-Dinitrophenol	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
2,4-Dinitrotoluene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2,6-Dinitrotoluene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2-Chloronaphthalene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2-Chlorophenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2-Methyl-4,6-Dinitrophenol	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
2-Methylnaphthalene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2-Methylphenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
2-Nitroaniline	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
2-Nitrophenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
3,3'-Dichlorobenzidine	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
3-Nitroaniline	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
4-Bromophenyl phenyl ether	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB2		SB4		SB20		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS00-01		PC-BG1-SB2-SS00-01		PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-P1-SB5-SS00-02		PC-P1-SB6-SS00-02	
COLLECTION DATE:		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
4-Chloroaniline	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
4-Methylphenol	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
4-Nitroaniline	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
4-Nitrophenol	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U
Acenaphthene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Acenaphthylene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Anthracene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Benzo(a)anthracene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Benzo(a)pyrene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Benzo(b)fluoranthene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Benzo(ghi)perylene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Benzo(k)fluoranthene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Butyl benzyl phthalate	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Carbazole	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Chrysene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Di-n-butyl phthalate	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Di-n-octyl phthalate	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Dibenzo(a,h)anthracene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Dibenzofuran	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Diethyl phthalate	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Dimethyl phthalate	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Fluoranthene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Fluorene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Hexachlorobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Hexachlorobutadiene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Hexachlorocyclopentadiene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Hexachloroethane	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Indeno(1,2,3-c,d)pyrene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Isophorone	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
N-Nitrosodi-N-Propylamine	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
N-Nitrosodiphenylamine	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Naphthalene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Nitrobenzene	ug/kg	350	U	420	U	360	U	380	U	340	U	350	U
Pentachlorophenol	ug/kg	840	U	1000	U	870	U	930	U	820	U	860	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SB1		SB2		SB4		SB20		SB5		SB6	
		SAMPLE ID:	PC-BG1-SB1-SS00-01		PC-BG1-SB2-SS00-01		PC-P1-SB4-SS00-01		PC-P1-SB20-SS00-02		PC-P1-SB5-SS00-02		PC-P1-SB6-SS00-02	
		COLLECTION DATE:	08/09/93		08/15/93		08/24/93		08/24/93		08/24/93		08/24/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
Phenol	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
Pyrene	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
bis(2-Chloroethoxy)methane	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
bis(2-Chloroethyl) ether	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
bis(2-Ethylhexyl)phthalate	ug/kg		350	U	420	U	360	U	380	U	340	U	350	U
METALS														
Aluminum	mg/kg		5330		-		-		-		-		-	
Antimony	mg/kg		4.80	UL	5.80	UL	4.90	UL	5.30	UL	4.60	UL	-	
Arsenic	mg/kg		0.78	0	0.52	U	0.43	U	0.73	0B	0.41	U	-	
Barium	mg/kg		14.50	0	-		-		-		-		-	
Beryllium	mg/kg		0.42	U	0.52	U	0.43	U	0.47	U	0.41	U	-	
Cadmium	mg/kg		0.53	U	0.64	UL	0.54	UL	0.58	U	0.51	UL	-	
Calcium	mg/kg		279	0	-		-		-		-		-	
Chromium	mg/kg		5.20		2.60		1.20		4.40	L	2.90		-	
Chromium, Hexavalent	mg/l		-		0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg		1.30	0	-		-		-		-		-	
Copper	mg/kg		1.60	U	1.90	U	1.60	U	1.80	U	1.50	U	-	
Iron	mg/kg		3940		-		-		-		-		-	
Lead	mg/kg		3	J	1.40	B	0.90		3	K	1.30		-	
Magnesium	mg/kg		426	0	-		-		-		-		-	
Manganese	mg/kg		35.60		-		-		-		-		-	
Mercury	mg/kg		0.11	U	0.13	U	0.11	U	0.12	U	0.10	U	-	
Nickel	mg/kg		3.70	U	4.50	U	3.80	U	4.20	(L)	3.60	U	-	
Potassium	mg/kg		267	0	-		-		-		-		-	
Selenium	mg/kg		0.32	UL	0.39	U	0.33	U	0.35	UL	0.31	U	-	
Silver	mg/kg		0.42	U	0.52	UL	0.43	U	0.47	U	0.41	U	-	
Sodium	mg/kg		28.20	0	-		-		-		-		-	
Thallium	mg/kg		0.32	U	0.39	UL	0.33	U	0.35	UL	0.31	U	-	
Vanadium	mg/kg		8.20		-		-		-		-		-	
Zinc	mg/kg		11.40	B	15.30	B	2	0B	4.30	B	5	B	-	
TPH														
Total Petroleum Hydrocarbons	mg/kg		30		10.40		9.60		10.40		6.30	U	6.30	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-P1-SB7-SS00-02		PC-P1-SB8-SS00-02		PC-P1-SB9-SS00-02		PC-P1-SB10-SS00-02		PC-P1-SB11-SS00-02		PC-P1-SB12-SS00-02	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.10	UJ	1.10	U	0.96	U	0.99	U	0.97	UJ	1.10	U
1,1,1-Trichloroethane	ug/kg	0.48	B	0.13	B	2.90	U	2.70		0.89	B	0.48	B
1,1,2,2-Tetrachloroethane	ug/kg	0.72	UJ	0.72	U	0.64	U	0.66	U	0.65	UJ	0.71	U
1,1,2-Trichloroethane	ug/kg	1	UJ	1	U	0.90	U	0.93	U	0.91	UJ	1	U
1,1-Dichloroethane	ug/kg	0.90	UJ	0.90	U	0.80	U	0.82	U	0.81	UJ	0.89	U
1,1-Dichloroethylene	ug/kg	1	UJ	1	U	0.90	U	0.93	U	0.91	UJ	1	U
1,2,3-Trichloropropane	ug/kg	1.10	UJ	1.10	U	0.96	U	0.99	U	0.97	UJ	1.10	U
1,2-Dibromoethane	ug/kg	1.60	UJ	1.60	U	1.40	U	1.40	U	1.40	UJ	1.50	U
1,2-Dichlorobenzene	ug/kg	1.70	UJ	1.70	U	1.50	UJ	1.50	UJ	1.50	U	1.70	U
1,2-Dichloroethane	ug/kg	0.78	UJ	0.78	U	0.69	U	0.71	U	0.70	UJ	0.77	U
1,2-Dichloropropane	ug/kg	0.78	UJ	0.78	U	0.69	U	0.71	U	0.70	UJ	0.77	U
1,2-trans-Dichloroethylene	ug/kg	1.30	UJ	1.30	U	1.20	U	1.20	U	1.20	UJ	1.30	U
1,3-Dichlorobenzene	ug/kg	1.30	UJ	1.30	U	1.20	UJ	1.20	UJ	1.20	U	1.30	U
1,3-cis-Dichloropropylene	ug/kg	1.10	UJ	1.10	U	1	U	1	U	1	UJ	1.10	U
1,3-trans-Dichloropropylene	ug/kg	1	UJ	1	U	0.90	U	0.93	U	0.91	UJ	1	U
1,4-Dichlorobenzene	ug/kg	1.70	UJ	1.70	U	1.50	UJ	1.50	UJ	1.50	U	1.70	U
2-Chloroethylvinyl ether	ug/kg	1.30	UJ	1.30	U	1.20	U	1.20	U	1.20	UJ	1.30	U
2-Chlorotoluene	ug/kg	1.20	UJ	1.20	U	1.10	UJ	1.10	UJ	1.10	U	1.20	U
4-Chlorotoluene	ug/kg	1.30	UJ	1.30	U	1.20	UJ	1.20	UJ	1.20	U	1.30	U
Bromobenzene	ug/kg	0.90	UJ	0.90	U	0.80	UJ	0.82	UJ	0.81	U	0.89	U
Bromochloromethane	ug/kg	1.10	UJ	1.10	U	0.96	U	0.99	U	0.97	UJ	1.10	U
Bromodichloromethane	ug/kg	1.20	UJ	1.20	U	1.10	U	1.10	U	1.10	UJ	1.20	U
Bromoform	ug/kg	1.10	UJ	1.10	U	0.96	U	0.99	U	0.97	UJ	1.10	U
Carbon Tetrachloride	ug/kg	0.78	UJ	0.78	U	0.69	U	0.71	U	0.70	UJ	0.77	U
Chlorobenzene	ug/kg	1.10	UJ	1.10	U	0.96	UJ	0.99	UJ	0.97	U	1.10	U
Chloroethane	ug/kg	3.10	UJ	3.10	U	2.80	U	2.90	U	2.80	UJ	3.10	U
Chloroform	ug/kg	0.81	B	0.67	B	0.61	B	0.82	B	0.48	B	0.71	B
Dibromochloromethane	ug/kg	0.96	UJ	0.96	U	0.85	U	0.88	U	0.86	UJ	0.95	U
Dibromomethane	ug/kg	1.10	UJ	1.10	U	0.96	U	0.99	U	0.97	UJ	1.10	U
Methyl bromide	ug/kg	3.40	UJ	3.40	U	3	U	3.10	U	3	UJ	3.30	U
Methyl chloride	ug/kg	3	UJ	3	U	2.70	U	2.70	U	2.70	UJ	3	U
Methylene chloride	ug/kg	9.30	J	7	U	4.40	B	7.50		4.60	B	5	
Tetrachloroethylene	ug/kg	0.96	UJ	0.96	U	0.85	U	0.88	U	0.86	UJ	0.95	U
Trichloroethylene	ug/kg	0.96	UJ	0.96	U	0.85	U	0.88	U	0.86	UJ	0.95	U
Vinyl chloride	ug/kg	3.10	UJ	3.10	U	2.80	U	2.90	U	2.80	UJ	3.10	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-P1-SB7-SS00-02		PC-P1-SB8-SS00-02		PC-P1-SB9-SS00-02		PC-P1-SB10-SS00-02		PC-P1-SB11-SS00-02		PC-P1-SB12-SS00-02	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.70	UJ	1.70	U	1.50	U	1.50	U	0.07	B	0.08	B
1,2-Dimethylbenzene	ug/kg	1.40	UJ	0.16	B	0.04	B	1.30	U	0.03	B	0.03	B
1,3-Dichlorobenzene	ug/kg	2.20	UJ	0.03	B	1.90	U	2	U	1.90	U	0.07	B
1,3/1,4-Dimethylbenzene	ug/kg	3.90	UJ	3.90	U	3.40	U	3.50	U	3.40	U	3.80	U
1,4-Dichlorobenzene	ug/kg	2.20	UJ	0.17	U	0.02		2	U	0.10	B	0.33	B
Benzene	ug/kg	1.70	UJ	1.70	U	1.50	U	1.50	U	1.50	U	1.70	U
Chlorobenzene	ug/kg	2.20	UJ	2.20	U	1.90	U	2	U	1.90	U	0.03	B
Ethylbenzene	ug/kg	2.20	UJ	2.20	U	1.90	U	2	U	1.90	U	2.10	U
Methyl-t-Butyl Ether	ug/kg	13	UJ	13	U	12	U	12	U	12	U	13	U
Styrene	ug/kg	1.80	UJ	0.05		1.60	U	1.60	U	0.02	B	0.05	B
Toluene	ug/kg	6.40	UJ	0.13	B	0.19	B	5.80	U	0.23	B	0.13	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
1,2-Dichlorobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
1,3-Dichlorobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
1,4-Dichlorobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,4,5-Trichlorophenol	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
2,4,6-Trichlorophenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,4-Dichlorophenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,4-Dimethylphenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,4-Dinitrophenol	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
2,4-Dinitrotoluene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2,6-Dinitrotoluene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2-Chloronaphthalene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2-Chlorophenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2-Methyl-4,6-Dinitrophenol	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
2-Methylnaphthalene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2-Methylphenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
2-Nitroaniline	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
2-Nitrophenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
3,3'-Dichlorobenzidine	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
3-Nitroaniline	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
4-Bromophenyl phenyl ether	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-P1-SB7-SS00-02		PC-P1-SB8-SS00-02		PC-P1-SB9-SS00-02		PC-P1-SB10-SS00-02		PC-P1-SB11-SS00-02		PC-P1-SB12-SS00-02	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
4-Chloroaniline	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
4-Chlorophenyl phenyl ether	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
4-Methylphenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
4-Nitroaniline	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
4-Nitrophenol	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U
Acenaphthene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Acenaphthylene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Anthracene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Benzo(a)anthracene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Benzo(a)pyrene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Benzo(b)fluoranthene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Benzo(ghi)perylene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Benzo(k)fluoranthene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Butyl benzyl phthalate	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Carbazole	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Chrysene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Di-n-butyl phthalate	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Di-n-octyl phthalate	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Dibenzo(a,h)anthracene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Dibenzofuran	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Diethyl phthalate	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Dimethyl phthalate	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Fluoranthene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Fluorene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Hexachlorobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Hexachlorobutadiene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Hexachlorocyclopentadiene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Hexachloroethane	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Indeno(1,2,3-c,d)pyrene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Isophorone	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
N-Nitrosodi-N-Propylamine	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
N-Nitrosodiphenylamine	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Naphthalene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Nitrobenzene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Pentachlorophenol	ug/kg	960	U	960	U	850	U	870	U	860	U	940	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-P1-SB7-SS00-02		PC-P1-SB8-SS00-02		PC-P1-SB9-SS00-02		PC-P1-SB10-SS00-02		PC-P1-SB11-SS00-02		PC-P1-SB12-SS00-02	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Phenol	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
Pyrene	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
bis(2-Chloroethoxy)methane	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
bis(2-Chloroethyl) ether	ug/kg	400	U	400	U	350	U	360	U	350	U	390	U
bis(2-Ethylhexyl)phthalate	ug/kg	400	U	400	U	350	U	360	U	37		390	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	5.40	UL	5.40	UL	4.80	UL	5	UL	4.80	UL	5.40	UL
Arsenic	mg/kg	0.48	U	0.66	(K)	0.60	0	0.44	UL	0.43	UL	0.55	0B
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.48	U	0.48	U	0.43	U	0.44	U	0.43	U	0.48	U
Cadmium	mg/kg	0.60	UL	0.61	UL	0.53	UL	0.55	U	0.54	U	0.60	U
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	1.20	U	13.30		5.80		1.10	UL	1.10	UL	4.40	L
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.80	U	10.50		2.20	0	1.70	U	1.60	U	1.80	U
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	1.30		7.10		2.60	L	0.41	K	0.44	K	3	J
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.12	U	0.12	U	0.11	U	0.11	U	0.11	U	0.12	U
Nickel	mg/kg	4.20	U	12.20		4.50		3.90	UL	3.80	UL	4.20	UL
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.36	U	0.36	UL	0.32	U	0.33	U	0.32	U	0.36	U
Silver	mg/kg	0.48	U	0.48	U	0.43	U	0.52	(B)	0.43	U	0.48	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.36	UL	0.36	U	0.32	UL	0.33	UL	0.32	UL	0.36	UL
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	2.80	(B)	23.60	B	8	B	1.20	0B	1.70	0B	3.60	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	9.50		20.10		17.40		6.30	U	6.30	U	6.30	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB13		SB6		SB7		SB8		SB10		SB11	
SAMPLE ID:		PC-P1-SB13-SS00-02		PC-MP2-SB6-SS00-02		PC-MP2-SB7-SS00-02		PC-MP2-SB8-SS00-02		PC-MP2-SB10-SS00-01		PC-CG3-SB11-SS00-02	
COLLECTION DATE:		08/24/93		08/15/93		08/15/93		08/15/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1	U	0.98	U	0.95	U	0.94	U	0.94	U	0.95	U
1,1,1-Trichloroethane	ug/kg	3	U	2.90	UJ	0.22	B	0.20	B	2.80	U	2.80	U
1,1,2,2-Tetrachloroethane	ug/kg	0.67	U	0.65	U	0.63	U	0.63	U	0.63	U	0.63	U
1,1,2-Trichloroethane	ug/kg	0.94	U	0.92	U	0.89	U	0.89	U	0.89	U	0.89	U
1,1-Dichloroethane	ug/kg	0.83	U	0.82	U	0.79	U	0.78	U	0.78	U	0.79	U
1,1-Dichloroethylene	ug/kg	0.94	U	0.92	U	0.89	U	0.89	U	0.89	U	0.89	U
1,2,3-Trichloropropane	ug/kg	1	U	0.98	U	0.95	U	0.94	U	0.94	U	0.95	U
1,2-Dibromoethane	ug/kg	1.40	U	1.40	U	1.40	U	1.40	U	1.40	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.60	U	1.50	UJ	1.50	U	1.50	U	1.50	UJ	1.50	U
1,2-Dichloroethane	ug/kg	0.72	U	0.71	U	0.68	U	0.68	U	0.68	U	0.68	U
1,2-Dichloropropane	ug/kg	0.72	U	0.71	U	0.68	U	0.68	U	0.68	U	0.68	U
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.20	U	1.20	U	1.10	U	1.10	U	1.20	U
1,3-Dichlorobenzene	ug/kg	1.20	U	1.20	UJ	1.20	U	1.10	U	1.10	UJ	1.20	U
1,3-cis-Dichloropropylene	ug/kg	1.10	U	1	U	1	U	0.99	U	0.99	U	1	U
1,3-trans-Dichloropropylene	ug/kg	0.94	U	0.92	U	0.89	U	0.89	U	0.89	U	0.89	U
1,4-Dichlorobenzene	ug/kg	1.60	U	1.50	UJ	1.50	U	1.50	U	1.50	UJ	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.20	U	1.20	U	1.10	U	1.10	U	1.20	U
2-Chlorotoluene	ug/kg	1.10	U	1.10	UJ	1.10	U	1	U	1	UJ	1.10	U
4-Chlorotoluene	ug/kg	1.20	U	1.20	UJ	1.20	U	1.10	U	1.10	UJ	1.20	U
Bromobenzene	ug/kg	0.83	U	0.82	UJ	0.79	U	0.78	U	0.78	UJ	0.79	U
Bromochloromethane	ug/kg	1	U	0.98	U	0.95	U	0.94	U	0.94	U	0.95	U
Bromodichloromethane	ug/kg	1.10	U	1.10	U	1.10	U	1	U	1	U	1.10	U
Bromoform	ug/kg	1	U	0.98	U	0.95	U	0.94	U	0.94	U	0.95	U
Carbon Tetrachloride	ug/kg	0.72	U	0.71	U	0.68	U	0.68	U	0.68	U	0.68	U
Chlorobenzene	ug/kg	1	U	0.98	UJ	0.95	U	0.94	U	0.94	UJ	0.95	U
Chloroethane	ug/kg	2.90	U	2.80	U	2.70	U	2.70	U	2.70	U	2.70	U
Chloroform	ug/kg	0.31	B	0.55	B	0.58	B	0.97	B	0.19	B	0.55	B
Dibromochloromethane	ug/kg	0.89	U	0.87	U	0.84	U	0.83	U	0.83	U	0.84	U
Dibromomethane	ug/kg	1	U	0.98	U	0.95	U	0.94	U	0.94	U	0.95	U
Methyl bromide	ug/kg	3.10	U	3	U	2.90	U	2.90	U	2.90	U	2.90	U
Methyl chloride	ug/kg	2.80	U	2.70	U	2.60	U	2.60	U	2.60	U	2.60	U
Methylene chloride	ug/kg	1.20	B	17		4.40	B	1.30	B	3.80	B	4.20	J
Tetrachloroethylene	ug/kg	0.89	U	0.87	U	0.84	U	0.83	U	0.83	U	0.84	U
Trichloroethylene	ug/kg	0.89	U	0.87	U	0.84	U	0.83	U	0.83	U	0.84	U
Vinyl chloride	ug/kg	2.90	U	2.80	U	2.70	U	2.70	U	2.70	U	2.70	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SB13		SB6		SB7		SB8		SB10		SB11	
		SAMPLE ID:	PC-P1-SB13-SS00-02		PC-MP2-SB6-SS00-02		PC-MP2-SB7-SS00-02		PC-MP2-SB8-SS00-02		PC-MP2-SB10-SS00-01		PC-CG3-SB11-SS00-02	
		COLLECTION DATE:	08/24/93		08/15/93		08/15/93		08/15/93		09/13/93		08/26/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020														
1,2-Dichlorobenzene	ug/kg		1.60	U	1.50	U	1.50	U	1.50	U	1.50	UJ	1.50	U
1,2-Dimethylbenzene	ug/kg		1.30	U	1.30	U	1.30	U	1.30	U	1.30	UJ	1.30	U
1,3-Dichlorobenzene	ug/kg		2	U	2	U	1.90	U	1.90	U	1.90	UJ	1.90	U
1,3/1,4-Dimethylbenzene	ug/kg		3.60	U	3.50	U	3.40	U	3.30	U	3.30	UJ	3.40	U
1,4-Dichlorobenzene	ug/kg		2	U	0.26	B	1.90	U	1.90	U	1.90	UJ	0.15	J
Benzene	ug/kg		1.60	U	1.50	U	1.50	U	1.50	U	1.50	UJ	1.50	U
Chlorobenzene	ug/kg		2	U	2	U	1.90	U	1.90	U	1.90	UJ	1.90	U
Ethylbenzene	ug/kg		2	U	2	U	1.90	U	1.90	U	1.90	UJ	1.90	U
Methyl-t-Butyl Ether	ug/kg		12	U	12	U	12	U	11	U	11	UJ	12	U
Styrene	ug/kg		1.70	U	1.60	U	1.60	U	1.60	U	1.60	UJ	1.60	U
Toluene	ug/kg		5.90	U	0.28	B	0.23	B	0.54	B	5.50	UJ	0.12	B
CLP 3/90														
1,2,4-Trichlorobenzene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg		880	U	870	U	840	U	820	U	830	U	830	U
2,4,6-Trichlorophenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg		880	U	870	U	840	U	820	U	830	U	830	U
2,4-Dinitrotoluene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg		880	U	870	U	840	U	820	U	830	U	830	U
2-Methylnaphthalene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2-Methylphenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg		880	U	870	U	840	U	820	U	830	U	830	U
2-Nitrophenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
3-Nitroaniline	ug/kg		880	U	870	U	840	U	820	U	830	U	830	U
4-Bromophenyl phenyl ether	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		SB13		SB6		SB7		SB8		SB10		SB11	
LOCATOR:													
SAMPLE ID:		PC-P1-SB13-SS00-02		PC-MP2-SB6-SS00-02		PC-MP2-SB7-SS00-02		PC-MP2-SB8-SS00-02		PC-MP2-SB10-SS00-01		PC-CG3-SB11-SS00-02	
COLLECTION DATE:		08/24/93		08/15/93		08/15/93		08/15/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	880	U	870	U	840	U	820	U	830	U	830	U
4-Nitrophenol	ug/kg	880	U	870	U	840	U	820	U	830	U	830	U
Acenaphthene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Acenaphthylene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Anthracene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	360	U	360	UJ	350	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	360	U	52	J	350	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	360	U	360	UJ	350	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	360	U	52	J	350	U	340	U	340	U	340	U
Butyl benzyl phthalate	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Carbazole	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Chrysene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Di-n-butyl phthalate	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Di-n-octyl phthalate	ug/kg	360	U	360	UJ	350	U	340	U	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	360	U	360	UJ	350	U	340	U	340	U	340	U
Dibenzofuran	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Diethyl phthalate	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Fluoranthene	ug/kg	360	U	51		350	U	340	U	340	U	340	U
Fluorene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Hexachlorobenzene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	360	U	360	UJ	350	U	340	U	340	U	340	U
Isophorone	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Naphthalene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Nitrobenzene	ug/kg	360	U	360	U	350	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	880	U	870	U	840	U	820	U	830	U	830	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SB13		SB6		SB7		SB8		SB10		SB11	
		SAMPLE ID:	PC-P1-SB13-SS00-02		PC-MP2-SB6-SS00-02		PC-MP2-SB7-SS00-02		PC-MP2-SB8-SS00-02		PC-MP2-SB10-SS00-01		PC-CG3-SB11-SS00-02	
		COLLECTION DATE:	08/24/93		08/15/93		08/15/93		08/15/93		09/13/93		08/26/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
Phenol	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
Pyrene	ug/kg		360	U	40		350	U	340	U	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg		360	U	360	U	350	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg		42	J	360	U	350	U	78		340	U	340	U
METALS														
Aluminum	mg/kg		-		-		-		-		-		-	
Antimony	mg/kg		5	UL	4.90	UL	4.70	UL	4.70	UL	4.70	UL	4.70	UL
Arsenic	mg/kg		0.55	0	1.90	B	0.69	0B	2.50	B	1.10		0.42	U
Barium	mg/kg		-		-		-		-		-		-	
Beryllium	mg/kg		0.44	U	0.43	U	0.42	U	0.42	U	0.42	U	0.42	U
Cadmium	mg/kg		0.55	UL	0.54	UL	0.53	UL	0.52	UL	0.52	UL	0.53	UL
Calcium	mg/kg		-		-		-		-		-		-	
Chromium	mg/kg		3.80		5		1.90		10.20		3.60		2.90	
Chromium, Hexavalent	mg/l		0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg		-		-		-		-		-		-	
Copper	mg/kg		1.70	U	5.10		1.60	U	4.70		3.30		1.60	U
Iron	mg/kg		-		-		-		-		-		-	
Lead	mg/kg		2.50		31	J	1.40	B	11.80	B	1.30	L	3.80	
Magnesium	mg/kg		-		-		-		-		-		-	
Manganese	mg/kg		-		-		-		-		-		-	
Mercury	mg/kg		0.11	U	0.11	U	0.11	U	0.10	U	0.10	U	0.11	U
Nickel	mg/kg		3.90	U	3.80	U	3.70	U	8.70		3.70	0	3.70	U
Potassium	mg/kg		-		-		-		-		-		-	
Selenium	mg/kg		0.33	U	0.32	UL	0.32	U	0.31	U	0.31	UL	0.32	UL
Silver	mg/kg		0.44	U	0.43	UL	0.42	UL	0.42	UL	0.42	U	0.42	U
Sodium	mg/kg		-		-		-		-		-		-	
Thallium	mg/kg		0.33	U	0.32	UL	0.32	UL	R	0.31	UL	0.32	UL	
Vanadium	mg/kg		-		-		-		-		-		-	
Zinc	mg/kg		4.10	B	20.30	B	9.50	B	21.70	B	19.20		9	B
TPH														
Total Petroleum Hydrocarbons	mg/kg		23.90		2120		12.10		45.80		2520		18	

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB20		SB12		SB13		SB4		SB6		SB7	
SAMPLE ID:		PC-CG3-SB20-SS00-02		PC-CG3-SB12-SS00-02		PC-CG3-SB13-SS00-02		PC-HN8-SB4-SS00-02		PC-HN8-SB6-SS00-02		PC-HN8-SB7-SS00-02	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/13/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.96	U	0.95	U	0.94	U	0.94	UJ	0.94	U	0.96	U
1,1,1-Trichloroethane	ug/kg	2.90	U	2.80	U	0.18	B	0.06	J	0.26	B	2.90	UJ
1,1,2,2-Tetrachloroethane	ug/kg	0.64	U	0.63	U	0.63	U	0.63	UJ	0.63	U	0.64	U
1,1,2-Trichloroethane	ug/kg	0.90	U	0.89	U	0.89	U	0.89	UJ	0.89	U	0.90	U
1,1-Dichloroethane	ug/kg	0.80	U	0.79	U	0.78	U	0.78	UJ	0.78	U	0.80	U
1,1-Dichloroethylene	ug/kg	0.90	U	0.89	U	0.89	U	0.89	UJ	0.89	U	0.90	U
1,2,3-Trichloropropane	ug/kg	0.96	U	0.95	U	0.94	U	0.94	UJ	0.94	U	0.96	U
1,2-Dibromoethane	ug/kg	1.40	U	1.40	U	1.40	U	1.40	UJ	1.40	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	UJ	1.50	U	1.50	UJ	1.50	UJ	1.50	U
1,2-Dichloroethane	ug/kg	0.69	U	0.68	U	0.68	U	0.68	UJ	0.68	U	0.69	U
1,2-Dichloropropane	ug/kg	0.69	U	0.68	U	0.68	U	0.68	UJ	0.68	U	0.69	U
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.20	U	1.10	U	1.10	UJ	1.10	U	1.20	U
1,3-Dichlorobenzene	ug/kg	1.20	U	1.20	UJ	1.10	U	1.10	UJ	1.10	UJ	1.20	U
1,3-cis-Dichloropropylene	ug/kg	1	U	1	U	0.99	U	0.99	UJ	0.99	U	1	U
1,3-trans-Dichloropropylene	ug/kg	0.90	U	0.89	U	0.89	U	0.89	UJ	0.89	U	0.90	U
1,4-Dichlorobenzene	ug/kg	1.50	U	1.50	UJ	1.50	U	1.50	UJ	1.50	UJ	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.20	U	1.10	U	1.10	UJ	1.10	U	1.20	U
2-Chlorotoluene	ug/kg	1.10	U	1.10	UJ	1	U	1	UJ	1	UJ	1.10	U
4-Chlorotoluene	ug/kg	1.20	U	1.20	UJ	1.10	U	1.10	UJ	1.10	UJ	1.20	U
Bromobenzene	ug/kg	0.80	U	0.79	UJ	0.78	U	0.78	UJ	0.78	UJ	0.80	U
Bromochloromethane	ug/kg	0.96	U	0.95	U	0.94	U	0.94	UJ	0.94	U	0.96	U
Bromodichloromethane	ug/kg	1.10	U	1.10	U	1	U	1	UJ	1	U	1.10	U
Bromoform	ug/kg	0.96	U	0.95	U	0.94	U	0.94	UJ	0.94	U	0.96	U
Carbon Tetrachloride	ug/kg	0.69	U	0.68	U	0.68	U	0.68	UJ	0.68	U	0.69	U
Chlorobenzene	ug/kg	0.96	U	0.95	UJ	0.94	U	0.94	UJ	0.94	UJ	0.96	U
Chloroethane	ug/kg	2.80	U	2.70	U	2.70	U	2.70	UJ	2.70	U	2.80	U
Chloroform	ug/kg	0.44	B	0.50	B	0.60	B	0.22	B	0.61	B	0.48	B
Dibromochloromethane	ug/kg	0.85	U	0.84	U	0.83	U	0.83	UJ	0.83	U	0.85	U
Dibromomethane	ug/kg	0.96	U	0.95	U	0.94	U	0.94	UJ	0.94	U	0.96	U
Methyl bromide	ug/kg	3	U	2.90	U	2.90	U	2.90	UJ	2.90	U	3	U
Methyl chloride	ug/kg	2.70	U	2.60	U	2.60	U	2.60	UJ	2.60	U	2.70	U
Methylene chloride	ug/kg	9.30	B	4.50	B	3.10	B	0.31	B	8.40	J	5.10	B
Tetrachloroethylene	ug/kg	0.85	U	0.84	U	0.83	U	0.83	UJ	0.83	U	0.85	U
Trichloroethylene	ug/kg	0.85	U	0.84	U	0.83	U	0.83	UJ	0.83	U	0.85	U
Vinyl chloride	ug/kg	2.80	U	2.70	U	2.70	U	2.70	UJ	2.70	U	2.80	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB20		SB12		SB13		SB4		SB6		SB7	
SAMPLE ID:		PC-CG3-SB20-SS00-02		PC-CG3-SB12-SS00-02		PC-CG3-SB13-SS00-02		PC-HN8-SB4-SS00-02		PC-HN8-SB6-SS00-02		PC-HN8-SB7-SS00-02	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/13/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	4.30	U	1.50	UJ	0.07		0.04	J	1.50	U	1.50	U
1,2-Dimethylbenzene	ug/kg	1.30	U	1.30	UJ	0.18		0.21	B	1.30	U	1.30	U
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.90	U	1.90	U	1.90	U
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.40	UJ	3.30	U	3.30	U	3.30	U	3.40	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.90	UJ	0.25	B	0.26	U	1.90	U	1.90	U
Benzene	ug/kg	1.50	U	1.50	UJ	0.02	B	0.06		1.50	U	1.50	U
Chlorobenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.90	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	12	U	12	UJ	11	U	2.40		11	U	12	U
Styrene	ug/kg	1.60	U	1.60	UJ	0.08	B	1.60	U	1.60	U	1.60	U
Toluene	ug/kg	5.60	U	5.60	UJ	0.18		0.12	B	5.50	U	0.23	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
1,2-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
1,3-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
1,4-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,4,5-Trichlorophenol	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
2,4,6-Trichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,4-Dichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,4-Dimethylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,4-Dinitrophenol	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
2,4-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2,6-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2-Chloronaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2-Chlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2-Methyl-4,6-Dinitrophenol	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
2-Methylnaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
2-Nitroaniline	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
2-Nitrophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
3,3'-Dichlorobenzidine	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
3-Nitroaniline	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
4-Bromophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB20		SB12		SB13		SB4		SB6		SB7	
SAMPLE ID:		PC-CG3-SB20-SS00-02		PC-CG3-SB12-SS00-02		PC-CG3-SB13-SS00-02		PC-HN8-SB4-SS00-02		PC-HN8-SB6-SS00-02		PC-HN8-SB7-SS00-02	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/13/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
4-Chloroaniline	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
4-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
4-Nitroaniline	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
4-Nitrophenol	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U
Acenaphthene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Acenaphthylene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Anthracene	ug/kg	76		340	U	340	U	340	U	340	U	350	U
Benzo(a)anthracene	ug/kg	290		340	U	340	U	340	U	340	U	350	U
Benzo(a)pyrene	ug/kg	170		340	U	340	U	340	U	340	U	350	U
Benzo(b)fluoranthene	ug/kg	430		340	U	340	U	340	U	48		350	U
Benzo(ghi)perylene	ug/kg	140		340	U	340	U	340	U	340	U	350	U
Benzo(k)fluoranthene	ug/kg	430		340	U	340	U	340	U	340	U	350	U
Butyl benzyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Carbazole	ug/kg	60		340	U	340	U	340	U	340	U	350	U
Chrysene	ug/kg	250		340	U	340	U	340	U	74		350	U
Di-n-butyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Di-n-octyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Dibenzo(a,h)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Dibenzofuran	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Diethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Dimethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Fluoranthene	ug/kg	640		340	U	340	U	340	U	340	U	350	U
Fluorene	ug/kg	39		340	U	340	U	340	U	340	U	350	U
Hexachlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Hexachlorobutadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Hexachlorocyclopentadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Hexachloroethane	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Indeno(1,2,3-c,d)pyrene	ug/kg	160		340	U	340	U	340	U	340	U	350	U
Isophorone	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
N-Nitrosodi-N-Propylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
N-Nitrosodiphenylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Naphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Nitrobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Pentachlorophenol	ug/kg	840	U	830	U	820	U	830	U	820	U	840	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB20		SB12		SB13		SB4		SB6		SB7	
SAMPLE ID:		PC-CG3-SB20-SS00-02		PC-CG3-SB12-SS00-02		PC-CG3-SB13-SS00-02		PC-HN8-SB4-SS00-02		PC-HN8-SB6-SS00-02		PC-HN8-SB7-SS00-02	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/13/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	440		340	U	340	U	340	U	340	U	350	U
Phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
Pyrene	ug/kg	420		340	U	340	U	340	U	340	U	350	U
bis(2-Chloroethoxy)methane	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
bis(2-Chloroethyl) ether	ug/kg	350	U	340	U	340	U	340	U	340	U	350	U
bis(2-Ethylhexyl)phthalate	ug/kg	350	U	340	U	340	U	340	U	52		350	U
METALS													
Aluminum	mg/kg	-		-		-		3350		-		-	
Antimony	mg/kg	4.80	UL	4.70	UL	4.70	UL	4.70	UL	5.10	(L)	4.80	UL
Arsenic	mg/kg	1.50		0.42	U	0.60	0	0.63	0	2.50	B	0.62	0B
Barium	mg/kg	-		-		-		14.90	0	-		-	
Beryllium	mg/kg	0.42	U	0.42	U	0.41	U	0.42	U	0.42	U	0.43	U
Cadmium	mg/kg	0.53	UL	0.53	UL	0.52	UL	0.52	U	0.52	UL	0.53	UL
Calcium	mg/kg	-		-		-		1230		-		-	
Chromium	mg/kg	7		2.40		5		3.90		2.90		7	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		1.30	0	-		-	
Copper	mg/kg	6.60		1.60	U	1.90	0	1.60	U	3.90		1.90	0
Iron	mg/kg	-		-		-		3540		-		-	
Lead	mg/kg	13.50		2.10		2.10		2.20		42.60	J	1.70	B
Magnesium	mg/kg	-		-		-		444	0	-		-	
Manganese	mg/kg	-		-		-		193		-		-	
Mercury	mg/kg	0.11	U	0.11	U	0.10	U	0.10	U	0.10	U	0.11	U
Nickel	mg/kg	3.70		3.70	U	3.70	0	3.70	U	3.70	U	3.70	U
Potassium	mg/kg	-		-		-		268	0	-		-	
Selenium	mg/kg	0.32	U	0.32	U	0.31	UL	0.31	U	0.34	0	0.32	U
Silver	mg/kg	0.42	U	0.42	U	0.41	U	0.42	U	0.42	UL	0.43	UL
Sodium	mg/kg	-		-		-		31.20	0	-		-	
Thallium	mg/kg	0.32	U	0.32	U	0.31	U	0.31	U	0.31	UL	0.32	UL
Vanadium	mg/kg	-		-		-		8.20		-		-	
Zinc	mg/kg	33.10	B	9.90	B	7.10	B	13.30	B	15	B	17.60	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	382		13.50		6.30	U	13.80		11000		22.70	

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-RT9-SB7-SS01-02		PC-RT9-SB8-SS01-02		PC-RT9-SB9-SS01-02		PC-RT9-SB10-SS01-02		PC-RT9-SB11-SS01-02		PC-RT9-SB12-SS01-02	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
1,1,1-Trichloroethane	ug/kg	0.24	B	2.80	UJ	0.23	B	2.80	UJ	0.08	U	2.90	U
1,1,2,2-Tetrachloroethane	ug/kg	0.63	U	0.62	UJ	0.64	U	0.63	UJ	0.63	U	0.65	U
1,1,2-Trichloroethane	ug/kg	0.89	U	0.88	UJ	0.90	U	0.89	UJ	0.89	U	0.91	U
1,1-Dichloroethane	ug/kg	0.79	U	0.77	UJ	0.80	U	0.78	UJ	0.79	U	0.81	U
1,1-Dichloroethylene	ug/kg	0.89	U	0.88	UJ	0.90	U	0.89	UJ	0.89	U	0.91	U
1,2,3-Trichloropropane	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
1,2-Dibromoethane	ug/kg	1.40	U	1.30	UJ	1.40	U	1.40	UJ	1.40	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.50	U	1.40	UJ	1.50	U	1.50	UJ	1.50	U	1.50	U
1,2-Dichloroethane	ug/kg	0.68	U	0.67	UJ	0.69	U	0.68	UJ	0.68	U	0.70	U
1,2-Dichloropropane	ug/kg	0.68	U	0.67	UJ	0.69	U	0.68	UJ	0.68	U	0.70	U
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.10	UJ	1.20	U	1.10	UJ	1.20	U	1.20	U
1,3-Dichlorobenzene	ug/kg	1.20	U	1.10	UJ	1.20	U	1.10	UJ	1.20	U	1.20	U
1,3-cis-Dichloropropylene	ug/kg	1	U	0.98	UJ	1	U	0.99	UJ	1	U	1	U
1,3-trans-Dichloropropylene	ug/kg	0.89	U	0.88	UJ	0.90	U	0.89	UJ	0.89	U	0.91	U
1,4-Dichlorobenzene	ug/kg	1.50	U	1.40	UJ	1.50	U	1.50	UJ	1.50	U	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.10	UJ	1.20	U	1.10	UJ	1.20	U	1.20	U
2-Chlorotoluene	ug/kg	1.10	U	1	UJ	1.10	U	1	UJ	1.10	U	1.10	U
4-Chlorotoluene	ug/kg	1.20	U	1.10	UJ	1.20	U	1.10	UJ	1.20	U	1.20	U
Bromobenzene	ug/kg	0.79	U	0.77	UJ	0.80	U	0.78	UJ	0.79	U	0.81	U
Bromochloromethane	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
Bromodichloromethane	ug/kg	1.10	U	1	UJ	1.10	U	1	UJ	1.10	U	1.10	U
Bromoform	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
Carbon Tetrachloride	ug/kg	0.68	U	0.67	UJ	0.69	U	0.68	UJ	0.68	U	0.70	U
Chlorobenzene	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
Chloroethane	ug/kg	2.70	U	2.70	UJ	2.80	U	2.70	UJ	2.70	U	2.80	U
Chloroform	ug/kg	1.20	B	0.34	B	1.10	B	0.77	B	1.50	B	0.51	B
Dibromochloromethane	ug/kg	0.84	U	0.82	UJ	0.85	U	0.83	UJ	0.84	U	0.86	U
Dibromomethane	ug/kg	0.95	U	0.93	UJ	0.96	U	0.94	UJ	0.95	U	0.97	U
Methyl bromide	ug/kg	2.90	U	2.90	UJ	3	U	2.90	UJ	2.90	U	3	U
Methyl chloride	ug/kg	2.60	U	2.60	UJ	2.70	U	2.60	UJ	2.60	U	2.70	U
Methylene chloride	ug/kg	3.10	B	0.97	B	4.20	B	3.70	B	2	B	9.40	B
Tetrachloroethylene	ug/kg	0.84	U	0.82	UJ	0.85	U	0.83	UJ	0.84	U	0.86	U
Trichloroethylene	ug/kg	0.84	U	0.82	UJ	0.85	U	0.83	UJ	0.84	U	0.86	U
Vinyl chloride	ug/kg	2.70	U	2.70	UJ	2.80	U	2.70	UJ	2.70	U	2.80	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-RT9-SB7-SS01-02		PC-RT9-SB8-SS01-02		PC-RT9-SB9-SS01-02		PC-RT9-SB10-SS01-02		PC-RT9-SB11-SS01-02		PC-RT9-SB12-SS01-02	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U
1,2-Dimethylbenzene	ug/kg	1.30	U	1.20	U	1.30	U	1.30	U	1.30	U	1.30	U
1,3-Dichlorobenzene	ug/kg	1.90	U	0.07	B	0.61	B	1.90	U	0.41	B	1.90	U
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.30	U	3.40	U	3.30	U	3.40	U	3.40	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.10	B	1.90	U	1.90	U	0.10		2.60	
Benzene	ug/kg	1.50	U	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	0.17	B	1.90	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	12	U	11	U	12	U	11	U	0.56	J	12	U
Styrene	ug/kg	1.60	U	1.50	U	1.60	U	1.60	U	1.60	U	1.60	U
Toluene	ug/kg	5.60	U	0.47	B	0.52	B	5.50	U	0.20	B	5.70	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
1,2-Dichlorobenzene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
1,3-Dichlorobenzene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
1,4-Dichlorobenzene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2,4,5-Trichlorophenol	ug/kg	840	U	820	U	850	U	830	U	840	U	860	U
2,4,6-Trichlorophenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2,4-Dichlorophenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2,4-Dimethylphenol	ug/kg	350	U	340	U	350	U	340	UJ	350	U	350	U
2,4-Dinitrophenol	ug/kg	840	U	820	U	850	U	830	UJ	840	UJ	860	U
2,4-Dinitrotoluene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2,6-Dinitrotoluene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2-Chloronaphthalene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2-Chlorophenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2-Methyl-4,6-Dinitrophenol	ug/kg	840	U	820	U	850	U	830	U	840	U	860	U
2-Methylnaphthalene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2-Methylphenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
2-Nitroaniline	ug/kg	840	UJ	820	UJ	850	UJ	830	U	840	U	860	U
2-Nitrophenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
3,3'-Dichlorobenzidine	ug/kg	350	U	340	U	350	U	340	U	350	U	350	UJ
3-Nitroaniline	ug/kg	840	U	820	U	850	U	830	U	840	U	860	U
4-Bromophenyl phenyl ether	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-RT9-SB7-SS01-02		PC-RT9-SB8-SS01-02		PC-RT9-SB9-SS01-02		PC-RT9-SB10-SS01-02		PC-RT9-SB11-SS01-02		PC-RT9-SB12-SS01-02	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
4-Chloroaniline	ug/kg	350	U	340	U	350	U	340	UJ	350	UJ	350	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
4-Methylphenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
4-Nitroaniline	ug/kg	840	U	820	U	850	U	830	U	840	U	860	U
4-Nitrophenol	ug/kg	840	UJ	820	UJ	850	UJ	830	UJ	840	UJ	860	UJ
Acenaphthene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Acenaphthylene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Anthracene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Benzo(a)anthracene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Benzo(a)pyrene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Benzo(b)fluoranthene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Benzo(ghi)perylene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Benzo(k)fluoranthene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Butyl benzyl phthalate	ug/kg	350	UJ	340	UJ	350	UJ	340	UJ	350	UJ	350	UJ
Carbazole	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Chrysene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Di-n-butyl phthalate	ug/kg	150	BJ	210	BJ	230	B	340	U	72	B	86	B
Di-n-octyl phthalate	ug/kg	350	UJ	340	UJ	350	UJ	340	UJ	350	UJ	350	U
Dibenzo(a,h)anthracene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Dibenzofuran	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Diethyl phthalate	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Dimethyl phthalate	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Fluoranthene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Fluorene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Hexachlorobenzene	ug/kg	350	U	340	U	350	U	340	U	350	UJ	350	U
Hexachlorobutadiene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Hexachlorocyclopentadiene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Hexachloroethane	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Indeno(1,2,3-c,d)pyrene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Isophorone	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
N-Nitrosodi-N-Propylamine	ug/kg	350	UJ	340	UJ	350	UJ	340	UJ	350	U	350	U
N-Nitrosodiphenylamine	ug/kg	350	U	340	U	350	U	340	UJ	350	UJ	350	U
Naphthalene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Nitrobenzene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Pentachlorophenol	ug/kg	840	U	820	U	850	U	830	U	840	U	860	U

Appendix L - Surface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB12	
SAMPLE ID:		PC-RT9-SB7-SS01-02		PC-RT9-SB8-SS01-02		PC-RT9-SB9-SS01-02		PC-RT9-SB10-SS01-02		PC-RT9-SB11-SS01-02		PC-RT9-SB12-SS01-02	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Phenol	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
Pyrene	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
bis(2-Chloroethoxy)methane	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
bis(2-Chloroethyl) ether	ug/kg	350	U	340	U	350	U	340	U	350	U	350	U
bis(2-Ethylhexyl)phthalate	ug/kg	350	UJ	340	UJ	350	UJ	340	UJ	150	J	52	J
METALS													
Aluminum	mg/kg	4220	J	1600	J	2350	J	2710	J	2640	J	-	
Antimony	mg/kg	6	U	5.90	U	6	U	5.90	U	6	U	6.10	UL
Arsenic	mg/kg	0.65	BQ	0.71	BQ	1.10		0.65	BQ	0.52	BQ	0.75	B
Barium	mg/kg	13	BQ	5.60	BQ	10.20	BQ	7.90	BQ	7.60	BQ	-	
Beryllium	mg/kg	0.21	U	0.21	U	0.21	U	0.21	U	0.21	U	0.26	B
Cadmium	mg/kg	0.52	U	0.52	U	0.53	U	0.52	U	0.59		0.54	U
Calcium	mg/kg	495	BQ	358	BQ	2570		230	QJ	283	QJ	-	
Chromium	mg/kg	5.30		3.60		3.30		3.70		4.10		5.40	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	1.30	BQ	1.20	BQ	1.20	U	1.20	BQ	1.20	BQ	-	
Copper	mg/kg	2.60	U	2.60	U	2.70	U	2.60	U	2.60	U	7.80	
Iron	mg/kg	3390		2290		2300		2380		2320		-	
Lead	mg/kg	1.70		1.40		1.70		1.20	A	1.20		2.60	
Magnesium	mg/kg	515	BQ	533		813		490	BQ	504	BQ	-	
Manganese	mg/kg	30.20		51.60		47.50		21.10		23.70		-	
Mercury	mg/kg	0.10	U	0.10	UN	0.11	UN	0.10	UN	0.10	UN	0.10	UN
Nickel	mg/kg	4.20	U	4.10	U	4.20	U	4.20	U	4.20	U	4.30	U
Potassium	mg/kg	509	U	502	U	515	U	507	U	510	U	-	
Selenium	mg/kg	0.42	U	0.41	U	0.42	UW	0.42	U	0.42	U	0.43	UL
Silver	mg/kg	1	U	1	U	1.10	U	1	U	1	U	1.10	U
Sodium	mg/kg	84.10	BQ	89.30	BQ	97.30	BQ	81.40	BQ	87.30	BQ	-	
Thallium	mg/kg	0.21	UL	0.21	UL	0.21	UL	0.21	UL	0.21	UL	0.22	U
Vanadium	mg/kg	8.50		5.40		5.50		5.10	BQ	5.50		-	
Zinc	mg/kg	6.80	B	4.50	B	5.60	B	4.90	B	4.30	B	6	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	20		19.60		20.50		21.50		14.10		14.50	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB1		SB2		SB4		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS02-03		PC-BG1-SB1-SS09-10		PC-BG1-SB2-SS02-03		PC-P1-SB4-SS02-03		PC-P1-SB5-SS03-04		PC-P1-SB6-SS03-04	
COLLECTION DATE:		08/09/93		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	UJ	1	UJ
1,1,1-Trichloroethane	ug/kg	0.27	B	0.10	B	0.48	U	0.30	B	0.26	B	0.22	B
1,1,2,2-Tetrachloroethane	ug/kg	0.63	U	0.63	U	0.70	U	0.71	U	0.66	UJ	0.70	UJ
1,1,2-Trichloroethane	ug/kg	0.89	U	0.89	U	0.99	U	1	U	0.93	UJ	0.99	UJ
1,1-Dichloroethane	ug/kg	0.79	U	0.79	U	0.87	U	0.89	U	0.82	UJ	0.87	UJ
1,1-Dichloroethylene	ug/kg	0.89	U	0.89	U	0.99	U	1	U	0.93	UJ	0.99	UJ
1,2,3-Trichloropropane	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	UJ	1	UJ
1,2-Dibromoethane	ug/kg	1.40	U	1.40	U	1.50	U	1.50	U	1.40	UJ	1.50	UJ
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	U	1.60	U	1.70	U	1.50	U	1.60	UJ
1,2-Dichloroethane	ug/kg	0.68	U	0.68	U	0.76	U	0.77	U	0.71	UJ	0.76	UJ
1,2-Dichloropropane	ug/kg	0.68	U	0.68	U	0.76	U	0.77	U	0.71	UJ	0.76	UJ
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.20	U	1.30	U	1.30	U	1.20	UJ	1.30	UJ
1,3-Dichlorobenzene	ug/kg	1.20	U	1.20	U	1.30	U	1.30	U	1.20	U	1.30	UJ
1,3-cis-Dichloropropylene	ug/kg	1	U	1	U	1.10	U	1.10	U	1	UJ	1.10	UJ
1,3-trans-Dichloropropylene	ug/kg	0.89	U	0.89	U	0.99	U	1	U	0.93	UJ	0.99	UJ
1,4-Dichlorobenzene	ug/kg	1.50	U	1.50	U	1.60	U	1.70	U	1.50	U	1.60	UJ
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.20	U	1.30	U	1.30	U	1.20	UJ	1.30	UJ
2-Chlorotoluene	ug/kg	1.10	U	1.10	U	1.20	U	1.20	U	1.10	U	1.20	UJ
4-Chlorotoluene	ug/kg	1.20	U	1.20	U	1.30	U	1.30	U	1.20	U	1.30	UJ
Bromobenzene	ug/kg	0.79	U	0.79	U	0.87	U	0.89	U	0.82	U	0.87	UJ
Bromochloromethane	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	UJ	1	UJ
Bromodichloromethane	ug/kg	1.10	U	1.10	U	1.20	U	1.20	U	1.10	UJ	1.20	UJ
Bromoform	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	UJ	1	UJ
Carbon Tetrachloride	ug/kg	0.68	U	0.68	U	0.76	U	0.77	U	0.71	UJ	0.76	UJ
Chlorobenzene	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	U	1	UJ
Chloroethane	ug/kg	2.70	U	2.70	U	3	U	3.10	U	2.90	UJ	3	UJ
Chloroform	ug/kg	0.91	B	0.83	B	0.92	B	0.79	B	0.69	B	0.74	B
Dibromochloromethane	ug/kg	0.84	U	0.84	U	0.93	U	0.95	U	0.88	UJ	0.93	UJ
Dibromomethane	ug/kg	0.95	U	0.95	U	1	U	1.10	U	0.99	UJ	1	UJ
Methyl bromide	ug/kg	2.90	U	2.90	U	3.30	U	3.30	U	3.10	UJ	3.30	UJ
Methyl chloride	ug/kg	2.60	U	2.60	U	2.90	U	3	U	2.70	UJ	2.90	UJ
Methylene chloride	ug/kg	2.50	B	1.80	B	9.10	J	5.40	B	2.50	B	5.10	J
Tetrachloroethylene	ug/kg	0.84	U	0.84	U	0.93	U	0.95	U	0.88	UJ	0.93	UJ
Trichloroethylene	ug/kg	0.84	U	0.84	U	0.93	U	0.95	U	0.88	UJ	0.93	UJ
Vinyl chloride	ug/kg	2.70	U	2.70	U	3	U	3.10	U	2.90	UJ	3	UJ

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB1		SB2		SB4		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS02-03		PC-BG1-SB1-SS09-10		PC-BG1-SB2-SS02-03		PC-P1-SB4-SS02-03		PC-P1-SB5-SS03-04		PC-P1-SB6-SS03-04	
COLLECTION DATE:		08/09/93		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	U	0.79		1.70	U	1.50	U	3.80	J
1,2-Dimethylbenzene	ug/kg	1.30	U	1.30	U	0.14		1.40	U	1.30	U	1.40	U
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	U	2.10	U	0.45	B	0.29	B	2.10	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.40	U	3.70	U	3.80	U	3.50	U	3.70	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.90	U	0.11	B	2.10	U	0.65	B	2.10	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.50	U	0.04		1.70	U	1.50	U	1.60	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	2.10	U	2.10	U	2	U	2.10	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	2.10	U	2.10	U	2	U	2.10	U
Methyl-t-Butyl Ether	ug/kg	12	U	12	U	13	U	13	U	12	U	13	U
Styrene	ug/kg	1.60	U	1.60	U	1.70	U	1.80	U	1.60	U	1.70	U
Toluene	ug/kg	5.60	U	5.60	U	5.60		0.22	B	5.80	U	6.20	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,4,5-Trichlorophenol	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,4-Dichlorophenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,4-Dimethylphenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,4-Dinitrophenol	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
2,4-Dinitrotoluene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2-Chloronaphthalene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2-Chlorophenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2-Methyl-4,6-Dinitrophenol	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
2-Methylnaphthalene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2-Methylphenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
2-Nitroaniline	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
2-Nitrophenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB1		SB2		SB4		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS02-03		PC-BG1-SB1-SS09-10		PC-BG1-SB2-SS02-03		PC-P1-SB4-SS02-03		PC-P1-SB5-SS03-04		PC-P1-SB6-SS03-04	
COLLECTION DATE:		08/09/93		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
4-Chloroaniline	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
4-Methylphenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
4-Nitroaniline	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
4-Nitrophenol	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
Acenaphthene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Acenaphthylene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Anthracene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Benzo(a)anthracene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Benzo(a)pyrene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Benzo(ghi)perylene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Benzo(k)fluoranthene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Butyl benzyl phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Carbazole	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Chrysene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Di-n-butyl phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Di-n-octyl phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Dibenzofuran	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Diethyl phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Dimethyl phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Fluoranthene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Fluorene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Hexachlorobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Hexachlorobutadiene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Hexachloroethane	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Isophorone	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
N-Nitrosodi-N-Propylamine	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
N-Nitrosodiphenylamine	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Naphthalene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB1		SB2		SB4		SB5		SB6	
SAMPLE ID:		PC-BG1-SB1-SS02-03		PC-BG1-SB1-SS09-10		PC-BG1-SB2-SS02-03		PC-P1-SB4-SS02-03		PC-P1-SB5-SS03-04		PC-P1-SB6-SS03-04	
COLLECTION DATE:		08/09/93		08/09/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Pentachlorophenol	ug/kg	830	U	830	U	930	U	950	U	880	U	930	U
Phenanthrene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Phenol	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
Pyrene	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
bis(2-Ethylhexyl)phthalate	ug/kg	340	U	340	U	380	U	390	U	360	U	380	U
METALS													
Aluminum	mg/kg	1480		805		-		-		-		-	
Antimony	mg/kg	4.70	UL	4.70	UL	5.30	UL	5.30	UL	4.90	UL	5.20	UL
Arsenic	mg/kg	0.48	0	0.57	0	1.70	B	0.47	U	0.44	U	0.47	U
Barium	mg/kg	4.20	0	2.30	0	-		-		-		-	
Beryllium	mg/kg	0.42	U	0.42	U	0.47	U	0.47	U	0.44	U	0.47	U
Cadmium	mg/kg	0.53	U	0.53	U	0.58	UL	0.59	UL	0.55	UL	0.58	UL
Calcium	mg/kg	160	0	30800		-		-		-		-	
Chromium	mg/kg	2.80		2.10		4.50		2.90		2.70		1.40	
Chromium, Hexavalent	mg/l	-		-		0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	0.95	U	0.95	U	-		-		-		-	
Copper	mg/kg	1.60	U	1.60	U	2.60		1.80	U	1.60	U	1.70	U
Iron	mg/kg	1870		1620		-		-		-		-	
Lead	mg/kg	1.10		0.88		1.40	B	1.60		1.30		0.94	
Magnesium	mg/kg	433	0	4470		-		-		-		-	
Manganese	mg/kg	21.90		39		-		-		-		-	
Mercury	mg/kg	0.11	U	0.11	U	0.12	U	0.12	U	0.11	U	0.11	U
Nickel	mg/kg	3.70	U	3.70	U	4.10	U	4.10	U	3.80	U	4.10	U
Potassium	mg/kg	240	U	241	U	-		-		-		-	
Selenium	mg/kg	0.32	U	0.32	U	0.63	L	0.36	U	0.33	U	0.35	U
Silver	mg/kg	0.42	U	0.42	U	0.47	UL	0.47	U	0.44	U	0.47	U
Sodium	mg/kg	30.20	0	48.80	0	-		-		-		-	
Thallium	mg/kg	0.32	U	0.32	U	0.35	UL	0.36	U	0.33	U	0.35	U
Vanadium	mg/kg	3.60	0	3.30	0	-		-		-		-	
Zinc	mg/kg	3.80	B	3.80	B	9.60	B	4.20	B	3.80	B	6.10	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	11.30		10		14.10		12.40		29.70		6.30	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB13	
SAMPLE ID:		PC-P1-SB7-SS03-04		PC-P1-SB8-SS03-04		PC-P1-SB9-SS03-04		PC-P1-SB10-SS03-04		PC-P1-SB11-SS03-04		PC-P1-SB13-SS03-04	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.10	U	1.10	U	1	U	1	U	1	U	1.10	U
1,1,1-Trichloroethane	ug/kg	0.11	B	0.33	B	0.09	B	2.20		1.40		0.29	B
1,1,2,2-Tetrachloroethane	ug/kg	0.73	U	0.71	U	0.69	U	0.69	U	0.70	U	0.75	U
1,1,2-Trichloroethane	ug/kg	1	U	1	U	0.98	U	0.98	U	0.99	U	1.10	U
1,1-Dichloroethane	ug/kg	0.91	U	0.89	U	0.86	U	0.86	U	0.87	U	0.94	U
1,1-Dichloroethylene	ug/kg	1	U	1	U	0.98	U	0.98	U	0.99	U	1.10	U
1,2,3-Trichloropropane	ug/kg	1.10	U	1.10	U	1	U	1	U	1	U	1.10	U
1,2-Dibromoethane	ug/kg	1.60	U	1.50	U	1.50	U	1.50	U	1.50	U	1.60	U
1,2-Dichlorobenzene	ug/kg	1.70	U	1.70	U	1.60	U	1.60	UJ	1.60	U	1.80	U
1,2-Dichloroethane	ug/kg	0.79	U	0.77	U	0.75	U	0.75	U	0.76	U	0.81	U
1,2-Dichloropropane	ug/kg	0.79	U	0.77	U	0.75	U	0.75	U	0.76	U	0.81	U
1,2-trans-Dichloroethylene	ug/kg	1.30	U	1.30	U	1.30	U	1.30	U	1.30	U	1.40	U
1,3-Dichlorobenzene	ug/kg	1.30	U	1.30	U	1.30	U	1.30	UJ	1.30	U	1.40	U
1,3-cis-Dichloropropylene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.20	U
1,3-trans-Dichloropropylene	ug/kg	1	U	1	U	0.98	U	0.98	U	0.99	U	1.10	U
1,4-Dichlorobenzene	ug/kg	1.70	U	1.70	U	1.60	U	1.60	UJ	1.60	U	1.80	U
2-Chloroethylvinyl ether	ug/kg	1.30	U	1.30	U	1.30	U	1.30	U	1.30	U	1.40	U
2-Chlorotoluene	ug/kg	1.20	U	1.20	U	1.10	U	1.10	UJ	1.20	U	1.20	U
4-Chlorotoluene	ug/kg	1.30	U	1.30	U	1.30	U	1.30	UJ	1.30	U	1.40	U
Bromobenzene	ug/kg	0.91	U	0.89	U	0.86	U	0.86	UJ	0.87	U	0.94	U
Bromochloromethane	ug/kg	1.10	U	1.10	U	1	U	1	U	1	U	1.10	U
Bromodichloromethane	ug/kg	1.20	U	1.20	U	1.10	U	1.10	U	1.20	U	1.20	U
Bromoform	ug/kg	1.10	U	1.10	U	1	U	1	U	1	U	1.10	U
Carbon Tetrachloride	ug/kg	0.79	U	0.77	U	0.75	U	0.75	U	0.76	U	0.81	U
Chlorobenzene	ug/kg	1.10	U	1.10	U	1	U	1	UJ	1	U	1.10	U
Chloroethane	ug/kg	3.20	U	3.10	U	3	U	3	U	3	U	3.20	U
Chloroform	ug/kg	0.88	B	0.89	B	1.40	B	0.81	B	0.65	B	0.54	B
Dibromochloromethane	ug/kg	0.98	U	0.95	U	0.92	U	0.92	U	0.93	U	1	U
Dibromomethane	ug/kg	1.10	U	1.10	U	1	U	1	U	1	U	1.10	U
Methyl bromide	ug/kg	3.40	U	3.30	U	3.20	U	3.20	U	3.30	U	3.50	U
Methyl chloride	ug/kg	3	U	3	U	2.90	U	2.90	U	2.90	U	3.10	U
Methylene chloride	ug/kg	5.80	B	7.70	U	3.90	B	10		8.70		4.70	J
Tetrachloroethylene	ug/kg	0.98	U	0.95	U	0.92	U	0.92	U	0.93	U	1	U
Trichloroethylene	ug/kg	0.98	U	0.95	U	0.92	U	0.92	U	0.93	U	1	U
Vinyl chloride	ug/kg	3.20	U	3.10	U	3	U	3	U	3	U	3.20	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB13	
SAMPLE ID:		PC-P1-SB7-SS03-04		PC-P1-SB8-SS03-04		PC-P1-SB9-SS03-04		PC-P1-SB10-SS03-04		PC-P1-SB11-SS03-04		PC-P1-SB13-SS03-04	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.70	U	1.70	U	0.08		1.60	U	1.60	U	1.80	U
1,2-Dimethylbenzene	ug/kg	0.09	B	1.40	U	0.16	B	1.40	U	1.40	U	1.50	U
1,3-Dichlorobenzene	ug/kg	2.20	U	0.39	B	2.10	U	2.10	U	2.10	U	2.20	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.90	U	3.80	U	3.70	U	3.70	U	3.70	U	4	U
1,4-Dichlorobenzene	ug/kg	0.06		2.10	U	0.47	U	2.10	U	2.10	U	2.20	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.70	U	1.70	U	1.60	U	1.60	U	1.60	U	1.80	U
Chlorobenzene	ug/kg	2.20	U	2.10	U	2.10	U	2.10	U	2.10	U	2.20	U
Ethylbenzene	ug/kg	2.20	U	2.10	U	2.10	U	2.10	U	2.10	U	2.20	U
Methyl-t-Butyl Ether	ug/kg	13	U	13	U	13	U	13	U	13	U	14	U
Styrene	ug/kg	0.02		1.80	U	1.70	U	1.70	U	1.70	U	1.90	U
Toluene	ug/kg	0.26	B	0.28	B	0.46	B	6.10	U	6.20	U	6.60	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
1,2-Dichlorobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
1,3-Dichlorobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
1,4-Dichlorobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,4,5-Trichlorophenol	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
2,4,6-Trichlorophenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,4-Dichlorophenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,4-Dimethylphenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,4-Dinitrophenol	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
2,4-Dinitrotoluene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2,6-Dinitrotoluene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2-Chloronaphthalene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2-Chlorophenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2-Methyl-4,6-Dinitrophenol	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
2-Methylnaphthalene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2-Methylphenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
2-Nitroaniline	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
2-Nitrophenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
3,3'-Dichlorobenzidine	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB13	
SAMPLE ID:		PC-P1-SB7-SS03-04		PC-P1-SB8-SS03-04		PC-P1-SB9-SS03-04		PC-P1-SB10-SS03-04		PC-P1-SB11-SS03-04		PC-P1-SB13-SS03-04	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
4-Bromophenyl phenyl ether	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
4-Chloro-3-methyl phenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
4-Chloroaniline	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
4-Chlorophenyl phenyl ether	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
4-Methylphenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
4-Nitroaniline	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
4-Nitrophenol	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
Acenaphthene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Acenaphthylene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Anthracene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Benzo(a)anthracene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Benzo(a)pyrene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Benzo(b)fluoranthene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Benzo(ghi)perylene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Benzo(k)fluoranthene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Butyl benzyl phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Carbazole	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Chrysene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Di-n-butyl phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Di-n-octyl phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Dibenzo(a,h)anthracene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Dibenzofuran	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Diethyl phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Dimethyl phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Fluoranthene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Fluorene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Hexachlorobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Hexachlorobutadiene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Hexachlorocyclopentadiene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Hexachloroethane	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Indeno(1,2,3-c,d)pyrene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Isophorone	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
N-Nitrosodi-N-Propylamine	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
N-Nitrosodiphenylamine	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Naphthalene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB2		SB2		SB3		SB3		SB3		SB4	
SAMPLE ID:		PC-MP2-SB2-SS00-02		PC-MP2-SB2-SS04-05		PC-MP2-SB3-SS00-02		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07		PC-MP2-SB4-SS00-02	
COLLECTION DATE:		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.40	U	1.40	U	1.40	U	1.40	U	1.50	U
1,2-Dimethylbenzene	ug/kg	1.30	U	1.20	U	1.20	U	1.20	U	1.20	U	1.30	U
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	U	1.80	U	1.90	U	1.90	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.30	U	3.20	U	3.30	U	3.30	U	3.30	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.90	U	1.80	U	1.90	U	1.90	U	1.90	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.40	U	1.40	U	1.40	U	1.40	U	1.50	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	1.80	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	1.80	U	1.90	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	12	U	11	U	11	U	11	U	11	U	11	U
Styrene	ug/kg	1.60	U	1.50	U	1.50	U	1.50	U	1.50	U	1.60	U
Toluene	ug/kg	5.60	U	5.50	U	5.30	U	5.50	U	0.17		5.50	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
2,4,6-Trichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
2,4-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
2-Methylnaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
2-Nitrophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB8		SB9		SB10		SB11		SB13	
SAMPLE ID:		PC-P1-SB7-SS03-04		PC-P1-SB8-SS03-04		PC-P1-SB9-SS03-04		PC-P1-SB10-SS03-04		PC-P1-SB11-SS03-04		PC-P1-SB13-SS03-04	
COLLECTION DATE:		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Pentachlorophenol	ug/kg	980	U	950	U	920	U	920	U	920	U	990	U
Phenanthrene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Phenol	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
Pyrene	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
bis(2-Chloroethoxy)methane	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
bis(2-Chloroethyl) ether	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
bis(2-Ethylhexyl)phthalate	ug/kg	400	U	390	U	380	U	380	U	380	U	410	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	5.50	UL	5.40	UL	5.20	UL	5.20	UL	5.30	UL	5.60	U
Arsenic	mg/kg	0.51	0	0.48	U	0.71	0	0.46	UL	0.87	0B	0.50	UL
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.49	U	0.48	U	0.46	U	0.46	U	0.47	U	0.50	U
Cadmium	mg/kg	0.61	UL	0.60	UL	0.57	UL	0.58	U	0.58	U	0.62	U
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	3.50		1.30		4.70		2.10	L	3.70	L	3.70	L
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.80	U	1.80	U	1.70	U	1.70	U	1.80	U	1.90	U
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	1.90		1		3		0.98	K	2.30	J	1.90	K
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.12	U	0.12	U	0.11	U	0.12	U	0.12	U	0.12	U
Nickel	mg/kg	4.20	U	4.20	U	4	U	4	UL	4.10	(L)	4.70	(L)
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.36	U	0.36	U	0.34	U	0.35	U	0.35	UL	0.37	UL
Silver	mg/kg	0.49	U	0.48	U	0.46	U	0.46	U	0.47	U	0.50	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.36	U	0.36	U	0.34	U	0.35	UL	0.35	UL	0.37	UL
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	4.70	B	2.50	B	5.70	B	3	B	4.50	B	3.50	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	9.70		14.30		32.50		9.50		6.30	U	47.40	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB2		SB2		SB3		SB3		SB3		SB4	
SAMPLE ID:		PC-MP2-SB2-SS00-02		PC-MP2-SB2-SS04-05		PC-MP2-SB3-SS00-02		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07		PC-MP2-SB4-SS00-02	
COLLECTION DATE:		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
1,1,1-Trichloroethane	ug/kg	0.36	B	0.38	B	2.80	U	0.50	B	0.38	B	0.41	B
1,1,2,2-Tetrachloroethane	ug/kg	0.63	U	0.62	U	0.61	U	0.62	U	0.62	U	0.63	U
1,1,2-Trichloroethane	ug/kg	0.89	U	0.88	U	0.87	U	0.88	U	0.88	U	0.89	U
1,1-Dichloroethane	ug/kg	0.79	U	0.77	U	0.76	U	0.77	U	0.77	U	0.78	U
1,1-Dichloroethylene	ug/kg	0.89	U	0.88	U	0.86	U	0.88	U	0.88	U	0.89	U
1,2,3-Trichloropropane	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
1,2-Dibromoethane	ug/kg	1.40	U	1.30	U	1.30	U	1.30	U	1.30	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.50	U	1.40	U	1.40	U	1.40	U	1.40	U	1.50	U
1,2-Dichloroethane	ug/kg	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U	0.68	U
1,2-Dichloropropane	ug/kg	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U	0.68	U
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
1,3-Dichlorobenzene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
1,3-cis-Dichloropropylene	ug/kg	1	U	0.98	U	0.97	U	0.98	U	0.98	U	0.99	U
1,3-trans-Dichloropropylene	ug/kg	0.89	U	0.88	U	0.87	U	0.88	U	0.88	U	0.89	U
1,4-Dichlorobenzene	ug/kg	1.50	U	1.40	U	1.40	U	1.40	U	1.40	U	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
2-Chlorotoluene	ug/kg	1.10	U	1	U	1	U	1	U	1	U	1	U
4-Chlorotoluene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
Bromobenzene	ug/kg	0.79	U	0.77	U	0.77	U	0.77	U	0.77	U	0.78	U
Bromochloromethane	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
Bromodichloromethane	ug/kg	1.10	U	1	U	1	U	1	U	1	U	1	U
Bromoform	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
Carbon Tetrachloride	ug/kg	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U	0.68	U
Chlorobenzene	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
Chloroethane	ug/kg	2.70	U	2.70	U	2.60	U	2.70	U	2.70	U	2.70	U
Chloroform	ug/kg	0.56	B	0.31	B	0.30	B	0.31	B	0.47	B	0.32	B
Dibromochloromethane	ug/kg	0.84	U	0.82	U	0.82	U	0.82	U	0.82	U	0.83	U
Dibromomethane	ug/kg	0.95	U	0.93	U	0.92	U	0.93	U	0.93	U	0.94	U
Methyl bromide	ug/kg	2.90	U	2.90	U	2.80	U	2.90	U	2.90	U	2.90	U
Methyl chloride	ug/kg	2.60	U	2.60	U	2.50	U	2.60	U	2.60	U	2.60	U
Methylene chloride	ug/kg	7.20	B	3.20	B	3.80	B	1.40	B	1.40	B	2.40	B
Tetrachloroethylene	ug/kg	0.84	U	0.82	U	0.82	U	0.82	U	0.82	U	0.83	U
Trichloroethylene	ug/kg	0.84	U	0.82	U	0.82	U	0.82	U	0.82	U	0.83	U
Vinyl chloride	ug/kg	2.70	U	2.70	U	2.60	U	2.70	U	2.70	U	2.70	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB2		SB2		SB3		SB3		SB3		SB4	
SAMPLE ID:		PC-MP2-SB2-SS00-02		PC-MP2-SB2-SS04-05		PC-MP2-SB3-SS00-02		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07		PC-MP2-SB4-SS00-02	
COLLECTION DATE:		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
4-Bromophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
4-Nitrophenol	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
Acenaphthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Acenaphthylene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Butyl benzyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Chrysene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Di-n-butyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Di-n-octyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dibenzofuran	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Diethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluorene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Isophorone	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Naphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB2		SB2		SB3		SB3		SB3		SB4	
SAMPLE ID:		PC-MP2-SB2-SS00-02		PC-MP2-SB2-SS04-05		PC-MP2-SB3-SS00-02		PC-MP2-SB3-SS04-05		PC-MP2-SB3-SS05-07		PC-MP2-SB4-SS00-02	
COLLECTION DATE:		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	840	U	820	U	820	U	820	U	820	U	830	U
Phenanthrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	4.70	UL	4.60	UL	4.60	UL	4.60	UL	4.60	UL	4.70	UL
Arsenic	mg/kg	0.58	0B	0.48	0B	0.49	0B	0.60	0B	0.49	0B	0.89	0B
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.42	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U
Cadmium	mg/kg	0.53	U	0.51	U	0.51	U	0.52	U	0.51	U	0.52	U
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	1.30	L	3.80	L	1.70	L	3.30	L	2.70	L	3.40	L
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	2.10	0	1.80	0	1.50	U	1.80	0	1.50	U	1.60	U
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	6	K	1	K	1.30	J	1.40	J	0.82	K	1.90	K
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.11	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	mg/kg	3.90	(L)	3.60	UL	4.30	L	5.30	L	3.60	UL	4.90	L
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.32	UL	0.31	UL	0.31	U	0.31	U	0.31	U	0.31	UL
Silver	mg/kg	0.42	U	0.41	U	0.41	U	0.41	U	0.41	U	0.41	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.32	UL	0.31	UL	0.31	UL	0.31	UL	0.31	UL	0.31	UL
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	13	B	4.50	B	5.50	B	5.50	B	2.90	B	6.90	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	11.10		53.10		15.40		42.60		12		26.80	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB4		SB5		SB5		SB6		SB7	
SAMPLE ID:		PC-MP2-SB4-SS03-04		PC-MP2-SB4-SS04-05		PC-MP2-SB5-SS00-02		PC-MP2-SB5-SS04-05		PC-MP2-SB6-SS05-06		PC-MP2-SB7-SS05-06	
COLLECTION DATE:		08/14/93		08/17/93		08/17/93		08/17/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.91	U	0.94	U	0.96	U
1,1,1-Trichloroethane	ug/kg	2.80	UJ	2.80	U	0.34	B	0.40	B	2.80	UJ	0.09	
1,1,2,2-Tetrachloroethane	ug/kg	0.63	UJ	0.62	U	0.63	U	0.61	U	0.63	U	0.64	U
1,1,2-Trichloroethane	ug/kg	0.89	UJ	0.88	U	0.89	U	0.86	U	0.89	U	0.90	U
1,1-Dichloroethane	ug/kg	0.78	UJ	0.77	U	0.79	U	0.76	U	0.78	U	0.80	U
1,1-Dichloroethylene	ug/kg	0.89	UJ	0.88	U	0.89	U	0.86	U	0.89	U	0.90	U
1,2,3-Trichloropropane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.91	U	0.94	U	0.96	U
1,2-Dibromoethane	ug/kg	1.40	UJ	1.30	U	1.40	U	1.30	U	1.40	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.40	U	1.50	U	1.50	U
1,2-Dichloroethane	ug/kg	0.68	UJ	0.67	U	0.68	U	0.66	U	0.68	U	0.69	U
1,2-Dichloropropane	ug/kg	0.68	UJ	0.67	U	0.68	U	0.66	U	0.68	U	0.69	U
1,2-trans-Dichloroethylene	ug/kg	1.10	UJ	1.10	U	1.20	U	1.10	U	1.10	U	1.20	U
1,3-Dichlorobenzene	ug/kg	1.10	UJ	1.10	U	1.20	UJ	1.10	U	1.10	U	1.20	U
1,3-cis-Dichloropropylene	ug/kg	0.99	UJ	0.98	U	1	U	0.96	U	0.99	U	1	U
1,3-trans-Dichloropropylene	ug/kg	0.89	UJ	0.88	U	0.89	U	0.86	U	0.89	U	0.90	U
1,4-Dichlorobenzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.40	U	1.50	U	1.50	U
2-Chloroethylvinyl ether	ug/kg	1.10	UJ	1.10	U	1.20	U	1.10	U	1.10	U	1.20	U
2-Chlorotoluene	ug/kg	1	UJ	1	U	1.10	UJ	1	U	1	U	1.10	U
4-Chlorotoluene	ug/kg	1.10	UJ	1.10	U	1.20	UJ	1.10	U	1.10	U	1.20	U
Bromobenzene	ug/kg	0.78	UJ	0.77	U	0.79	UJ	0.76	U	0.78	U	0.80	U
Bromochloromethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.91	U	0.94	U	0.96	U
Bromodichloromethane	ug/kg	1	UJ	1	U	1.10	U	1	U	1	U	1.10	U
Bromoform	ug/kg	0.94	UJ	0.93	U	0.95	U	0.91	U	0.94	U	0.96	U
Carbon Tetrachloride	ug/kg	0.68	UJ	0.67	U	0.68	U	0.66	U	0.68	U	0.69	U
Chlorobenzene	ug/kg	0.94	UJ	0.93	U	0.95	UJ	0.91	U	0.94	U	0.96	U
Chloroethane	ug/kg	2.70	UJ	2.70	U	2.70	U	2.60	U	2.70	U	2.80	U
Chloroform	ug/kg	0.90	B	0.32	B	0.41	B	0.32	B	0.37	B	0.54	B
Dibromochloromethane	ug/kg	0.83	UJ	0.82	U	0.84	U	0.81	U	0.83	U	0.85	U
Dibromomethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.91	U	0.94	U	0.96	U
Methyl bromide	ug/kg	2.90	UJ	2.90	U	2.90	U	2.80	U	2.90	U	3	U
Methyl chloride	ug/kg	2.60	UJ	2.60	U	2.60	U	2.50	U	2.60	U	2.70	U
Methylene chloride	ug/kg	3	B	4.70	B	2.70	B	1.70	B	7.60	B	5.60	B
Tetrachloroethylene	ug/kg	0.83	UJ	0.82	U	0.84	U	0.81	U	0.83	U	0.85	U
Trichloroethylene	ug/kg	0.83	UJ	0.82	U	0.84	U	0.81	U	0.83	U	0.85	U
Vinyl chloride	ug/kg	2.70	UJ	2.70	U	2.70	U	2.60	U	2.70	U	2.80	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB4		SB5		SB5		SB6		SB7	
SAMPLE ID:		PC-MP2-SB4-SS03-04		PC-MP2-SB4-SS04-05		PC-MP2-SB5-SS00-02		PC-MP2-SB5-SS04-05		PC-MP2-SB6-SS05-06		PC-MP2-SB7-SS05-06	
COLLECTION DATE:		08/14/93		08/17/93		08/17/93		08/17/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.40	U	1.50	U	1.50	U
1,2-Dimethylbenzene	ug/kg	1.30	UJ	1.20	U	1.30	UJ	1.20	U	0.11		1.30	U
1,3-Dichlorobenzene	ug/kg	1.90	UJ	1.90	U	1.90	UJ	0.31	B	1.90	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.30	UJ	3.30	U	3.40	UJ	3.20	U	3.30	U	3.40	U
1,4-Dichlorobenzene	ug/kg	1.90	UJ	1.90	U	1.90	UJ	1.80	U	0.62	B	1.90	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.40	U	1.50	U	1.50	U
Chlorobenzene	ug/kg	1.90	UJ	1.90	U	1.90	UJ	1.80	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	UJ	1.90	U	1.90	UJ	1.80	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	11	UJ	11	U	12	UJ	11	U	11	U	12	U
Styrene	ug/kg	1.60	UJ	1.50	U	1.60	UJ	1.50	U	0.04		1.60	U
Toluene	ug/kg	0.53	B	5.50	U	5.60	UJ	5.40	U	0.69	B	0.25	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,4,5-Trichlorophenol	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,4-Dichlorophenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,4-Dimethylphenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,4-Dinitrophenol	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
2,4-Dinitrotoluene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2-Chloronaphthalene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2-Chlorophenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2-Methyl-4,6-Dinitrophenol	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
2-Methylnaphthalene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2-Methylphenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
2-Nitroaniline	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
2-Nitrophenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB4		SB5		SB5		SB6		SB7	
SAMPLE ID:		PC-MP2-SB4-SS03-04		PC-MP2-SB4-SS04-05		PC-MP2-SB5-SS00-02		PC-MP2-SB5-SS04-05		PC-MP2-SB6-SS05-06		PC-MP2-SB7-SS05-06	
COLLECTION DATE:		08/14/93		08/17/93		08/17/93		08/17/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
4-Chloroaniline	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
4-Methylphenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
4-Nitroaniline	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
4-Nitrophenol	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
Acenaphthene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Acenaphthylene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Anthracene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Benzo(a)anthracene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Benzo(a)pyrene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Benzo(ghi)perylene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Benzo(k)fluoranthene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Butyl benzyl phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Carbazole	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Chrysene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Di-n-butyl phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Di-n-octyl phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Dibenzofuran	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Diethyl phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Dimethyl phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Fluoranthene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Fluorene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Hexachlorobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Hexachlorobutadiene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Hexachloroethane	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Isophorone	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
N-Nitrosodi-N-Propylamine	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
N-Nitrosodiphenylamine	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Naphthalene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		SB4		SB4		SB5		SB5		SB6		SB7	
LOCATOR:		SB4		SB4		SB5		SB5		SB6		SB7	
SAMPLE ID:		PC-MP2-SB4-SS03-04		PC-MP2-SB4-SS04-05		PC-MP2-SB5-SS00-02		PC-MP2-SB5-SS04-05		PC-MP2-SB6-SS05-06		PC-MP2-SB7-SS05-06	
COLLECTION DATE:		08/14/93		08/17/93		08/17/93		08/17/93		08/15/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Pentachlorophenol	ug/kg	830	U	820	U	840	U	810	U	830	U	840	U
Phenanthrene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Phenol	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
Pyrene	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
bis(2-Ethylhexyl)phthalate	ug/kg	340	U	340	U	350	U	330	U	340	U	350	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	4.70	UL	4.60	UL	4.70	UL	4.60	UL	4.70	UL	4.90	UL
Arsenic	mg/kg	0.79	0B	0.41	UL	0.68	0B	0.41	0B	0.61	0B	0.71	0B
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.42	U	0.41	U	0.42	U	0.41	U	0.42	U	0.43	U
Cadmium	mg/kg	0.52	UL	0.52	U	0.53	U	0.51	U	0.52	UL	0.54	UL
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	2.50		3.10	L	5.10	L	2.50	L	2.10		4.10	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.60	U	2	0	2.10	0	1.70	0	1.60	U	2.40	0
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	1	B	1.20	K	2.50	J	1.20	J	0.94	B	1.10	B
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.10	U	0.10	U	0.11	U	0.10	U	0.10	U	0.11	U
Nickel	mg/kg	3.70	U	5	L	6.90	L	4	(L)	3.60	U	3.80	U
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.31	U	0.31	UL	0.32	UL	0.30	U	0.31	U	0.32	U
Silver	mg/kg	0.42	UL	0.41	U	0.42	U	0.41	U	0.42	UL	0.43	UL
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.31	UL	0.31	UL	0.32	UL	0.30	UL	0.31	UL	0.32	UL
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	13.50	B	6	B	8.50	B	3.50	B	6.70	B	9.60	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	13.50		9.40		23.20		193		43.50		26.40	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB8		SB9		SB9		SB10		SB10		SB11	
SAMPLE ID:		PC-MP2-SB8-SS05-06		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-CG3-SB11-SS04-06	
COLLECTION DATE:		08/15/93		08/16/93		08/16/93		09/13/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
1,1,1-Trichloroethane	ug/kg	0.19		0.05	B	2.80	U	2.80	U	2.80	U	0.11	B
1,1,2,2-Tetrachloroethane	ug/kg	0.63	U	0.63	U	0.62	U	0.61	U	0.62	U	0.62	U
1,1,2-Trichloroethane	ug/kg	0.89	U	0.89	U	0.88	U	0.87	U	0.88	U	0.88	U
1,1-Dichloroethane	ug/kg	0.79	U	0.78	U	0.77	U	0.77	U	0.77	U	0.77	U
1,1-Dichloroethylene	ug/kg	0.89	U	0.89	U	0.88	U	0.87	U	0.88	U	0.88	U
1,2,3-Trichloropropane	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
1,2-Dibromoethane	ug/kg	1.40	U	1.40	U	1.30	U	1.30	U	1.30	U	1.30	U
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	U	1.40	U	1.40	UJ	1.40	U	1.40	U
1,2-Dichloroethane	ug/kg	0.68	U	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U
1,2-Dichloropropane	ug/kg	0.68	U	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U
1,2-trans-Dichloroethylene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
1,3-Dichlorobenzene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	UJ	1.10	U	1.10	U
1,3-cis-Dichloropropylene	ug/kg	1	U	0.99	U	0.98	U	0.97	U	0.98	U	0.98	U
1,3-trans-Dichloropropylene	ug/kg	0.89	U	0.89	U	0.88	U	0.87	U	0.88	U	0.88	U
1,4-Dichlorobenzene	ug/kg	1.50	U	1.50	U	1.40	U	1.40	UJ	1.40	U	1.40	U
2-Chloroethylvinyl ether	ug/kg	1.20	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
2-Chlorotoluene	ug/kg	1.10	U	1	U	1	U	1	UJ	1	U	1	U
4-Chlorotoluene	ug/kg	1.20	U	1.10	U	1.10	U	1.10	UJ	1.10	U	1.10	U
Bromobenzene	ug/kg	0.79	U	0.78	U	0.77	U	0.77	UJ	0.77	U	0.77	U
Bromochloromethane	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
Bromodichloromethane	ug/kg	1.10	U	1	U	1	U	1	U	1	U	1	U
Bromoform	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
Carbon Tetrachloride	ug/kg	0.68	U	0.68	U	0.67	U	0.66	U	0.67	U	0.67	U
Chlorobenzene	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
Chloroethane	ug/kg	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U
Chloroform	ug/kg	0.59	B	0.57	B	0.63	B	0.30	B	0.31	B	0.59	B
Dibromochloromethane	ug/kg	0.84	U	0.83	U	0.82	U	0.82	U	0.82	U	0.82	U
Dibromomethane	ug/kg	0.95	U	0.94	U	0.93	U	0.92	U	0.93	U	0.93	U
Methyl bromide	ug/kg	2.90	U	2.90	U	2.90	U	2.90	U	2.90	U	2.90	U
Methyl chloride	ug/kg	2.60	U	2.60	U	2.60	U	2.60	U	2.60	U	2.60	U
Methylene chloride	ug/kg	1.40	B	5.70	B	2	B	5.20	B	4.10	B	2.70	B
Tetrachloroethylene	ug/kg	0.84	U	0.83	U	0.82	U	0.82	U	0.82	U	0.82	U
Trichloroethylene	ug/kg	0.84	U	0.83	U	0.82	U	0.82	U	0.82	U	0.82	U
Vinyl chloride	ug/kg	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB8		SB9		SB9		SB10		SB10		SB11	
SAMPLE ID:		PC-MP2-SB8-SS05-06		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-CG3-SB11-SS04-06	
COLLECTION DATE:		08/15/93		08/16/93		08/16/93		09/13/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	0.03		1.50	UJ	2.50		0.12	U	1.40	U	0.12	B
1,2-Dimethylbenzene	ug/kg	0.12		1.30	UJ	1.20	U	1.20	U	0.14	B	0.12	B
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.80	U	1.90	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.30	UJ	3.30	U	3.30	U	3.30	U	3.30	U
1,4-Dichlorobenzene	ug/kg	0.46	B	1.90	UJ	1.90	U	1.80	U	0.11	B	1.90	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.50	UJ	1.40	U	1.40	U	1.40	U	1.40	U
Chlorobenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.80	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.80	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	12	U	11	UJ	11	U	11	U	11	U	11	U
Styrene	ug/kg	1.60	U	1.60	UJ	1.50	U	1.50	U	1.50	U	1.50	U
Toluene	ug/kg	0.18	B	5.50	UJ	5.50	U	0.15	B	0.17	B	0.16	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
2,4,6-Trichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
2,4-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
2-Methylnaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
2-Nitrophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB8		SB9		SB9		SB10		SB10		SB11	
SAMPLE ID:		PC-MP2-SB8-SS05-06		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-CG3-SB11-SS04-06	
COLLECTION DATE:		08/15/93		08/16/93		08/16/93		09/13/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
4-Bromophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
4-Nitrophenol	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
Acenaphthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Acenaphthylene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Butyl benzyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Chrysene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Di-n-butyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Di-n-octyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dibenzofuran	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Diethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluorene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Isophorone	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Naphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB8		SB9		SB9		SB10		SB10		SB11	
SAMPLE ID:		PC-MP2-SB8-SS05-06		PC-MP2-SB9-SS03-04		PC-MP2-SB9-SS04-06		PC-MP2-SB10-SS03-04		PC-MP2-SB10-SS08-10		PC-CG3-SB11-SS04-06	
COLLECTION DATE:		08/15/93		08/16/93		08/16/93		09/13/93		09/13/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	840	U	820	U	830	U	820	U	820	U	810	U
Phenanthrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	4.70	UL	4.70	UL	4.80	UL	4.60	UL	4.70	UL	4.60	UL
Arsenic	mg/kg	0.58	0B	0.62	0B	0.57	0B	0.75	(L)	0.41	U	0.48	0
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.42	U	0.42	U	0.42	U	0.41	U	0.41	U	0.41	U
Cadmium	mg/kg	0.52	UL	0.52	UL	0.53	UL	0.51	UL	0.52	UL	0.52	UL
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	3.70		2.70		3.10		2.50	J	2.80		3.20	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.60	U	2.10	0	1.60	U	1.80	0	1.90	0	2.70	
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	2.50	B	0.84	B	1	B	1.10	L	2.90	L	0.84	
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.10	U	0.10	U	0.11	U	0.10	U	0.10	U	0.10	U
Nickel	mg/kg	3.70	U	3.60	U	3.70	U	3.60	U	3.60	U	3.60	U
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.31	U	0.33	(L)	0.32	U	0.31	U	0.31	U	0.31	U
Silver	mg/kg	0.42	UL	0.42	UL	0.42	UL	0.41	U	0.41	U	0.41	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.31	UL	0.31	UL	0.32	UL	0.31	U	0.31	UL	0.31	U
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	10	B	5.40	B	4.60	B	15.30		12.70		14.80	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	54		18.20		49.40		40.60		67		7.20	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12		SB12		SB13		SB13		SB13	
SAMPLE ID:		PC-CG3-SB11-SS10-12		PC-CG3-SB12-SS04-06		PC-CG3-SB12-SS10-12		PC-CG3-SB13-SS02-04		PC-CG3-SB13-SS04-06		PC-CG3-SB13-SS08-10	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.95	U	0.93	U	0.93	U
1,1,1-Trichloroethane	ug/kg	2.80	UJ	0.09	B	0.19	B	2.80	U	0.14	B	0.18	B
1,1,2,2-Tetrachloroethane	ug/kg	0.63	UJ	0.62	U	0.63	U	0.63	U	0.33	J	0.62	U
1,1,2-Trichloroethane	ug/kg	0.89	UJ	0.88	U	0.89	U	0.89	U	0.88	U	0.88	U
1,1-Dichloroethane	ug/kg	0.78	UJ	0.77	U	0.79	U	0.79	U	0.77	U	0.77	U
1,1-Dichloroethylene	ug/kg	0.89	UJ	0.88	U	0.89	U	0.89	U	0.88	U	0.88	U
1,2,3-Trichloropropane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.95	U	0.50	J	0.93	U
1,2-Dibromoethane	ug/kg	1.40	UJ	1.30	U	1.40	U	1.40	U	1.30	U	1.30	U
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.50	U	1.40	U	1.40	U
1,2-Dichloroethane	ug/kg	0.68	UJ	0.67	U	0.68	U	0.68	U	0.67	U	0.67	U
1,2-Dichloropropane	ug/kg	0.68	UJ	0.67	U	0.68	U	0.68	U	0.67	U	0.67	U
1,2-trans-Dichloroethylene	ug/kg	1.10	UJ	1.10	U	1.20	U	1.20	U	1.10	U	1.10	U
1,3-Dichlorobenzene	ug/kg	1.10	UJ	1.10	U	1.20	UJ	1.20	U	1.10	U	1.10	U
1,3-cis-Dichloropropylene	ug/kg	0.99	UJ	0.98	U	1	U	1	U	0.98	U	0.98	U
1,3-trans-Dichloropropylene	ug/kg	0.89	UJ	0.88	U	0.89	U	0.89	U	0.88	U	0.88	U
1,4-Dichlorobenzene	ug/kg	1.50	UJ	1.40	U	1.50	UJ	1.50	U	1.40	U	1.40	U
2-Chloroethylvinyl ether	ug/kg	1.10	UJ	1.10	U	1.20	U	1.20	U	1.10	U	1.10	U
2-Chlorotoluene	ug/kg	1	UJ	1	U	1.10	UJ	1.10	U	1	U	1	U
4-Chlorotoluene	ug/kg	1.10	UJ	1.10	U	1.20	UJ	1.20	U	1.10	U	1.10	U
Bromobenzene	ug/kg	0.78	UJ	0.77	U	0.79	UJ	0.79	U	0.77	U	0.77	U
Bromochloromethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.95	U	0.93	U	0.93	U
Bromodichloromethane	ug/kg	1	UJ	1	U	1.10	U	1.10	U	1	U	1	U
Bromoform	ug/kg	0.94	UJ	0.93	U	0.95	U	0.95	U	0.93	U	0.93	U
Carbon Tetrachloride	ug/kg	0.68	UJ	0.67	U	0.68	U	0.68	U	0.67	U	0.67	U
Chlorobenzene	ug/kg	0.94	UJ	0.93	U	0.95	UJ	0.95	U	0.93	U	0.93	U
Chloroethane	ug/kg	2.70	UJ	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U
Chloroform	ug/kg	0.42	B	0.60	B	0.53	B	0.40	B	0.54	B	0.67	B
Dibromochloromethane	ug/kg	0.83	UJ	0.82	U	0.84	U	0.84	U	0.82	U	0.82	U
Dibromomethane	ug/kg	0.94	UJ	0.93	U	0.95	U	0.95	U	0.93	U	0.93	U
Methyl bromide	ug/kg	2.90	UJ	2.90	U	2.90	U	2.90	U	2.90	U	2.90	U
Methyl chloride	ug/kg	2.60	UJ	2.60	U	2.60	U	2.60	U	2.60	U	2.60	U
Methylene chloride	ug/kg	2.40	B	2.90	B	3.10	B	3.10	B	2.80	B	10	B
Tetrachloroethylene	ug/kg	0.83	UJ	0.82	U	0.84	U	0.84	U	0.82	U	0.82	U
Trichloroethylene	ug/kg	0.83	UJ	0.82	U	0.84	U	0.84	U	0.20	J	0.82	U
Vinyl chloride	ug/kg	2.70	UJ	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12		SB12		SB13		SB13		SB13	
SAMPLE ID:		PC-CG3-SB11-SS10-12		PC-CG3-SB12-SS04-06		PC-CG3-SB12-SS10-12		PC-CG3-SB13-SS02-04		PC-CG3-SB13-SS04-06		PC-CG3-SB13-SS08-10	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.80	U	1.40	U	1.50	U	2.20	U	1.40	U	0.08	B
1,2-Dimethylbenzene	ug/kg	1.30	U	0.14	B	1.30	U	1.30	U	0.09	B	0.35	B
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		0.01	
1,3/1,4-Dimethylbenzene	ug/kg	3.30	U	3.30	U	3.40	U	3.40	U	3.30	U	-	
1,4-Dichlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	0.10	B	0.03	B
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		0.01	
Benzene	ug/kg	1.50	U	1.40	U	1.50	U	1.50	U	1.40	U	1.40	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	11	U	11	U	12	U	12	U	11	U	11	U
Styrene	ug/kg	1.60	U	1.50	U	1.60	U	1.60	U	1.50	U	1.50	U
Toluene	ug/kg	5.50	U	0.13	B	5.60	U	5.60	U	0.12	B	0.24	B
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
2,4-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
2-Methylnaphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	49	
2-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
2-Nitrophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12		SB12		SB13		SB13		SB13	
SAMPLE ID:		PC-CG3-SB11-SS10-12		PC-CG3-SB12-SS04-06		PC-CG3-SB12-SS10-12		PC-CG3-SB13-SS02-04		PC-CG3-SB13-SS04-06		PC-CG3-SB13-SS08-10	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
4-Nitrophenol	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
Acenaphthene	ug/kg	340	U	340	U	340	U	340	U	340	U	190	
Acenaphthylene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	310	
Benzo(a)anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	520	
Benzo(a)pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	350	
Benzo(b)fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	770	
Benzo(ghi)perylene	ug/kg	340	U	340	U	340	U	340	U	340	U	110	
Benzo(k)fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	770	
Butyl benzyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	340	U	340	U	340	U	340	U	340	U	230	
Chrysene	ug/kg	340	U	340	U	340	U	340	U	340	U	530	
Di-n-butyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Di-n-octyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dibenzofuran	ug/kg	340	U	340	U	340	U	340	U	340	U	150	J
Diethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	1400	
Fluorene	ug/kg	340	U	340	U	340	U	340	U	340	U	220	
Hexachlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	190	
Isophorone	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Naphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	170	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12		SB12		SB13		SB13		SB13	
SAMPLE ID:		PC-CG3-SB11-SS10-12		PC-CG3-SB12-SS04-06		PC-CG3-SB12-SS10-12		PC-CG3-SB13-SS02-04		PC-CG3-SB13-SS04-06		PC-CG3-SB13-SS08-10	
COLLECTION DATE:		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	820	U	810	U	830	U	830	U	820	U	820	U
Phenanthrene	ug/kg	340	U	340	U	340	U	340	U	340	U	1500	
Phenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	1000	
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	210		340	U	45		37		340	U	340	U
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	4.70	UL	4.60	UL	4.70	UL	4.70	UL	4.60	UL	4.70	UL
Arsenic	mg/kg	0.42	U	0.41	U	0.42	U	0.68	0	0.41	U	0.49	(L)
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.42	U	0.41	U	0.42	U	0.42	U	0.41	U	0.41	U
Cadmium	mg/kg	0.52	UL	0.52	UL	0.53	UL	0.52	UL	0.52	UL	0.52	UL
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	2.20		2.90		2.60		4.90		3.10		2.80	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	1.60	U	2.70		1.60	U	1.90	0	3.10		2.70	J
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	0.92		0.93		1.20		5.50		0.98		1.20	J
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.10	U	0.10	U	0.11	U	0.10	U	0.10	U	0.10	U
Nickel	mg/kg	3.70	U	3.60	U	3.70	U	3.70	U	3.60	U	3.60	U
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.31	UL	0.31	U	0.32	UL	0.31	UL	0.31	U	0.31	U
Silver	mg/kg	0.42	U	0.41	U	0.42	U	0.42	U	0.41	U	0.41	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.31	UL	0.31	U	0.32	UL	0.31	U	0.31	U	0.31	UL
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	5.40	B	19	B	4.70	B	10.70	B	65.30	B	11.60	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	6.30	U	6.30	U	39.20		9.90		31.30		38.80	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB13		SB2		SB2		SB2		SB3		SB3	
SAMPLE ID:		PC-CG3-SB13-SS10-12		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03		PC-HN8-SB2-SS09-10		PC-HN8-SB3-SS01-02		PC-HN8-SB3-SS09-11	
COLLECTION DATE:		08/26/93		08/13/93		08/13/93		08/13/93		08/13/93		08/13/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.94	U	0.93	U	0.94	U	0.93	U	R	0.93	UJ	
1,1,1-Trichloroethane	ug/kg	0.10	B	0.08	B	0.07	B	0.13	B	R	0.07	B	
1,1,2,2-Tetrachloroethane	ug/kg	0.63	U	0.62	U	0.63	U	0.62	U	R	0.62	UJ	
1,1,2-Trichloroethane	ug/kg	0.89	U	0.88	U	0.89	U	0.88	U	R	0.88	UJ	
1,1-Dichloroethane	ug/kg	0.78	U	0.77	U	0.78	U	0.77	U	0.78	U	0.77	UJ
1,1-Dichloroethylene	ug/kg	0.89	U	0.88	U	0.89	U	0.88	U	0.89	U	0.88	UJ
1,2,3-Trichloropropane	ug/kg	0.94	U	0.93	U	0.94	U	0.93	U	R	0.93	UJ	
1,2-Dibromoethane	ug/kg	1.40	U	1.30	U	1.40	U	1.30	U	R	1.30	UJ	
1,2-Dichlorobenzene	ug/kg	1.50	U	1.40	UJ	1.50	U	1.40	U	1.50	U	1.40	UJ
1,2-Dichloroethane	ug/kg	0.68	U	0.67	U	0.68	U	0.67	U	R	0.67	UJ	
1,2-Dichloropropane	ug/kg	0.68	U	0.67	U	0.68	U	0.67	U	R	0.67	UJ	
1,2-trans-Dichloroethylene	ug/kg	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	UJ
1,3-Dichlorobenzene	ug/kg	0.05	B	1.10	UJ	1.10	U	1.10	U	1.10	U	1.10	UJ
1,3-cis-Dichloropropylene	ug/kg	0.99	U	0.98	U	0.99	U	0.98	U	0.99	U	0.98	UJ
1,3-trans-Dichloropropylene	ug/kg	0.89	U	0.88	U	0.89	U	0.88	U	0.89	U	0.88	UJ
1,4-Dichlorobenzene	ug/kg	0.07	B	1.40	UJ	1.50	U	1.40	U	1.50	U	1.40	UJ
2-Chloroethylvinyl ether	ug/kg	1.10	U	1.10	U	1.10	U	1.10	U	R	1.10	UJ	
2-Chlorotoluene	ug/kg	1	U	1	UJ	1	U	1	U	1	U	1	UJ
4-Chlorotoluene	ug/kg	0.06	B	1.10	UJ	1.10	U	1.10	U	1.10	U	1.10	UJ
Bromobenzene	ug/kg	0.78	U	0.77	UJ	0.78	U	0.77	U	0.78	U	0.77	UJ
Bromochloromethane	ug/kg	0.94	U	0.93	U	0.94	U	0.93	U	R	0.93	UJ	
Bromodichloromethane	ug/kg	1	U	1	U	1	U	0.27	J	R	1	UJ	
Bromoform	ug/kg	0.94	U	0.93	U	0.94	U	0.93	U	R	0.93	UJ	
Carbon Tetrachloride	ug/kg	0.68	U	0.67	U	0.68	U	0.67	U	0.68	U	0.67	UJ
Chlorobenzene	ug/kg	0.94	U	0.93	UJ	0.94	U	0.93	U	0.94	U	0.93	UJ
Chloroethane	ug/kg	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U	2.70	UJ
Chloroform	ug/kg	0.39	B	0.63	B	0.42	B	0.97	B	0.55	B	0.24	B
Dibromochloromethane	ug/kg	0.83	U	0.82	U	0.83	U	0.82	U	R	0.82	UJ	
Dibromomethane	ug/kg	0.94	U	0.93	U	0.94	U	0.93	U	0.94	U	0.93	UJ
Methyl bromide	ug/kg	2.90	U	2.90	U	2.90	U	2.90	U	2.90	U	2.90	UJ
Methyl chloride	ug/kg	2.60	U	2.60	U	2.60	U	2.60	U	2.60	U	2.60	UJ
Methylene chloride	ug/kg	2.60	B	1.40	B	1	B	1.20	B	1.60	B	0.48	B
Tetrachloroethylene	ug/kg	0.06	B	0.82	U	0.83	U	0.82	U	0.83	U	0.82	UJ
Trichloroethylene	ug/kg	0.03	B	0.82	U	0.83	U	0.82	U	0.83	U	0.82	UJ
Vinyl chloride	ug/kg	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U	2.70	UJ

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB13		SB2		SB2		SB2		SB3		SB3	
SAMPLE ID:		PC-CG3-SB13-SS10-12		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03		PC-HN8-SB2-SS09-10		PC-HN8-SB3-SS01-02		PC-HN8-SB3-SS09-11	
COLLECTION DATE:		08/26/93		08/13/93		08/13/93		08/13/93		08/13/93		08/13/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	U	0.07	U	1.40	U	0.06	J	0.25	U
1,2-Dimethylbenzene	ug/kg	1.30	U	0.04	B	0.03	B	1.20	U	0.12	B	0.30	B
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	0.04	B	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.30	U	3.30	U	3.30	U	3.30	U	3.30	U	3.30	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.90	U	0.17	U	0.13	B	0.13	B	0.19	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.40	U	1.50	U	1.40	U	1.50	U	1.40	U
Chlorobenzene	ug/kg	1.90	U	0.14		1.90	U	1.90	U	0.12		1.90	U
Ethylbenzene	ug/kg	1.90	U	0.05	J	1.90	U	1.90	U	0.10	J	0.03	J
Methyl-t-Butyl Ether	ug/kg	11	U	11	U	11	U	11	U	11	U	11	U
Styrene	ug/kg	1.60	U	1.50	U	1.60	U	1.50	U	1.60	U	0.15	B
Toluene	ug/kg	5.50	U	0.21	B	0.21	B	0.25	B	0.28	J	0.06	J
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
2,4-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
2-Methylnaphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
2-Nitrophenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB13		SB2		SB2		SB2		SB3		SB3	
SAMPLE ID:		PC-CG3-SB13-SS10-12		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03		PC-HN8-SB2-SS09-10		PC-HN8-SB3-SS01-02		PC-HN8-SB3-SS09-11	
COLLECTION DATE:		08/26/93		08/13/93		08/13/93		08/13/93		08/13/93		08/13/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
4-Nitrophenol	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
Acenaphthene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Acenaphthylene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Benzo(ghi)perylene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Benzo(k)fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Butyl benzyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Chrysene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Di-n-butyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Di-n-octyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dibenzofuran	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Diethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Fluorene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Isophorone	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Naphthalene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	SB13		SB2		SB2		SB2		SB3		SB3	
	SAMPLE ID:	PC-CG3-SB13-SS10-12		PC-HN8-SB2-SS01-02		PC-HN8-SB2-SS02-03		PC-HN8-SB2-SS09-10		PC-HN8-SB3-SS01-02		PC-HN8-SB3-SS09-11	
	COLLECTION DATE:	08/26/93		08/13/93		08/13/93		08/13/93		08/13/93		08/13/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	820	U	820	U	830	U	820	U	830	U	820	U
Phenanthrene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Phenol	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	340	U	340	U	340	U	340	U	340	U	340	U
METALS													
Aluminum	mg/kg	-		4120		2650		1120		3800		982	
Antimony	mg/kg	4.70	UL	4.70	UL	4.70	UL	4.70	UL	4.70	UL	4.60	UL
Arsenic	mg/kg	0.41	U	0.88	(J)	0.44	0	0.52	0	0.60	0	1.20	
Barium	mg/kg	-		17	0	7.60	0	7.50	0	8.50	0	2.80	0
Beryllium	mg/kg	0.41	U	0.41	U	0.42	U	0.41	U	0.42	U	0.41	U
Cadmium	mg/kg	0.52	UL	0.52	UL	0.52	U	0.52	U	0.52	U	0.52	U
Calcium	mg/kg	-		1380		584		542		531		28800	
Chromium	mg/kg	2.70		6.50		4.20		3.30		5.20		2.90	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01		0.01	U	0.01	U
Cobalt	mg/kg	-		1.40	(J)	1.40	0	0.93	U	1.40	0	1	0
Copper	mg/kg	1.60	U	1.60	U	1.60	U	1.60	U	1.60	U	1.50	U
Iron	mg/kg	-		4490		2520		2360		3800		2130	
Lead	mg/kg	1.20		1.80	J	1.20		0.90		1.60		0.79	L
Magnesium	mg/kg	-		637		502	0	513	0	555		4280	
Manganese	mg/kg	-		133		52.30		74.10		42.40		44.20	
Mercury	mg/kg	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	mg/kg	3.60	U	4.30		3.60	U	3.60	U	3.90	0	3.60	U
Potassium	mg/kg	-		263	(J)	238	U	274	0	366	0	236	U
Selenium	mg/kg	0.31	U	0.31	UL	0.31	U	0.31	U	0.31	U	0.31	U
Silver	mg/kg	0.41	U	0.41	U	0.42	U	0.41	U	0.42	U	0.41	U
Sodium	mg/kg	-		39	0	31	0	44.40	0	28.10	0	50.70	0
Thallium	mg/kg	0.31	UL	0.31	U	0.31	U	0.31	U	0.31	U	0.31	UL
Vanadium	mg/kg	-		10.30		4.60	0	4.80	0	9.40		4.80	0
Zinc	mg/kg	4.90	B	10.10	B	5.60	B	4.70	B	8.50	B	4.20	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	6.30	U	29.90		11.30		11.40		14.60		6.30	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB6		SB7		SB8		SB8		SB8	
SAMPLE ID:		PC-HN8-SB4-SS12-14		PC-HN8-SB6-SS12-13		PC-HN8-SB7-SS12-13		PC-HN8-SB8-SS01-02		PC-HN8-SB8-SS09-10		PC-HN8-SB8-SS10-12	
COLLECTION DATE:		08/13/93		08/15/93		08/15/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.96	UJ	0.94	U	0.94	U	0.93	U	0.93	U	0.93	U
1,1,1-Trichloroethane	ug/kg	2.90	UJ	2.80	UJ	0.20	B	0.10	B	2.80	U	2.80	U
1,1,2,2-Tetrachloroethane	ug/kg	0.64	UJ	0.63	UJ	0.63	U	0.62	U	0.62	U	0.62	U
1,1,2-Trichloroethane	ug/kg	0.90	UJ	0.89	UJ	0.89	U	0.88	U	0.88	U	0.88	U
1,1-Dichloroethane	ug/kg	0.80	UJ	0.78	U	0.78	U	0.77	U	0.77	U	0.77	U
1,1-Dichloroethylene	ug/kg	0.90	UJ	0.89	U	0.89	U	0.88	U	0.88	U	0.88	U
1,2,3-Trichloropropane	ug/kg	0.96	UJ	0.94	UJ	0.94	U	0.93	U	0.93	U	0.93	U
1,2-Dibromoethane	ug/kg	1.40	UJ	1.40	U	1.40	U	1.30	U	1.30	U	1.30	U
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.50	UJ	1.50	U	1.40	U	1.40	U	1.40	U
1,2-Dichloroethane	ug/kg	0.69	UJ	0.68	UJ	0.68	U	0.67	U	0.67	U	0.67	U
1,2-Dichloropropane	ug/kg	0.69	UJ	0.68	U	0.68	U	0.67	U	0.67	U	0.67	U
1,2-trans-Dichloroethylene	ug/kg	1.20	UJ	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
1,3-Dichlorobenzene	ug/kg	1.20	UJ	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
1,3-cis-Dichloropropylene	ug/kg	1	UJ	0.99	U	0.99	U	0.98	U	0.98	U	0.98	U
1,3-trans-Dichloropropylene	ug/kg	0.90	UJ	0.89	U	0.89	U	0.88	U	0.88	U	0.88	U
1,4-Dichlorobenzene	ug/kg	1.50	UJ	1.50	UJ	1.50	U	1.40	U	1.40	U	1.40	U
2-Chloroethylvinyl ether	ug/kg	1.20	UJ	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
2-Chlorotoluene	ug/kg	1.10	UJ	1	U	1	U	1	U	1	U	1	U
4-Chlorotoluene	ug/kg	1.20	UJ	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
Bromobenzene	ug/kg	0.80	UJ	0.78	U	0.78	U	0.77	U	0.77	U	0.77	U
Bromochloromethane	ug/kg	0.96	UJ	0.94	U	0.94	U	0.93	U	0.93	U	0.93	U
Bromodichloromethane	ug/kg	1.10	UJ	1	U	1	U	1	U	1	U	1	U
Bromoform	ug/kg	0.96	UJ	0.94	U	0.94	U	0.93	U	0.93	U	0.93	U
Carbon Tetrachloride	ug/kg	0.69	UJ	0.68	U	0.68	U	0.67	U	0.67	U	0.67	U
Chlorobenzene	ug/kg	0.96	UJ	0.94	U	0.94	U	0.93	U	0.93	U	0.93	U
Chloroethane	ug/kg	2.80	UJ	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U
Chloroform	ug/kg	0.20	B	0.51	B	0.82	B	0.78	B	0.62	B	0.59	B
Dibromochloromethane	ug/kg	0.85	UJ	0.83	U	0.83	U	0.82	U	0.82	U	0.82	U
Dibromomethane	ug/kg	0.96	UJ	0.94	U	0.94	U	0.93	U	0.93	U	0.93	U
Methyl bromide	ug/kg	3	UJ	2.90	U	2.90	U	2.90	U	2.90	U	2.90	U
Methyl chloride	ug/kg	2.70	UJ	2.60	U	2.60	U	2.60	U	2.60	U	2.60	U
Methylene chloride	ug/kg	0.43	B	5.70	B	2.80	B	12	B	2.70	B	7.30	B
Tetrachloroethylene	ug/kg	0.85	UJ	0.83	U	0.83	U	0.82	U	0.82	U	0.82	U
Trichloroethylene	ug/kg	0.85	UJ	0.83	U	0.83	U	0.82	U	0.82	U	0.82	U
Vinyl chloride	ug/kg	2.80	UJ	2.70	U	2.70	U	2.70	U	2.70	U	2.70	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB6		SB7		SB8		SB8		SB8	
SAMPLE ID:		PC-HN8-SB4-SS12-14		PC-HN8-SB6-SS12-13		PC-HN8-SB7-SS12-13		PC-HN8-SB8-SS01-02		PC-HN8-SB8-SS09-10		PC-HN8-SB8-SS10-12	
COLLECTION DATE:		08/13/93		08/15/93		08/15/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	1.50	U	1.50	U	1.50	U	1.40	U	1.40	U	1.40	U
1,2-Dimethylbenzene	ug/kg	0.13	B	1.30	U	1.30	U	1.20	U	1.20	U	1.20	U
1,3-Dichlorobenzene	ug/kg	1.90	U	1.90	UJ	1.90	U	1.90	U	1.90	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.40	U	3.30	U	3.30	U	3.30	U	3.30	U	3.30	U
1,4-Dichlorobenzene	ug/kg	0.31	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.50	U	1.50	U	1.40	U	1.40	U	1.40	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	0.61		11	U	11	U	11	U	11	U	11	U
Styrene	ug/kg	1.60	U	1.60	U	1.60	U	1.50	U	1.50	U	1.50	U
Toluene	ug/kg	0.19	B	5.50	UJ	0.21	B	5.50	U	5.50	U	5.50	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,2-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,3-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
1,4-Dichlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
2,4,6-Trichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dichlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dimethylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,4-Dinitrophenol	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
2,4-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2,6-Dinitrotoluene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chloronaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Chlorophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
2-Methylnaphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
2-Nitroaniline	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
2-Nitrophenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB6		SB7		SB8		SB8		SB8	
SAMPLE ID:		PC-HN8-SB4-SS12-14		PC-HN8-SB6-SS12-13		PC-HN8-SB7-SS12-13		PC-HN8-SB8-SS01-02		PC-HN8-SB8-SS09-10		PC-HN8-SB8-SS10-12	
COLLECTION DATE:		08/13/93		08/15/93		08/15/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
4-Bromophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chloroaniline	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Methylphenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
4-Nitroaniline	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
4-Nitrophenol	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
Acenaphthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Acenaphthylene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)anthracene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Benzo(a)pyrene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Benzo(b)fluoranthene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Benzo(ghi)perylene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Benzo(k)fluoranthene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Butyl benzyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Carbazole	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Chrysene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Di-n-butyl phthalate	ug/kg	350	U	340	U	340	U	340	U	36	J	340	U
Di-n-octyl phthalate	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Dibenzo(a,h)anthracene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Dibenzofuran	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Diethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Dimethyl phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluoranthene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Fluorene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorobutadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Hexachloroethane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	350	U	340	U	340	U	340	UJ	340	U	340	U
Isophorone	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Naphthalene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB6		SB7		SB8		SB8		SB8	
SAMPLE ID:		PC-HN8-SB4-SS12-14		PC-HN8-SB6-SS12-13		PC-HN8-SB7-SS12-13		PC-HN8-SB8-SS01-02		PC-HN8-SB8-SS09-10		PC-HN8-SB8-SS10-12	
COLLECTION DATE:		08/13/93		08/15/93		08/15/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pentachlorophenol	ug/kg	850	U	830	U	830	U	820	U	810	U	820	U
Phenanthrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Phenol	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
Pyrene	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	350	U	340	U	340	U	340	U	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	350	U	340	U	340	U	340	U	340	U	35	B
METALS													
Aluminum	mg/kg	1040		-		-		-		-		-	
Antimony	mg/kg	4.80	UL	4.70	UL	4.70	UL	4.70	UL	4.60	UL	4.60	UL
Arsenic	mg/kg	0.56	0	1.20	B	0.52	0B	1.20	B	0.43	0B	0.56	0B
Barium	mg/kg	2.60	0	-		-		-		-		-	
Beryllium	mg/kg	0.43	U	0.42	U	0.42	U	0.41	U	0.41	U	0.41	U
Cadmium	mg/kg	0.53	U	0.52	UL	0.52	U	0.52	U	0.52	U	0.52	UL
Calcium	mg/kg	39400		-		-		-		-		-	
Chromium	mg/kg	2.70		1.70		2.20		3.10		2.20		2.90	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	1	0	-		-		-		-		-	
Copper	mg/kg	1.60	U	1.60	U	2.10	0	2.80		1.50	U	1.80	0
Iron	mg/kg	2170		-		-		-		-		-	
Lead	mg/kg	0.89		0.72	B	1	B	1.10	B	0.76	B	0.88	B
Magnesium	mg/kg	5520		-		-		-		-		-	
Manganese	mg/kg	48.60		-		-		-		-		-	
Mercury	mg/kg	0.11	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	mg/kg	3.70	U	3.60	U	3.60	U	3.60	U	3.60	U	3.60	U
Potassium	mg/kg	243	U	-		-		-		-		-	
Selenium	mg/kg	0.32	U	0.31	U	0.31	U	0.31	U	0.31	U	0.31	U
Silver	mg/kg	0.43	U	0.42	UL	0.42	UL	0.41	UL	0.41	UL	0.41	UL
Sodium	mg/kg	64.90	0	-		-		-		-		-	
Thallium	mg/kg	0.32	U	0.31	UL	0.31	UL	0.31	UL	0.31	UL	0.31	UL
Vanadium	mg/kg	4.10	0	-		-		-		-		-	
Zinc	mg/kg	4.60	B	6.80	B	5.50	B	11.10	B	7.30	B	5.80	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	7.30	B	147		12		23.10		16.40		11.20	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB7		SB7		SB8		SB9		SB10	
SAMPLE ID:		PC-RT9-SB7-SS05-07		PC-RT9-SB7-SS15-17		PC-RT9-SB7-SS21-22		PC-RT9-SB8-SS15-17		PC-RT9-SB9-SS15-17		PC-RT9-SB10-SS10-12	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
1,1,1-Trichloroethane	ug/kg	0.17	B	0.10	B	0.20	B	0.11	B	3.10	UJ	0.13	
1,1,2,2-Tetrachloroethane	ug/kg	0.63	UJ	0.63	U	0.61	U	0.63	UJ	0.70	UJ	0.62	U
1,1,2-Trichloroethane	ug/kg	0.89	UJ	0.89	U	0.87	U	0.89	UJ	0.99	UJ	0.88	U
1,1-Dichloroethane	ug/kg	0.78	UJ	0.78	U	0.77	U	0.78	UJ	0.87	UJ	0.77	U
1,1-Dichloroethylene	ug/kg	0.89	UJ	0.89	U	0.87	U	0.89	UJ	0.99	UJ	0.88	U
1,2,3-Trichloropropane	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
1,2-Dibromoethane	ug/kg	1.40	UJ	1.40	U	1.30	U	1.40	UJ	1.50	UJ	1.30	U
1,2-Dichlorobenzene	ug/kg	1.50	UJ	1.50	U	1.40	U	1.50	UJ	1.60	UJ	1.40	U
1,2-Dichloroethane	ug/kg	0.68	UJ	0.68	U	0.66	U	0.68	UJ	0.76	UJ	0.67	U
1,2-Dichloropropane	ug/kg	0.68	UJ	0.68	U	0.66	U	0.68	UJ	0.76	UJ	0.67	U
1,2-trans-Dichloroethylene	ug/kg	1.10	UJ	1.10	U	1.10	U	1.10	UJ	1.30	UJ	1.10	U
1,3-Dichlorobenzene	ug/kg	1.10	UJ	1.10	U	1.10	U	1.10	UJ	1.30	UJ	1.10	U
1,3-cis-Dichloropropylene	ug/kg	0.99	UJ	0.99	U	0.97	U	0.99	UJ	1.10	UJ	0.98	U
1,3-trans-Dichloropropylene	ug/kg	0.89	UJ	0.89	U	0.87	U	0.89	UJ	0.99	UJ	0.88	U
1,4-Dichlorobenzene	ug/kg	1.50	UJ	1.50	U	1.40	U	1.50	UJ	1.60	UJ	1.40	U
2-Chloroethylvinyl ether	ug/kg	1.10	UJ	1.10	U	1.10	U	1.10	U	1.30	UJ	1.10	U
2-Chlorotoluene	ug/kg	1	UJ	1	U	1	U	1	UJ	1.20	UJ	1	U
4-Chlorotoluene	ug/kg	1.10	UJ	1.10	U	1.10	U	1.10	UJ	1.30	UJ	1.10	U
Bromobenzene	ug/kg	0.78	UJ	0.78	U	0.77	U	0.78	UJ	0.87	UJ	0.77	U
Bromochloromethane	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
Bromodichloromethane	ug/kg	1	UJ	1	U	1	U	1	UJ	1.20	UJ	1	U
Bromoform	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
Carbon Tetrachloride	ug/kg	0.68	UJ	0.68	U	0.66	U	0.68	UJ	0.76	UJ	0.67	U
Chlorobenzene	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
Chloroethane	ug/kg	2.70	UJ	2.70	U	2.70	U	2.70	UJ	3	UJ	2.70	U
Chloroform	ug/kg	0.72	B	1.10	B	1.10	B	0.86	B	1.80	B	1.30	B
Dibromochloromethane	ug/kg	0.83	UJ	0.83	U	0.82	U	0.83	UJ	0.93	UJ	0.82	U
Dibromomethane	ug/kg	0.94	UJ	0.94	U	0.92	U	0.94	UJ	1	UJ	0.93	U
Methyl bromide	ug/kg	2.90	UJ	2.90	U	2.90	U	2.90	UJ	3.30	UJ	2.90	U
Methyl chloride	ug/kg	2.60	UJ	2.60	U	2.60	U	2.60	UJ	2.90	UJ	2.60	U
Methylene chloride	ug/kg	2.20	B	9.30	J	4.80	B	2.90	B	1.50	B	1.70	B
Tetrachloroethylene	ug/kg	0.83	UJ	0.83	U	0.82	U	0.83	UJ	0.93	UJ	0.82	U
Trichloroethylene	ug/kg	0.83	UJ	0.83	U	0.82	U	0.83	UJ	0.93	UJ	0.82	U
Vinyl chloride	ug/kg	2.70	UJ	2.70	U	2.70	U	2.70	UJ	3	UJ	2.70	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB7		SB7		SB8		SB9		SB10	
SAMPLE ID:		PC-RT9-SB7-SS05-07		PC-RT9-SB7-SS15-17		PC-RT9-SB7-SS21-22		PC-RT9-SB8-SS15-17		PC-RT9-SB9-SS15-17		PC-RT9-SB10-SS10-12	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/kg	0.08	B	0.19	B	0.14	B	0.11	B	2.10		1.40	U
1,2-Dimethylbenzene	ug/kg	1.30	U	1.30	U	1.20	U	1.30	U	1.40	U	1.20	U
1,3-Dichlorobenzene	ug/kg	0.49	B	0.06	B	0.28	B	0.08	B	2.10	U	1.90	U
1,3-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.30	U	-		3.30	U	3.30	U	3.70	U	3.30	U
1,4-Dichlorobenzene	ug/kg	1.90	U	0.55	B	0.20	B	0.77	B	2.10	U	1.90	
1,4-Dimethylbenzene	ug/kg	-		-		-		-		-		-	
Benzene	ug/kg	1.50	U	1.50	U	1.40	U	1.50	U	1.60	U	1.40	U
Chlorobenzene	ug/kg	1.90	U	1.90	U	1.60		1.90	U	2.10	U	1.90	U
Ethylbenzene	ug/kg	1.90	U	0.22	B	0.38	B	0.10	B	2.10	U	1.90	U
Methyl-t-Butyl Ether	ug/kg	11	U	11	U	11	U	11	U	13	U	5.20	B
Styrene	ug/kg	1.60	U	0.07	B	1.50	U	0.09	B	1.70	U	1.50	U
Toluene	ug/kg	0.43	B	0.66	B	0.56	B	0.64	B	6.20	U	5.50	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2,4,5-Trichlorophenol	ug/kg	830	U	830	U	820	U	830	U	930	U	820	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2,4-Dichlorophenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2,4-Dimethylphenol	ug/kg	340	U	340	U	340	UJ	340	U	380	UJ	340	U
2,4-Dinitrophenol	ug/kg	830	U	830	U	820	U	830	U	930	UJ	820	UJ
2,4-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2-Chloronaphthalene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2-Chlorophenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	830	U	830	U	820	U	830	U	930	U	820	U
2-Methylnaphthalene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
2-Nitroaniline	ug/kg	830	UJ	830	UJ	820	U	830	UJ	930	U	820	U
2-Nitrophenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U	340	U	340	U	380	U	340	UJ

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB7		SB7		SB8		SB9		SB10	
SAMPLE ID:		PC-RT9-SB7-SS05-07		PC-RT9-SB7-SS15-17		PC-RT9-SB7-SS21-22		PC-RT9-SB8-SS15-17		PC-RT9-SB9-SS15-17		PC-RT9-SB10-SS10-12	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	830	U	830	U	820	U	830	U	930	U	820	UJ
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
4-Chloroaniline	ug/kg	340	U	340	U	340	UJ	340	U	380	UJ	340	UJ
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
4-Methylphenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
4-Nitroaniline	ug/kg	830	U	830	U	820	U	830	U	930	U	820	UJ
4-Nitrophenol	ug/kg	830	UJ	830	UJ	820	UJ	830	UJ	930	UJ	820	UJ
Acenaphthene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Acenaphthylene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Anthracene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Benzo(a)anthracene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Benzo(a)pyrene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U	340	UJ	340	U	380	U	340	U
Benzo(ghi)perylene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	UJ
Benzo(k)fluoranthene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	UJ
Butyl benzyl phthalate	ug/kg	340	UJ	340	UJ	340	UJ	340	UJ	380	UJ	340	U
Carbazole	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Chrysene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Di-n-butyl phthalate	ug/kg	190	B	320	B	240	B	230	BJ	210	B	340	U
Di-n-octyl phthalate	ug/kg	340	UJ	340	UJ	340	UJ	340	UJ	380	UJ	340	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Dibenzofuran	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Diethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Dimethyl phthalate	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Fluoranthene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Fluorene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Hexachlorobenzene	ug/kg	340	U	340	U	340	U	340	U	380	UJ	340	U
Hexachlorobutadiene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Hexachloroethane	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	UJ
Isophorone	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	340	UJ	340	U	340	U	340	UJ	380	U	340	U
N-Nitrosodiphenylamine	ug/kg	340	U	340	UJ	340	U	340	U	380	UJ	340	U
Naphthalene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB7		SB7		SB7		SB8		SB9		SB10	
SAMPLE ID:		PC-RT9-SB7-SS05-07		PC-RT9-SB7-SS15-17		PC-RT9-SB7-SS21-22		PC-RT9-SB8-SS15-17		PC-RT9-SB9-SS15-17		PC-RT9-SB10-SS10-12	
COLLECTION DATE:		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92		11/12/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Pentachlorophenol	ug/kg	830	U	830	U	820	U	830	U	930	U	820	UJ
Phenanthrene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Phenol	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
Pyrene	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U	340	U	340	U	380	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	340	UJ	340	UJ	340	U	340	UJ	130	J	340	U
METALS													
Aluminum	mg/kg	1600	J	829	J	821	J	639	J	1040	J	894	J
Antimony	mg/kg	5.90	U	6	U	5.80	U	5.90	U	6.70	U	5.90	U
Arsenic	mg/kg	0.44	BQ	0.90	BQ	0.65	BQ	0.66	BQ	0.51	BQ	0.67	BQ
Barium	mg/kg	4.40	BQ	2.80	BQ	2.80	BQ	2.30	BQ	3.70	BQ	2.70	BQ
Beryllium	mg/kg	0.21	U	0.21	U	0.20	U	0.21	U	0.23	U	0.21	U
Cadmium	mg/kg	0.52	U	0.52	U	0.51	U	0.52	U	0.58	U	0.52	U
Calcium	mg/kg	495	BQ	29200		34200		28800		35700		30200	J
Chromium	mg/kg	5.30		2.90		2.20		1.80		2.80		1.80	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	1.40	BQ	1.20	U	1.10	U	1.10	U	1.30	U	1.10	U
Copper	mg/kg	2.60	U	2.60	U	2.60	U	2.60	U	2.90	U	2.60	U
Iron	mg/kg	2700		1550		1490		1220		1870		1550	
Lead	mg/kg	1.40		0.87		0.78		0.67		1		0.83	
Magnesium	mg/kg	804		4010		4690		4230		6250		4020	
Manganese	mg/kg	58.50		42.60		40.10		33.90		47.50		40.10	
Mercury	mg/kg	0.10	UN	0.10	UN	0.10	UN	0.10	UN	0.12	UN	0.10	UN
Nickel	mg/kg	4.20	U	4.20	U	4.10	U	4.20	U	4.70	U	4.10	U
Potassium	mg/kg	505	U	508	U	496	U	506	U	567	U	503	U
Selenium	mg/kg	0.42	U	0.42	U	0.41	U	0.42	U	0.47	U	0.41	U
Silver	mg/kg	1	U	1	U	1	U	1	U	1.20	U	1	U
Sodium	mg/kg	95.20	BQ	113	B	105	BQ	105	BQ	138	BQ	121	BQ
Thallium	mg/kg	0.21	UL	0.21	UL	0.20	UL	0.21	UL	0.23	UL	0.21	UL
Vanadium	mg/kg	6.20		3.30	BQ	3.40	BQ	2.50	BQ	4.10	BQ	3.10	BQ
Zinc	mg/kg	5	B	3.60	B	3.40	B	3.40	B	3.90	B	3.50	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	21.40		18.30		13.60		18.50		15.10		19.40	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12	
SAMPLE ID:		PC-RT9-SB11-SS12-14		PC-RT9-SB12-SS05-07	
COLLECTION DATE:		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL
8010					
1,1,1,2-Tetrachloroethane	ug/kg	0.92	U	-	
1,1,1-Trichloroethane	ug/kg	2.80	U	-	
1,1,2,2-Tetrachloroethane	ug/kg	0.61	U	-	
1,1,2-Trichloroethane	ug/kg	0.87	U	-	
1,1-Dichloroethane	ug/kg	0.77	U	-	
1,1-Dichloroethylene	ug/kg	0.87	U	-	
1,2,3-Trichloropropane	ug/kg	0.92	U	-	
1,2-Dibromoethane	ug/kg	1.30	U	-	
1,2-Dichlorobenzene	ug/kg	1.40	U	-	
1,2-Dichloroethane	ug/kg	0.66	U	-	
1,2-Dichloropropane	ug/kg	0.66	U	-	
1,2-trans-Dichloroethylene	ug/kg	1.10	U	-	
1,3-Dichlorobenzene	ug/kg	1.10	U	-	
1,3-cis-Dichloropropylene	ug/kg	0.97	U	-	
1,3-trans-Dichloropropylene	ug/kg	0.87	U	-	
1,4-Dichlorobenzene	ug/kg	1.40	U	-	
2-Chloroethylvinyl ether	ug/kg	1.10	U	-	
2-Chlorotoluene	ug/kg	1	U	-	
4-Chlorotoluene	ug/kg	1.10	U	-	
Bromobenzene	ug/kg	0.77	U	-	
Bromochloromethane	ug/kg	0.92	U	-	
Bromodichloromethane	ug/kg	1	U	-	
Bromoform	ug/kg	0.92	U	-	
Carbon Tetrachloride	ug/kg	0.66	U	-	
Chlorobenzene	ug/kg	0.92	U	-	
Chloroethane	ug/kg	2.70	U	-	
Chloroform	ug/kg	0.84	B	-	
Dibromochloromethane	ug/kg	0.82	U	-	
Dibromomethane	ug/kg	0.92	U	-	
Methyl bromide	ug/kg	2.90	U	-	
Methyl chloride	ug/kg	2.60	U	-	
Methylene chloride	ug/kg	5.30	B	-	
Tetrachloroethylene	ug/kg	0.82	U	-	
Trichloroethylene	ug/kg	0.82	U	-	
Vinyl chloride	ug/kg	2.70	U	-	

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12	
SAMPLE ID:		PC-RT9-SB11-SS12-14		PC-RT9-SB12-SS05-07	
COLLECTION DATE:		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL
8020					
1,2-Dichlorobenzene	ug/kg	1.40	U	-	
1,2-Dimethylbenzene	ug/kg	1.20	U	-	
1,3-Dichlorobenzene	ug/kg	0.50	B	-	
1,3-Dimethylbenzene	ug/kg	-		-	
1,3/1,4-Dimethylbenzene	ug/kg	3.30	U	-	
1,4-Dichlorobenzene	ug/kg	1.80	U	-	
1,4-Dimethylbenzene	ug/kg	-		-	
Benzene	ug/kg	1.40	U	-	
Chlorobenzene	ug/kg	1.80	U	-	
Ethylbenzene	ug/kg	1.80	U	-	
Methyl-t-Butyl Ether	ug/kg	0.54		-	
Styrene	ug/kg	1.50	U	-	
Toluene	ug/kg	0.41	B	-	
CLP 3/90					
1,2,4-Trichlorobenzene	ug/kg	340	U	340	U
1,2-Dichlorobenzene	ug/kg	340	U	340	U
1,3-Dichlorobenzene	ug/kg	340	U	340	U
1,4-Dichlorobenzene	ug/kg	340	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	340	U	340	U
2,4,5-Trichlorophenol	ug/kg	820	U	830	U
2,4,6-Trichlorophenol	ug/kg	340	U	340	U
2,4-Dichlorophenol	ug/kg	340	U	340	U
2,4-Dimethylphenol	ug/kg	340	UJ	340	U
2,4-Dinitrophenol	ug/kg	820	U	830	U
2,4-Dinitrotoluene	ug/kg	340	U	340	U
2,6-Dinitrotoluene	ug/kg	340	U	340	U
2-Chloronaphthalene	ug/kg	340	U	340	U
2-Chlorophenol	ug/kg	340	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	820	U	830	U
2-Methylnaphthalene	ug/kg	340	U	340	U
2-Methylphenol	ug/kg	340	U	340	U
2-Nitroaniline	ug/kg	820	U	830	U
2-Nitrophenol	ug/kg	340	U	340	U
3,3'-Dichlorobenzidine	ug/kg	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12	
SAMPLE ID:		PC-RT9-SB11-SS12-14		PC-RT9-SB12-SS05-07	
COLLECTION DATE:		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL
3-Nitroaniline	ug/kg	820	U	830	U
4-Bromophenyl phenyl ether	ug/kg	340	U	340	U
4-Chloro-3-methyl phenol	ug/kg	340	U	340	U
4-Chloroaniline	ug/kg	340	UJ	340	U
4-Chlorophenyl phenyl ether	ug/kg	340	U	340	U
4-Methylphenol	ug/kg	340	U	340	U
4-Nitroaniline	ug/kg	820	U	830	U
4-Nitrophenol	ug/kg	820	UJ	830	U
Acenaphthene	ug/kg	340	U	340	U
Acenaphthylene	ug/kg	340	U	340	U
Anthracene	ug/kg	340	U	340	U
Benzo(a)anthracene	ug/kg	340	U	340	U
Benzo(a)pyrene	ug/kg	340	U	340	U
Benzo(b)fluoranthene	ug/kg	340	U	340	U
Benzo(ghi)perylene	ug/kg	340	U	340	U
Benzo(k)fluoranthene	ug/kg	340	U	340	U
Butyl benzyl phthalate	ug/kg	340	UJ	340	U
Carbazole	ug/kg	340	U	340	U
Chrysene	ug/kg	340	U	340	U
Di-n-butyl phthalate	ug/kg	52	B	55	B
Di-n-octyl phthalate	ug/kg	340	UJ	340	U
Dibenzo(a,h)anthracene	ug/kg	340	U	340	U
Dibenzofuran	ug/kg	340	U	340	U
Diethyl phthalate	ug/kg	340	U	340	U
Dimethyl phthalate	ug/kg	340	U	340	U
Fluoranthene	ug/kg	340	U	340	U
Fluorene	ug/kg	340	U	340	U
Hexachlorobenzene	ug/kg	340	UJ	340	U
Hexachlorobutadiene	ug/kg	340	U	340	U
Hexachlorocyclopentadiene	ug/kg	340	U	340	U
Hexachloroethane	ug/kg	340	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	340	U	340	U
Isophorone	ug/kg	340	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	340	U	340	U
N-Nitrosodiphenylamine	ug/kg	340	UJ	340	U
Naphthalene	ug/kg	340	U	340	U

Appendix L - Subsurface Soil Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SB11		SB12	
SAMPLE ID:		PC-RT9-SB11-SS12-14		PC-RT9-SB12-SS05-07	
COLLECTION DATE:		11/12/92		11/13/92	
	UNITS:	RESULT	QUAL	RESULT	QUAL
Nitrobenzene	ug/kg	340	U	340	U
Pentachlorophenol	ug/kg	820	U	830	U
Phenanthrene	ug/kg	340	U	340	U
Phenol	ug/kg	340	U	340	U
Pyrene	ug/kg	340	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	340	U	340	U
bis(2-Chloroethyl) ether	ug/kg	340	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	35	J	79	
METALS					
Aluminum	mg/kg	725	J	-	
Antimony	mg/kg	5.80	U	5.90	UL
Arsenic	mg/kg	0.45	BQ	0.65	B
Barium	mg/kg	2.50	BQ	-	
Beryllium	mg/kg	0.20	U	0.21	U
Cadmium	mg/kg	0.51	U	0.52	U
Calcium	mg/kg	26800	J	-	
Chromium	mg/kg	2		4.20	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U
Cobalt	mg/kg	1.10	U	-	
Copper	mg/kg	2.50	U	2.70	
Iron	mg/kg	1370		-	
Lead	mg/kg	0.85		1.30	
Magnesium	mg/kg	3530		-	
Manganese	mg/kg	35.40		-	
Mercury	mg/kg	0.10	UN	0.10	UN
Nickel	mg/kg	4.10	U	4.10	U
Potassium	mg/kg	493	U	-	
Selenium	mg/kg	0.41	U	0.42	UL
Silver	mg/kg	1	U	1	U
Sodium	mg/kg	102	BQ	-	
Thallium	mg/kg	0.20	UL	0.21	U
Vanadium	mg/kg	2.70	B	-	
Zinc	mg/kg	3.30	QB	6.70	B
TPH					
Total Petroleum Hydrocarbons	mg/kg	14		8.70	

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SD001		SD002		SD004		SD003		SD005		SD001	
		SAMPLE ID:	PC-P1-SD001		PC-P1-SD002		PC-P1-SD004		PC-P1-SD003		PC-P1-SD005		PC-TF4-SD001	
		COLLECTION DATE:	09/13/93		09/13/93		09/13/93		09/13/93		09/13/93		07/29/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
1,1,1,2-Tetrachloroethane	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
1,1,1-Trichloroethane	ug/kg		3.50	U	3.10	U	2.70		3.50	U	3.30		6	U
1,1,2,2-Tetrachloroethane	ug/kg		0.77	U	0.68	U	0.74	U	0.78	U	0.78	U	1.30	U
1,1,2-Trichloroethane	ug/kg		1.10	U	0.97	U	1	U	1.10	U	1.10	U	1.90	U
1,1-Dichloroethane	ug/kg		0.96	U	0.85	U	0.93	U	0.97	U	0.97	U	1.70	U
1,1-Dichloroethylene	ug/kg		1.10	U	0.97	U	1	U	1.10	U	1.10	U	1.90	U
1,2,3-Trichloropropane	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
1,2-Dibromoethane	ug/kg		1.70	U	1.50	U	1.60	U	1.70	U	1.70	U	2.90	U
1,2-Dichlorobenzene	ug/kg		1.80	U	1.60	U	1.70	U	1.80	U	1.80	U	3.10	U
1,2-Dichloroethane	ug/kg		0.83	U	0.74	U	0.80	U	0.84	U	0.84	U	1.40	U
1,2-Dichloropropane	ug/kg		0.83	U	0.74	U	0.80	U	0.84	U	0.84	U	1.40	U
1,2-trans-Dichloroethylene	ug/kg		1.40	U	1.20	U	1.40	U	1.40	U	1.40	U	2.40	U
1,3-Dichlorobenzene	ug/kg		1.40	U	1.20	U	1.40	U	1.40	U	1.40	U	2.40	U
1,3-cis-Dichloropropylene	ug/kg		1.20	U	1.10	U	1.20	U	1.20	U	1.20	U	2.10	U
1,3-trans-Dichloropropylene	ug/kg		1.10	U	0.97	U	1	U	1.10	U	1.10	U	1.90	U
1,4-Dichlorobenzene	ug/kg		1.80	U	1.60	U	1.70	U	1.80	U	1.80	U	3.10	U
2-Chloroethylvinyl ether	ug/kg		1.40	U	1.20	U	1.40	U	1.40	U	1.40	U	2.40	U
2-Chlorotoluene	ug/kg		1.30	U	1.10	U	1.20	U	1.30	U	1.30	U	2.20	U
4-Chlorotoluene	ug/kg		1.40	U	1.20	U	1.40	U	1.40	U	1.40	U	2.40	U
Bromobenzene	ug/kg		0.96	U	0.85	U	0.93	U	0.97	U	0.97	U	1.70	U
Bromochloromethane	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
Bromodichloromethane	ug/kg		1.30	U	1.10	U	1.20	U	1.30	U	1.30	U	2.20	U
Bromoform	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
Carbon Tetrachloride	ug/kg		0.83	U	0.74	U	0.80	U	0.84	U	0.84	U	1.40	U
Chlorobenzene	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
Chloroethane	ug/kg		3.30	U	3	U	3.20	U	3.40	U	3.40	U	5.80	U
Chloroform	ug/kg		0.34	B	0.23	B	0.29	B	0.30	B	0.60	B	1.10	B
Dibromochloromethane	ug/kg		1	U	0.91	U	0.99	U	1	U	1	U	1.80	U
Dibromomethane	ug/kg		1.20	U	1	U	1.10	U	1.20	U	1.20	U	2	U
Methyl bromide	ug/kg		3.60	U	3.20	U	3.50	U	3.60	U	3.60	U	6.20	U
Methyl chloride	ug/kg		3.20	U	2.80	U	3.10	U	3.20	U	3.20	U	5.60	U
Methylene chloride	ug/kg		0.63	B	1.40	B	2.70	B	0.26	B	2.80	B	1.90	B
Tetrachloroethylene	ug/kg		1	U	0.91	U	0.99	U	1	U	1	U	1.80	U
Trichloroethylene	ug/kg		1	U	0.91	U	0.99	U	1	U	1	U	1.80	U
Vinyl chloride	ug/kg		3.30	U	3	U	3.20	U	3.40	U	3.40	U	5.80	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001		SD002		SD004		SD003		SD005		SD001	
SAMPLE ID:		PC-P1-SD001		PC-P1-SD002		PC-P1-SD004		PC-P1-SD003		PC-P1-SD005		PC-TF4-SD001	
COLLECTION DATE:		09/13/93		09/13/93		09/13/93		09/13/93		09/13/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2													
1,2-Dichlorobenzene	ug/kg	1.80	U	0.85	U	1.70	U	2	U	1.80	U	3.30	B
1,2-Dimethylbenzene	ug/kg	0.20	B	1.40	U	0.12	B	0.12	B	0.12	B	2.70	U
1,3-Dichlorobenzene	ug/kg	2.30	U	2	U	2.20	U	2.30	U	2.30	U	4	U
1,3/1,4-Dimethylbenzene	ug/kg	4.10	U	3.60	U	4	U	4.20	U	4.20	U	7.10	U
1,4-Dichlorobenzene	ug/kg	0.27	B	2	U	0.23	U	2.30	U	0.25	B	4	U
Benzene	ug/kg	1.80	U	1.60	U	1.70	U	1.80	U	1.80	U	3.10	U
Chlorobenzene	ug/kg	2.30	U	2	U	2.20	U	2.30	U	2.30	U	4	U
Ethylbenzene	ug/kg	2.30	U	2	U	2.20	U	2.30	U	2.30	U	4	U
Methyl-t-Butyl Ether	ug/kg	14	U	13	U	14	U	14	U	14	U	24	U
Styrene	ug/kg	1.90	U	1.70	U	1.90	U	1.90	U	1.90	U	3.30	U
Toluene	ug/kg	0.24	B	0.20	B	0.14	B	0.34	B	0.12	B	12	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
1,2-Dichlorobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
1,3-Dichlorobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
1,4-Dichlorobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,4,5-Trichlorophenol	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
2,4,6-Trichlorophenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,4-Dichlorophenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,4-Dimethylphenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,4-Dinitrophenol	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
2,4-Dinitrotoluene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2,6-Dinitrotoluene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2-Chloronaphthalene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2-Chlorophenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2-Methyl-4,6-Dinitrophenol	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
2-Methylnaphthalene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2-Methylphenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
2-Nitroaniline	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
2-Nitrophenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
3,3'-Dichlorobenzidine	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
3-Nitroaniline	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
4-Bromophenyl phenyl ether	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001		SD002		SD004		SD003		SD005		SD001	
SAMPLE ID:		PC-P1-SD001		PC-P1-SD002		PC-P1-SD004		PC-P1-SD003		PC-P1-SD005		PC-TF4-SD001	
COLLECTION DATE:		09/13/93		09/13/93		09/13/93		09/13/93		09/13/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
4-Chloroaniline	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
4-Chlorophenyl phenyl ether	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
4-Methylphenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
4-Nitroaniline	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
4-Nitrophenol	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U
Acenaphthene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Acenaphthylene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Anthracene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Benzo(a)anthracene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Benzo(a)pyrene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Benzo(b)fluoranthene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Benzo(ghi)perylene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Benzo(k)fluoranthene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Butyl benzyl phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Carbazole	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Chrysene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Di-n-butyl phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Di-n-octyl phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Dibenzo(a,h)anthracene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Dibenzofuran	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Diethyl phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Dimethyl phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Fluoranthene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Fluorene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Hexachlorobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Hexachlorobutadiene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Hexachlorocyclopentadiene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Hexachloroethane	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Indeno(1,2,3-c,d)pyrene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Isophorone	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
N-Nitrosodi-N-Propylamine	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
N-Nitrosodiphenylamine	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Naphthalene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Nitrobenzene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Pentachlorophenol	ug/kg	1000	U	890	U	990	U	1000	U	1000	U	1800	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001		SD002		SD004		SD003		SD005		SD001	
SAMPLE ID:		PC-P1-SD001		PC-P1-SD002		PC-P1-SD004		PC-P1-SD003		PC-P1-SD005		PC-TF4-SD001	
COLLECTION DATE:		09/13/93		09/13/93		09/13/93		09/13/93		09/13/93		07/29/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Phenol	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
Pyrene	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
bis(2-Chloroethoxy)methane	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
bis(2-Chloroethyl) ether	ug/kg	420	U	370	U	410	U	430	U	430	U	730	U
bis(2-Ethylhexyl)phthalate	ug/kg	420	U	370	U	410	U	430	U	430	U	90	B
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	5.70	UL	5.10	UL	5.50	UL	5.80	UL	5.90	UL	7.80	UL
Arsenic	mg/kg	3		8.50		3.10		0.96	0	3.40		2.30	
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.51	U	0.45	U	0.49	U	0.52	U	0.52	U	0.22	U
Cadmium	mg/kg	0.64	UL	0.57	UL	0.62	UL	0.65	UL	0.65	UL	0.67	U
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	4		3.30		3.70		2.80		14.70		10	
Chromium, Hexavalent	mg/l	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	2.30	0	4.30		6.30		1.90	U	24		4.80	0B
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	2.30	L	3.90	L	2.30	L	1.20	L	4	L	4.50	B
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.13	U	0.11	U	0.12	U	0.13	U	0.13	U	0.22	U
Nickel	mg/kg	4.50	U	4	U	4.30	U	4.60	0	11.70		4.50	0
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.38	UL	0.34	UL	0.37	U	0.39	U	0.39	U	1.10	
Silver	mg/kg	0.51	U	0.45	U	0.49	U	0.52	U	0.52	U	0.89	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.38	UL	0.34	UL	0.37	UL	0.39	U	0.39	U	0.67	U
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	15.70		12.30		19.60		15.30		30.30		13.80	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	43.90		85.30		41.10		133		94.80		6.30	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001A		SD002A		SD002B		SD003		SD004A		SD004B	
SAMPLE ID:		PC-TF4-SD001A		PC-TF4-SD002A		PC-TF4-SD002B		PC-TF4-SD003		PC-TF4-SD004A		PC-TF4-SD004B	
COLLECTION DATE:		07/29/93		07/29/93		07/29/93		07/29/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
1,1,1-Trichloroethane	ug/kg	3.90	U	0.36	B	3.90	U	3.60	U	3.60	U	3.60	U
1,1,2,2-Tetrachloroethane	ug/kg	0.86	U	0.97	UL	0.87	U	0.81	U	0.79	U	0.79	U
1,1,2-Trichloroethane	ug/kg	1.20	U	1.40	UL	1.20	U	1.10	U	1.10	U	1.10	U
1,1-Dichloroethane	ug/kg	1.10	U	1.20	UL	1.10	U	1	U	0.99	U	0.99	U
1,1-Dichloroethylene	ug/kg	1.20	U	1.40	UL	1.20	U	1.10	U	1.10	U	1.10	U
1,2,3-Trichloropropane	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
1,2-Dibromoethane	ug/kg	1.90	U	2.10	UL	1.90	U	1.80	U	1.70	U	1.70	U
1,2-Dichlorobenzene	ug/kg	2	U	2.30	UL	2	U	1.90	U	1.80	U	1.80	U
1,2-Dichloroethane	ug/kg	0.93	U	1	UL	0.94	U	0.88	U	0.86	U	0.86	U
1,2-Dichloropropane	ug/kg	0.93	U	1	UL	0.94	U	0.88	U	0.86	U	0.86	U
1,2-trans-Dichloroethylene	ug/kg	1.60	U	1.80	UL	1.60	U	1.50	U	1.40	U	1.40	U
1,3-Dichlorobenzene	ug/kg	1.60	U	1.80	UL	1.60	U	1.50	U	1.40	U	1.40	U
1,3-cis-Dichloropropylene	ug/kg	1.40	U	1.50	UL	1.40	U	1.30	U	1.20	U	1.20	U
1,3-trans-Dichloropropylene	ug/kg	1.20	U	1.40	UL	1.20	U	1.10	U	1.10	U	1.10	U
1,4-Dichlorobenzene	ug/kg	2	U	2.30	UL	2	U	1.90	U	1.80	U	1.80	U
2-Chloroethylvinyl ether	ug/kg	1.60	U	1.80	UL	1.60	U	1.50	U	1.40	U	1.40	U
2-Chlorotoluene	ug/kg	1.40	U	1.60	UL	1.40	U	1.40	U	1.30	U	1.30	U
4-Chlorotoluene	ug/kg	1.60	U	1.80	UL	1.60	U	1.50	U	1.40	U	1.40	U
Bromobenzene	ug/kg	1.10	U	1.20	UL	1.10	U	1	U	0.99	U	0.99	U
Bromochloromethane	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
Bromodichloromethane	ug/kg	1.40	U	1.60	UL	1.40	U	1.40	U	1.30	U	1.30	U
Bromoform	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
Carbon Tetrachloride	ug/kg	0.93	U	1	UL	0.94	U	0.88	U	0.86	U	0.86	U
Chlorobenzene	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
Chloroethane	ug/kg	3.70	U	4.20	UL	3.80	U	3.50	U	3.40	U	3.40	U
Chloroform	ug/kg	0.95	B	1.50	B	0.98	B	1	B	0.95	B	1.10	B
Dibromochloromethane	ug/kg	1.10	U	1.30	UL	1.20	U	1.10	U	1.10	U	1.10	U
Dibromomethane	ug/kg	1.30	U	1.50	UL	1.30	U	1.20	U	1.20	U	1.20	U
Methyl bromide	ug/kg	4	U	4.50	UL	4.10	U	3.80	U	3.70	U	3.70	U
Methyl chloride	ug/kg	3.60	U	4	UL	3.60	U	3.40	U	3.30	U	3.30	U
Methylene chloride	ug/kg	4.20		3	L	5.60		12		4.90		4	
Tetrachloroethylene	ug/kg	1.10	U	1.30	UL	1.20	U	1.10	U	1.10	U	1.10	U
Trichloroethylene	ug/kg	1.10	U	1.30	UL	1.20	U	1.10	U	1.10	U	1.10	U
Vinyl chloride	ug/kg	3.70	U	4.20	UL	3.80	U	3.50	U	3.40	U	3.40	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001A		SD002A		SD002B		SD003		SD004A		SD004B			
SAMPLE ID:		PC-TF4-SD001A		PC-TF4-SD002A		PC-TF4-SD002B		PC-TF4-SD003		PC-TF4-SD004A		PC-TF4-SD004B			
COLLECTION DATE:		07/29/93		07/29/93		07/29/93		07/29/93		07/30/93		07/30/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
2															
1,2-Dichlorobenzene	ug/kg	2	U	2.30	U	2	U	1.20	B	1.80	U	1.80	U		
1,2-Dimethylbenzene	ug/kg	1.70	U	1.90	U	1.70	U	1.60	U	1.60	U	1.60	U		
1,3-Dichlorobenzene	ug/kg	2.60	U	2.90	U	2.60	U	2.40	U	2.40	U	2.40	U		
1,3/1,4-Dimethylbenzene	ug/kg	4.60	U	5.20	U	4.60	U	4.30	U	4.20	U	4.20	U		
1,4-Dichlorobenzene	ug/kg	2.60	U	2.90	U	2.60	U	2.40	U	2.40	U	2.40	U		
Benzene	ug/kg	2	U	2.30	U	2	U	1.90	U	1.80	U	1.80	U		
Chlorobenzene	ug/kg	2.60	U	2.90	U	2.60	U	2.40	U	2.40	U	2.40	U		
Ethylbenzene	ug/kg	2.60	U	2.90	U	2.60	U	2.40	U	2.40	U	2.40	U		
Methyl-t-Butyl Ether	ug/kg	16	U	18	U	16	U	15	U	14	U	14	U		
Styrene	ug/kg	2.10	U	2.40	U	2.20	U	2	U	2	U	2	U		
Toluene	ug/kg	7.60	U	8.50	U	7.70	U	7.20	U	7	U	7	U		
CLP 3/90															
1,2,4-Trichlorobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
1,2-Dichlorobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
1,3-Dichlorobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
1,4-Dichlorobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,2'-Oxybis(1-Chloropropane)	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,4,5-Trichlorophenol	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U		
2,4,6-Trichlorophenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,4-Dichlorophenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,4-Dimethylphenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,4-Dinitrophenol	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U		
2,4-Dinitrotoluene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2,6-Dinitrotoluene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2-Chloronaphthalene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2-Chlorophenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2-Methyl-4,6-Dinitrophenol	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U		
2-Methylnaphthalene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2-Methylphenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
2-Nitroaniline	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U		
2-Nitrophenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
3,3'-Dichlorobenzidine	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		
3-Nitroaniline	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U		
4-Bromophenyl phenyl ether	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U		

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD001A		SD002A		SD002B		SD003		SD004A		SD004B	
SAMPLE ID:		PC-TF4-SD001A		PC-TF4-SD002A		PC-TF4-SD002B		PC-TF4-SD003		PC-TF4-SD004A		PC-TF4-SD004B	
COLLECTION DATE:		07/29/93		07/29/93		07/29/93		07/29/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
4-Chloroaniline	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
4-Chlorophenyl phenyl ether	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
4-Methylphenol	ug/kg	470	U	130	J	470	U	440	U	430	U	430	U
4-Nitroaniline	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U
4-Nitrophenol	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U
Acenaphthene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Acenaphthylene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Anthracene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Benzo(a)anthracene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Benzo(a)pyrene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Benzo(b)fluoranthene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Benzo(ghi)perylene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Benzo(k)fluoranthene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Butyl benzyl phthalate	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Carbazole	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Chrysene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Di-n-butyl phthalate	ug/kg	470	U	56		470	U	440	U	430	U	430	U
Di-n-octyl phthalate	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Dibenzo(a,h)anthracene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Dibenzofuran	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Diethyl phthalate	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Dimethyl phthalate	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Fluoranthene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Fluorene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Hexachlorobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Hexachlorobutadiene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Hexachlorocyclopentadiene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Hexachloroethane	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Indeno(1,2,3-c,d)pyrene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Isophorone	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
N-Nitrosodi-N-Propylamine	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
N-Nitrosodiphenylamine	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Naphthalene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Nitrobenzene	ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Pentachlorophenol	ug/kg	1100	U	1300	U	1100	U	1100	U	1000	U	1000	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	SD001A		SD002A		SD002B		SD003		SD004A		SD004B	
SAMPLE ID:	PC-TF4-SD001A		PC-TF4-SD002A		PC-TF4-SD002B		PC-TF4-SD003		PC-TF4-SD004A		PC-TF4-SD004B	
COLLECTION DATE:	07/29/93		07/29/93		07/29/93		07/29/93		07/30/93		07/30/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Phenol ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
Pyrene ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
bis(2-Chloroethoxy)methane ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
bis(2-Chloroethyl) ether ug/kg	470	U	530	U	470	U	440	U	430	U	430	U
bis(2-Ethylhexyl)phthalate ug/kg	50	B	110	B	470	U	110	B	430	U	430	U
METALS												
Aluminum mg/kg	-		-		-		-		-		-	
Antimony mg/kg	5	UL	5.60	UL	5.10	UL	4.80	UL	4.60	UL	4.60	UL
Arsenic mg/kg	0.79	0	0.77	(L)	0.60	0	0.78	0	0.53	0	1.10	0
Barium mg/kg	-		-		-		-		-		-	
Beryllium mg/kg	0.14	U	0.16	U	0.14	U	0.14	U	0.13	U	0.13	U
Cadmium mg/kg	0.43	U	0.48	U	0.43	U	0.41	U	0.39	U	0.40	U
Calcium mg/kg	-		-		-		-		-		-	
Chromium mg/kg	3.80		3.20		4		4.60		3.10		3.50	
Chromium, Hexavalent mg/l	-		-		-		-		-		-	
Cobalt mg/kg	-		-		-		-		-		-	
Copper mg/kg	2.60	0B	1.40	0B	1.80	0B	1.50	0B	1.70	0B	2.10	0B
Iron mg/kg	-		-		-		-		-		-	
Lead mg/kg	0.93	B	1.30	B	0.90	B	3	B	1.90	B	1.60	B
Magnesium mg/kg	-		-		-		-		-		-	
Manganese mg/kg	-		-		-		-		-		-	
Mercury mg/kg	0.14	U	0.16	U	0.14	U	0.14	U	0.13	U	0.13	U
Nickel mg/kg	2.60	U	2.90	U	2.60	U	2.40	U	2.40	U	2.40	U
Potassium mg/kg	-		-		-		-		-		-	
Selenium mg/kg	0.43	U	0.48	U	0.43	U	0.42	(L)	0.39	U	0.40	UL
Silver mg/kg	0.57	U	0.65	U	0.58	U	0.54	U	0.53	U	0.53	U
Sodium mg/kg	-		-		-		-		-		-	
Thallium mg/kg	0.43	U	0.48	U	0.43	UL	0.41	U	0.39	U	0.40	U
Vanadium mg/kg	-		-		-		-		-		-	
Zinc mg/kg	4.80	B	5.60	B	5.90	B	7.30	B	12.70	B	9.10	B
TPH												
Total Petroleum Hydrocarbons mg/kg	6.30	U	6.30	U	6.30	U	6.30	U	6.30	U	6.30	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD104B		SD005A		SD005B		SD006A		SD006B		SD106B	
SAMPLE ID:		PC-TF4-SD104B		PC-TF4-SD005A		PC-TF4-SD005B		PC-TF4-SD006A		PC-TF4-SD006B		PC-TF4-SD106B	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
1,1,1-Trichloroethane	ug/kg	3.60	U	5.20	U	3.80	U	1.60	B	3.90	U	0.43	B
1,1,2,2-Tetrachloroethane	ug/kg	0.81	U	1.20	U	0.85	U	0.80	U	0.86	U	0.90	U
1,1,2-Trichloroethane	ug/kg	1.10	U	1.60	U	1.20	U	1.10	U	1.20	U	1.30	U
1,1-Dichloroethane	ug/kg	1	U	1.40	U	1.10	U	1	U	1.10	U	1.10	U
1,1-Dichloroethylene	ug/kg	1.10	U	1.60	U	1.20	U	1.10	U	1.20	U	1.30	U
1,2,3-Trichloropropane	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
1,2-Dibromoethane	ug/kg	1.80	U	2.50	U	1.80	U	1.70	U	1.90	U	1.90	U
1,2-Dichlorobenzene	ug/kg	1.90	U	2.70	U	2	U	1.90	U	2	U	2.10	U
1,2-Dichloroethane	ug/kg	0.88	U	1.20	U	0.92	U	0.87	U	0.93	U	0.97	U
1,2-Dichloropropane	ug/kg	0.88	U	1.20	U	0.92	U	0.87	U	0.93	U	0.97	U
1,2-trans-Dichloroethylene	ug/kg	1.50	U	2.10	U	1.50	U	1.50	U	1.60	U	1.60	U
1,3-Dichlorobenzene	ug/kg	1.50	U	2.10	U	1.50	U	1.50	U	1.60	U	1.60	U
1,3-cis-Dichloropropylene	ug/kg	1.30	U	1.80	U	1.30	U	1.30	U	1.40	U	1.40	U
1,3-trans-Dichloropropylene	ug/kg	1.10	U	1.60	U	1.20	U	1.10	U	1.20	U	1.30	U
1,4-Dichlorobenzene	ug/kg	1.90	U	2.70	U	2	U	1.90	U	2	U	2.10	U
2-Chloroethylvinyl ether	ug/kg	1.50	U	2.10	U	1.50	U	1.50	U	1.60	U	1.60	U
2-Chlorotoluene	ug/kg	1.40	U	1.90	U	1.40	U	1.30	U	1.40	U	1.50	U
4-Chlorotoluene	ug/kg	1.50	U	2.10	U	1.50	U	1.50	U	1.60	U	1.60	U
Bromobenzene	ug/kg	1	U	1.40	U	1.10	U	1	U	1.10	U	1.10	U
Bromochloromethane	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
Bromodichloromethane	ug/kg	1.40	U	1.90	U	1.40	U	1.30	U	1.40	U	1.50	U
Bromoform	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
Carbon Tetrachloride	ug/kg	0.88	U	1.20	U	0.92	U	0.87	U	0.93	U	0.97	U
Chlorobenzene	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
Chloroethane	ug/kg	3.50	U	5	U	3.70	U	3.50	U	3.70	U	3.90	U
Chloroform	ug/kg	1.10	B	1.10	B	0.95	B	0.57	B	0.74	B	0.99	B
Dibromochloromethane	ug/kg	1.10	U	1.50	U	1.10	U	1.10	U	1.10	U	1.20	U
Dibromomethane	ug/kg	1.20	U	1.70	U	1.30	U	1.20	U	1.30	U	1.30	U
Methyl bromide	ug/kg	3.80	U	5.40	U	3.90	U	3.70	U	4	U	4.20	U
Methyl chloride	ug/kg	3.40	U	4.80	U	3.50	U	3.30	U	3.60	U	3.70	U
Methylene chloride	ug/kg	3.30	B	18	B	16		2.90	B	2.70	B	3.90	B
Tetrachloroethylene	ug/kg	1.10	U	1.50	U	1.10	U	1.10	U	1.10	U	1.20	U
Trichloroethylene	ug/kg	1.10	U	1.50	U	1.10	U	0.09	J	1.10	U	1.20	U
Vinyl chloride	ug/kg	3.50	U	5	U	3.70	U	3.50	U	3.70	U	3.90	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD104B		SD005A		SD005B		SD006A		SD006B		SD106B	
SAMPLE ID:		PC-TF4-SD104B		PC-TF4-SD005A		PC-TF4-SD005B		PC-TF4-SD006A		PC-TF4-SD006B		PC-TF4-SD106B	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2													
1,2-Dichlorobenzene	ug/kg	1.90	U	2.70	U	2	U	1.90	U	2	U	2.10	U
1,2-Dimethylbenzene	ug/kg	1.60	U	2.30	U	1.70	U	1.60	U	1.70	U	1.80	U
1,3-Dichlorobenzene	ug/kg	2.40	U	3.50	U	2.50	U	2.40	U	2.60	U	2.70	U
1,3/1,4-Dimethylbenzene	ug/kg	4.30	U	6.20	U	4.50	U	4.30	U	4.60	U	4.80	U
1,4-Dichlorobenzene	ug/kg	2.40	U	3.50	U	2.50	U	2.40	U	2.60	U	2.70	U
Benzene	ug/kg	1.90	U	2.70	U	2	U	1.90	U	2	U	2.10	U
Chlorobenzene	ug/kg	2.40	U	3.50	U	2.50	U	2.40	U	2.60	U	2.70	U
Ethylbenzene	ug/kg	2.40	U	3.50	U	2.50	U	2.40	U	2.60	U	2.70	U
Methyl-t-Butyl Ether	ug/kg	15	U	21	U	15	U	15	U	16	U	16	U
Styrene	ug/kg	2	U	2.90	U	2.10	U	2	U	2.10	U	2.20	U
Toluene	ug/kg	7.20	U	10	U	7.50	U	7.10	U	7.60	U	7.90	U
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
1,2-Dichlorobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
1,3-Dichlorobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
1,4-Dichlorobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	440	U	630	U	430	U	430	U	470	U	120	
2,4,5-Trichlorophenol	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
2,4,6-Trichlorophenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2,4-Dichlorophenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2,4-Dimethylphenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2,4-Dinitrophenol	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
2,4-Dinitrotoluene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2,6-Dinitrotoluene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2-Chloronaphthalene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2-Chlorophenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2-Methyl-4,6-Dinitrophenol	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
2-Methylnaphthalene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2-Methylphenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
2-Nitroaniline	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
2-Nitrophenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
3,3'-Dichlorobenzidine	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
3-Nitroaniline	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
4-Bromophenyl phenyl ether	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD104B		SD005A		SD005B		SD006A		SD006B		SD106B	
SAMPLE ID:		PC-TF4-SD104B		PC-TF4-SD005A		PC-TF4-SD005B		PC-TF4-SD006A		PC-TF4-SD006B		PC-TF4-SD106B	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
4-Chloroaniline	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
4-Chlorophenyl phenyl ether	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
4-Methylphenol	ug/kg	440	U	630	U	430	U	430	U	470	U	54	J
4-Nitroaniline	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
4-Nitrophenol	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U
Acenaphthene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Acenaphthylene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Anthracene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Benzo(a)anthracene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Benzo(a)pyrene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Benzo(b)fluoranthene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Benzo(ghi)perylene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Benzo(k)fluoranthene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Butyl benzyl phthalate	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Carbazole	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Chrysene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Di-n-butyl phthalate	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Di-n-octyl phthalate	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Dibenzo(a,h)anthracene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Dibenzofuran	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Diethyl phthalate	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Dimethyl phthalate	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Fluoranthene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Fluorene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Hexachlorobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Hexachlorobutadiene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Hexachlorocyclopentadiene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Hexachloroethane	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Indeno(1,2,3-c,d)pyrene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Isophorone	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
N-Nitrosodi-N-Propylamine	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
N-Nitrosodiphenylamine	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Naphthalene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Nitrobenzene	ug/kg	440	U	630	U	430	U	430	U	470	U	490	U
Pentachlorophenol	ug/kg	1100	U	1500	U	1100	U	1100	U	1100	U	1200	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SD104B		SD005A		SD005B		SD006A		SD006B		SD106B	
		SAMPLE ID:	PC-TF4-SD104B		PC-TF4-SD005A		PC-TF4-SD005B		PC-TF4-SD006A		PC-TF4-SD006B		PC-TF4-SD106B	
		COLLECTION DATE:	07/30/93		07/30/93		07/30/93		07/30/93		07/30/93		07/30/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg		440	U	630	U	430	U	430	U	470	U	490	U
Phenol	ug/kg		440	U	630	U	430	U	430	U	470	U	490	U
Pyrene	ug/kg		440	U	630	U	430	U	430	U	470	U	490	U
bis(2-Chloroethoxy)methane	ug/kg		440	U	630	U	430	U	430	U	470	U	490	U
bis(2-Chloroethyl) ether	ug/kg		440	U	630	U	430	U	430	U	470	U	490	U
bis(2-Ethylhexyl)phthalate	ug/kg		440	U	100	B	430	U	280	B	470	U	60	B
METALS														
Aluminum	mg/kg		-		-		-		-		-		-	
Antimony	mg/kg		4.70	UL	6.70	UL	4.70	UL	4.60	UL	5	UL	5.20	UL
Arsenic	mg/kg		0.85	0	1.20	0	0.54	U	1.70		0.53	UL	1.30	0
Barium	mg/kg		-		-		-		-		-		-	
Beryllium	mg/kg		0.13	U	0.19	U	0.13	U	0.13	U	0.14	U	0.15	U
Cadmium	mg/kg		0.40	U	0.58	U	0.40	U	0.40	U	0.43	U	0.45	U
Calcium	mg/kg		-		-		-		-		-		-	
Chromium	mg/kg		3.80		6.30		4.10		4.10		3.60		4.20	
Chromium, Hexavalent	mg/l		-		-		-		-		-		-	
Cobalt	mg/kg		-		-		-		-		-		-	
Copper	mg/kg		2.10	0B	6.20	B	1.40	0B	2.40	0B	1.90	0B	1.90	0B
Iron	mg/kg		-		-		-		-		-		-	
Lead	mg/kg		1.40	B	8.10	B	1.60	B	3.80	B	1.20	B	1.90	B
Magnesium	mg/kg		-		-		-		-		-		-	
Manganese	mg/kg		-		-		-		-		-		-	
Mercury	mg/kg		0.13	U	0.19	U	0.13	U	0.13	U	0.14	U	0.15	U
Nickel	mg/kg		2.60	0	3.50	U	2.40	U	2.40	U	2.60	U	2.70	U
Potassium	mg/kg		-		-		-		-		-		-	
Selenium	mg/kg		0.40	U	0.72	(L)	0.40	U	0.40	U	0.43	U	0.45	U
Silver	mg/kg		0.54	U	0.77	U	0.54	U	0.53	U	0.57	U	0.60	U
Sodium	mg/kg		-		-		-		-		-		-	
Thallium	mg/kg		0.40	U	0.58	U	0.40	U	0.40	U	0.43	U	0.45	UL
Vanadium	mg/kg		-		-		-		-		-		-	
Zinc	mg/kg		8.50	B	8.90	B	6.90	B	8.60	B	10.50	B	8.30	B
TPH														
Total Petroleum Hydrocarbons	mg/kg		6.30	U	6.30	U	6.30	U	47.30		51.90		593	

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD007		SD008		SD009A		SD009B		SD010A		SD010B	
SAMPLE ID:		PC-TF4-SD007		PC-TF4-SD008		PC-TF4-SD009A		PC-TF4-SD009B		PC-TF4-SD010A		PC-TF4-SD010B	
COLLECTION DATE:		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.20	U	1.20	U	0.94	U	1.10	U	1.40	U	R	
1,1,1-Trichloroethane	ug/kg	3.60	U	3.60	U	2.80	U	3.40	U	4.20	U	0.28	B
1,1,2,2-Tetrachloroethane	ug/kg	0.80	U	0.79	U	0.63	U	0.76	U	0.92	U	R	
1,1,2-Trichloroethane	ug/kg	1.10	U	1.10	U	0.89	U	1.10	U	1.30	U	R	
1,1-Dichloroethane	ug/kg	1	U	0.99	U	0.78	U	0.95	U	1.20	U	R	
1,1-Dichloroethylene	ug/kg	1.10	U	1.10	U	0.89	U	1.10	U	1.30	U	0.89	U
1,2,3-Trichloropropane	ug/kg	1.20	U	1.20	U	0.94	U	1.10	U	1.40	U	R	
1,2-Dibromoethane	ug/kg	1.70	U	1.70	U	1.40	U	1.60	U	2	U	1.40	U
1,2-Dichlorobenzene	ug/kg	1.90	U	1.80	U	1.50	UJ	1.80	UJ	2.20	UJ	R	
1,2-Dichloroethane	ug/kg	0.87	U	0.86	U	0.68	U	0.82	U	1	U	R	
1,2-Dichloropropane	ug/kg	0.87	U	0.86	U	0.68	U	0.82	U	1	U	R	
1,2-trans-Dichloroethylene	ug/kg	1.50	U	1.40	U	1.10	U	1.40	U	1.70	U	R	
1,3-Dichlorobenzene	ug/kg	1.50	U	1.40	U	1.10	UJ	1.40	UJ	1.70	UJ	R	
1,3-cis-Dichloropropylene	ug/kg	1.30	U	1.20	U	0.99	U	1.20	U	1.50	U	R	
1,3-trans-Dichloropropylene	ug/kg	1.10	U	1.10	U	0.89	U	1.10	U	1.30	U	0.89	U
1,4-Dichlorobenzene	ug/kg	1.90	U	1.80	U	1.50	UJ	1.80	UJ	2.20	UJ	R	
2-Chloroethylvinyl ether	ug/kg	1.50	U	1.40	U	1.10	U	1.40	U	1.70	U	1.10	U
2-Chlorotoluene	ug/kg	1.30	U	1.30	U	1	UJ	1.30	UJ	1.50	UJ	R	
4-Chlorotoluene	ug/kg	1.50	U	1.40	U	1.10	UJ	1.40	UJ	1.70	UJ	R	
Bromobenzene	ug/kg	1	U	0.99	U	0.78	UJ	0.95	UJ	1.20	UJ	R	
Bromochloromethane	ug/kg	1.20	U	1.20	U	0.94	U	1.10	U	1.40	U	R	
Bromodichloromethane	ug/kg	1.30	U	1.30	U	1	U	1.30	U	1.50	U	1	U
Bromoform	ug/kg	1.20	U	1.20	U	0.94	U	1.10	U	1.40	U	0.94	U
Carbon Tetrachloride	ug/kg	0.87	U	0.86	U	0.68	U	0.82	U	1	U	R	
Chlorobenzene	ug/kg	1.20	U	1.20	U	0.94	UJ	1.10	UJ	1.40	UJ	R	
Chloroethane	ug/kg	3.50	U	3.40	U	2.70	U	3.30	U	4	U	2.70	U
Chloroform	ug/kg	0.82	B	0.72	B	0.68	B	0.74	B	0.82	B	0.54	B
Dibromochloromethane	ug/kg	1.10	U	1.10	U	0.83	U	1	U	1.20	U	0.83	U
Dibromomethane	ug/kg	1.20	U	1.20	U	0.94	U	1.10	U	1.40	U	R	
Methyl bromide	ug/kg	3.70	U	3.70	U	2.90	U	3.50	U	4.30	U	2.90	U
Methyl chloride	ug/kg	3.30	U	3.30	U	2.60	U	3.20	U	3.80	U	2.60	U
Methylene chloride	ug/kg	4.70	B	4	U	1.90		1.30	U	1.50	U	2.70	B
Tetrachloroethylene	ug/kg	1.10	U	1.10	U	0.83	U	1	U	1.20	U	R	
Trichloroethylene	ug/kg	1.10	U	1.10	U	0.83	U	1	U	1.20	U	R	
Vinyl chloride	ug/kg	3.50	U	3.40	U	2.70	U	3.30	U	4	U	2.70	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD007		SD008		SD009A		SD009B		SD010A		SD010B	
SAMPLE ID:		PC-TF4-SD007		PC-TF4-SD008		PC-TF4-SD009A		PC-TF4-SD009B		PC-TF4-SD010A		PC-TF4-SD010B	
COLLECTION DATE:		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2													
1,2-Dichlorobenzene	ug/kg	3	B	2.80	B	1.50	UJ	2.50	B	2.20	UJ	1.50	UJ
1,2-Dimethylbenzene	ug/kg	1.60	U	1.60	U	1.30	UJ	1.50	U	1.80	UJ	1.30	UJ
1,3-Dichlorobenzene	ug/kg	2.40	U	2.40	U	1.90	UJ	2.30	U	2.80	UJ	1.90	UJ
1,3/1,4-Dimethylbenzene	ug/kg	4.30	U	4.20	U	3.30	UJ	4.10	U	4.90	UJ	3.30	UJ
1,4-Dichlorobenzene	ug/kg	2.40	U	2.40	U	1.90	UJ	2.30	U	2.80	UJ	0.06	B
Benzene	ug/kg	1.90	U	1.80	U	1.50	UJ	1.80	U	2.20	UJ	1.50	UJ
Chlorobenzene	ug/kg	2.40	U	2.40	U	1.90	UJ	2.30	U	2.80	UJ	1.90	UJ
Ethylbenzene	ug/kg	2.40	U	2.40	U	1.90	UJ	2.30	U	2.80	UJ	1.90	UJ
Methyl-t-Butyl Ether	ug/kg	15	U	14	U	11	UJ	14	U	17	UJ	11	UJ
Styrene	ug/kg	2	U	2	U	1.60	UJ	1.90	U	2.30	UJ	1.60	UJ
Toluene	ug/kg	7.10	U	7	U	5.50	UJ	6.70	U	8.20	UJ	0.08	J
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
1,2-Dichlorobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
1,3-Dichlorobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
1,4-Dichlorobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,4,5-Trichlorophenol	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
2,4,6-Trichlorophenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,4-Dichlorophenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,4-Dimethylphenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,4-Dinitrophenol	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
2,4-Dinitrotoluene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2,6-Dinitrotoluene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2-Chloronaphthalene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2-Chlorophenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2-Methyl-4,6-Dinitrophenol	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
2-Methylnaphthalene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2-Methylphenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
2-Nitroaniline	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
2-Nitrophenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
3,3'-Dichlorobenzidine	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
3-Nitroaniline	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
4-Bromophenyl phenyl ether	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD007		SD008		SD009A		SD009B		SD010A		SD010B	
SAMPLE ID:		PC-TF4-SD007		PC-TF4-SD008		PC-TF4-SD009A		PC-TF4-SD009B		PC-TF4-SD010A		PC-TF4-SD010B	
COLLECTION DATE:		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
4-Chloroaniline	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
4-Chlorophenyl phenyl ether	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
4-Methylphenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
4-Nitroaniline	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
4-Nitrophenol	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U
Acenaphthene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Acenaphthylene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Anthracene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Benzo(a)anthracene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Benzo(a)pyrene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Benzo(b)fluoranthene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Benzo(ghi)perylene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Benzo(k)fluoranthene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Butyl benzyl phthalate	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Carbazole	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Chrysene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Di-n-butyl phthalate	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Di-n-octyl phthalate	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Dibenzo(a,h)anthracene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Dibenzofuran	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Diethyl phthalate	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Dimethyl phthalate	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Fluoranthene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Fluorene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Hexachlorobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Hexachlorobutadiene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Hexachlorocyclopentadiene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Hexachloroethane	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Indeno(1,2,3-c,d)pyrene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Isophorone	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
N-Nitrosodi-N-Propylamine	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
N-Nitrosodiphenylamine	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Naphthalene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Nitrobenzene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Pentachlorophenol	ug/kg	1100	U	1000	U	820	U	1000	U	1200	U	820	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD007		SD008		SD009A		SD009B		SD010A		SD010B	
SAMPLE ID:		PC-TF4-SD007		PC-TF4-SD008		PC-TF4-SD009A		PC-TF4-SD009B		PC-TF4-SD010A		PC-TF4-SD010B	
COLLECTION DATE:		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93		07/31/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Phenol	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
Pyrene	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
bis(2-Chloroethoxy)methane	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
bis(2-Chloroethyl) ether	ug/kg	430	U	430	U	340	U	410	U	500	U	340	U
bis(2-Ethylhexyl)phthalate	ug/kg	430	U	430	U	42	B	46	B	55	B	41	B
METALS													
Aluminum	mg/kg	-		-		-		-		-		-	
Antimony	mg/kg	4.60	UL	4.60	UL	3.60	UL	4.40	UL	5.40	UL	3.60	UL
Arsenic	mg/kg	0.53	U	0.53	U	0.61	(L)	0.90	()	0.85	(L)	0.65	(L)
Barium	mg/kg	-		-		-		-		-		-	
Beryllium	mg/kg	0.13	U	0.13	U	0.10	U	0.13	()B	0.15	U	0.10	U
Cadmium	mg/kg	0.40	U	0.39	U	0.31	U	0.38	U	0.46	U	0.31	U
Calcium	mg/kg	-		-		-		-		-		-	
Chromium	mg/kg	2.40		3.90		2.90		5.60		4.40		2.40	
Chromium, Hexavalent	mg/l	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	0.78	()B	1.60	()B	1.70	()B	3.20	B	4.50	B	1.70	()B
Iron	mg/kg	-		-		-		-		-		-	
Lead	mg/kg	0.93	B	4.60	B	3.90	B	1.10	B	14.50	B	3.40	B
Magnesium	mg/kg	-		-		-		-		-		-	
Manganese	mg/kg	-		-		-		-		-		-	
Mercury	mg/kg	0.13	U	0.13	U	0.10	U	0.13	U	0.15	U	0.10	U
Nickel	mg/kg	2.40	U	2.40	U	1.90	U	4.50	()	3	()	2.50	()
Potassium	mg/kg	-		-		-		-		-		-	
Selenium	mg/kg	0.40	U	0.39	U	0.31	U	0.38	U	0.46	U	0.31	UL
Silver	mg/kg	0.53	U	0.53	U	0.41	U	0.51	U	0.61	U	0.42	U
Sodium	mg/kg	-		-		-		-		-		-	
Thallium	mg/kg	0.40	U	0.39	U	0.31	U	0.38	U	0.46	U	0.31	U
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	6.30	B	10.60	B	10.20	B	12.20	B	79.20	B	7.80	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	6.30	U	10		6.30	U	6.30	U	23.70		6.30	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD011		SD012		SD013		SD014		SD015		SD115	
SAMPLE ID:		PC-TF4-SD011		PC-TF4-SD012		PC-TF4-SD013		PC-TF4-SD014		PC-TF4-SD015		PC-TF4-SD115	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U
1,1,1-Trichloroethane	ug/kg	0.34	B	3.70	U	3.70	U	0.37	B	3.60	U	0.37	B
1,1,2,2-Tetrachloroethane	ug/kg	0.79	U	0.83	U	0.82	U	0.80	UJ	0.80	U	0.80	U
1,1,2-Trichloroethane	ug/kg	1.10	U	1.20	U	1.20	U	1.10	UJ	1.10	U	1.10	U
1,1-Dichloroethane	ug/kg	0.99	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethylene	ug/kg	1.10	U	1.20	U	1.20	U	1.10	U	1.10	U	1.10	U
1,2,3-Trichloropropane	ug/kg	1.20	U	1.20	U	1.20	U	1.20	UJ	1.20	U	1.20	U
1,2-Dibromoethane	ug/kg	1.70	U	1.80	U	1.80	U	1.70	U	1.70	U	1.70	U
1,2-Dichlorobenzene	ug/kg	1.80	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
1,2-Dichloroethane	ug/kg	0.86	U	0.90	U	0.89	U	0.87	U	0.87	U	0.87	U
1,2-Dichloropropane	ug/kg	0.86	U	0.90	U	0.89	U	0.87	U	0.87	U	0.87	U
1,2-trans-Dichloroethylene	ug/kg	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
1,3-Dichlorobenzene	ug/kg	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
1,3-cis-Dichloropropylene	ug/kg	1.20	U	1.30	U	1.30	U	1.30	U	1.30	U	1.30	U
1,3-trans-Dichloropropylene	ug/kg	1.10	U	1.20	U	1.20	U	1.10	U	1.10	U	1.10	U
1,4-Dichlorobenzene	ug/kg	1.80	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
2-Chloroethylvinyl ether	ug/kg	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
2-Chlorotoluene	ug/kg	1.30	U	1.40	U	1.40	U	1.30	U	1.30	U	1.30	U
4-Chlorotoluene	ug/kg	1.40	U	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
Bromobenzene	ug/kg	0.99	U	1	U	1	U	1	U	1	U	1	U
Bromochloromethane	ug/kg	1.20	U	1.20	U	1.20	U	1.20	UJ	1.20	U	1.20	U
Bromodichloromethane	ug/kg	1.30	U	1.40	U	1.40	U	1.30	U	1.30	U	1.30	U
Bromoform	ug/kg	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U
Carbon Tetrachloride	ug/kg	0.86	U	0.90	U	0.89	U	0.87	U	0.87	U	0.87	U
Chlorobenzene	ug/kg	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U	1.20	U
Chloroethane	ug/kg	3.40	U	3.60	U	3.60	U	3.50	U	3.50	U	3.50	U
Chloroform	ug/kg	1.20	B	1	B	1.10	B	1.20	B	0.96	B	1.20	B
Dibromochloromethane	ug/kg	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
Dibromomethane	ug/kg	1.20	U	1.20	U	1.20	U	1.20	UJ	1.20	U	1.20	U
Methyl bromide	ug/kg	3.70	U	3.90	U	3.80	U	3.70	U	3.70	U	3.70	U
Methyl chloride	ug/kg	3.30	U	3.50	U	3.40	U	3.30	U	3.30	U	3.30	U
Methylene chloride	ug/kg	2	B	2.10	B	4.90	B	4.10	UJ	1.30	U	6.90	B
Tetrachloroethylene	ug/kg	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
Trichloroethylene	ug/kg	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U	1.10	U
Vinyl chloride	ug/kg	3.40	U	3.60	U	3.60	U	3.50	U	3.50	U	3.50	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	SD011		SD012		SD013		SD014		SD015		SD115	
SAMPLE ID:	PC-TF4-SD011		PC-TF4-SD012		PC-TF4-SD013		PC-TF4-SD014		PC-TF4-SD015		PC-TF4-SD115	
COLLECTION DATE:	08/01/93		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2												
1,2-Dichlorobenzene ug/kg	1.80	U	1.90	U	1.90	U	1.90	U	1.90	U	1.20	U
1,2-Dimethylbenzene ug/kg	1.60	U	1.70	U	1.60	U	1.60	U	1.60	U	1.60	U
1,3-Dichlorobenzene ug/kg	2.40	U	2.50	U	2.50	U	2.40	U	2.40	U	2.40	U
1,3/1,4-Dimethylbenzene ug/kg	4.20	U	4.40	U	4.40	U	4.30	U	4.30	U	4.30	U
1,4-Dichlorobenzene ug/kg	2.40	U	2.50	U	2.50	U	2.40	U	2.40	U	2.40	U
Benzene ug/kg	1.80	U	1.90	U	1.90	U	1.90	U	1.90	U	1.90	U
Chlorobenzene ug/kg	2.40	U	2.50	U	2.50	U	2.40	U	2.40	U	2.40	U
Ethylbenzene ug/kg	2.40	U	2.50	U	2.50	U	2.40	U	2.40	U	2.40	U
Methyl-t-Butyl Ether ug/kg	14	U	15	U	15	U	3.80		15	U	15	U
Styrene ug/kg	2	U	2.10	U	2.10	U	2	U	2	U	2	U
Toluene ug/kg	7	U	7.40	U	7.30	U	7.10	U	7.10	U	7.10	U
CLP 3/90												
1,2,4-Trichlorobenzene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
1,2-Dichlorobenzene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
1,3-Dichlorobenzene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
1,4-Dichlorobenzene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,2'-Oxybis(1-Chloropropane) ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,4,5-Trichlorophenol ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
2,4,6-Trichlorophenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,4-Dichlorophenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,4-Dimethylphenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,4-Dinitrophenol ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
2,4-Dinitrotoluene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2,6-Dinitrotoluene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2-Chloronaphthalene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2-Chlorophenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2-Methyl-4,6-Dinitrophenol ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
2-Methylnaphthalene ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2-Methylphenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
2-Nitroaniline ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
2-Nitrophenol ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
3,3'-Dichlorobenzidine ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
3-Nitroaniline ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
4-Bromophenyl phenyl ether ug/kg	430	U	450	U	450	U	430	U	440	U	430	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD011		SD012		SD013		SD014		SD015		SD115	
SAMPLE ID:		PC-TF4-SD011		PC-TF4-SD012		PC-TF4-SD013		PC-TF4-SD014		PC-TF4-SD015		PC-TF4-SD115	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
4-Chloroaniline	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
4-Chlorophenyl phenyl ether	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
4-Methylphenol	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
4-Nitroaniline	ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
4-Nitrophenol	ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U
Acenaphthene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Acenaphthylene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Anthracene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Benzo(a)anthracene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Benzo(a)pyrene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Benzo(b)fluoranthene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Benzo(ghi)perylene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Benzo(k)fluoranthene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Butyl benzyl phthalate	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Carbazole	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Chrysene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Di-n-butyl phthalate	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Di-n-octyl phthalate	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Dibenzo(a,h)anthracene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Dibenzofuran	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Diethyl phthalate	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Dimethyl phthalate	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Fluoranthene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Fluorene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Hexachlorobenzene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Hexachlorobutadiene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Hexachlorocyclopentadiene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Hexachloroethane	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Indeno(1,2,3-c,d)pyrene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Isophorone	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
N-Nitrosodi-N-Propylamine	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
N-Nitrosodiphenylamine	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Naphthalene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Nitrobenzene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Pentachlorophenol	ug/kg	1000	U	1100	U	1100	U	1100	U	1100	U	1000	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD011		SD012		SD013		SD014		SD015		SD115	
SAMPLE ID:		PC-TF4-SD011		PC-TF4-SD012		PC-TF4-SD013		PC-TF4-SD014		PC-TF4-SD015		PC-TF4-SD115	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93		08/01/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Phenol	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
Pyrene	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
bis(2-Chloroethoxy)methane	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
bis(2-Chloroethyl) ether	ug/kg	430	U	450	U	450	U	430	U	440	U	430	U
bis(2-Ethylhexyl)phthalate	ug/kg	430	U	47	B	450	U	430	U	440	U	430	U
METALS													
Aluminum	mg/kg	1240		1340		1590		1850		-		1290	
Antimony	mg/kg	6	UL	6.30	UL	6.20	UL	6	UL	4.60	UL	5.90	UL
Arsenic	mg/kg	0.53	U	0.83	0	0.71	0	0.68	0	0.53	U	0.53	
Barium	mg/kg	4.40	0	5.30	0	3.70	0	6.30	0	-		3.10	0
Beryllium	mg/kg	0.53	U	0.56	U	0.55	U	0.53	U	0.13	U	0.53	U
Cadmium	mg/kg	0.66	U	0.70	U	0.69	U	0.66	U	0.40	U	0.66	U
Calcium	mg/kg	943		16300		3730		3120		-		8570	
Chromium	mg/kg	2.90		2.40		3.30		3.30		2.80		2.10	
Chromium, Hexavalent	mg/l	-		-		-		-		-		-	
Cobalt	mg/kg	1.20	U	1.30	U	1.20	U	1.30	0	-		1.20	U
Copper	mg/kg	2	U	2.10	U	2.10	U	2	U	1.40	0B	2	U
Iron	mg/kg	1720		1970		1970		2250		-		1760	
Lead	mg/kg	0.77	B	1.70	B	1.30	B	2.30	B	0.77	B	0.80	B
Magnesium	mg/kg	691		2090		779		1060		-		681	
Manganese	mg/kg	16.90		27.50		20.30		20		-		24	
Mercury	mg/kg	0.13	U	0.14	U	0.14	U	0.13	U	0.13	U	0.13	U
Nickel	mg/kg	4.60	U	4.90	U	4.80	U	4.60	U	2.40	U	4.60	U
Potassium	mg/kg	302		319	U	313	U	303	U	-		302	U
Selenium	mg/kg	0.40	U	0.42	U	0.41	U	0.40	UL	0.40	UL	0.40	U
Silver	mg/kg	0.53	U	0.56	U	0.55	U	0.53	U	0.53	U	0.53	U
Sodium	mg/kg	43.50	0	51.50	0	42.20	0	48.80	0	-		49.50	0
Thallium	mg/kg	0.40	U	0.42	U	0.41	U	0.40	U	0.40	U	0.40	U
Vanadium	mg/kg	3.60	0	3.70	0	4.20	0	5.20	0	-		3.50	0
Zinc	mg/kg	4.40	B	5.80	B	4.80	B	8.30	B	14.30	B	5.80	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	24.70		27.50		21.50		41.10		22.30		10.30	

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD016		SD017		SD018		SD1		SD2		SD3	
SAMPLE ID:		PC-TF4-SD016		PC-TF4-SD017		PC-TF4-SD018		PC-LF6-SD1		PC-LF6-SD2		PC-LF6-SD3	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
1,1,1-Trichloroethane	ug/kg	5.20	U	18	UJ	1.10	B	3.30	B	2.70	UJ	3.90	UJ
1,1,2,2-Tetrachloroethane	ug/kg	1.20	U	4	UJ	1.90	U	1.90	U	0.60	UJ	0.86	UJ
1,1,2-Trichloroethane	ug/kg	1.60	U	5.70	UJ	2.70	U	2.70	U	0.85	UJ	1.20	UJ
1,1-Dichloroethane	ug/kg	1.40	U	5	UJ	2.40	U	2.40	U	0.75	UJ	1.10	UJ
1,1-Dichloroethylene	ug/kg	1.60	U	5.70	UJ	2.70	U	2.70	U	0.85	UJ	1.20	UJ
1,2,3-Trichloropropane	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
1,2-Dibromoethane	ug/kg	2.50	U	8.70	UJ	4.20	U	4.20	U	1.30	UJ	1.90	UJ
1,2-Dichlorobenzene	ug/kg	2.70	U	9.30	UJ	4.50	U	4.50	U	1.40	UJ	2	UJ
1,2-Dichloroethane	ug/kg	1.20	U	4.30	UJ	2.10	U	2.10	U	0.65	UJ	0.93	UJ
1,2-Dichloropropane	ug/kg	1.20	U	4.30	UJ	2.10	U	2.10	U	0.65	UJ	0.93	UJ
1,2-trans-Dichloroethylene	ug/kg	2.10	U	7.30	UJ	3.50	U	3.50	U	1.10	UJ	1.60	UJ
1,3-Dichlorobenzene	ug/kg	2.10	U	7.30	UJ	3.50	U	3.50	U	1.10	UJ	1.60	UJ
1,3-cis-Dichloropropylene	ug/kg	1.80	U	6.30	UJ	3.10	U	3.10	U	0.95	UJ	1.40	UJ
1,3-trans-Dichloropropylene	ug/kg	1.60	U	5.70	UJ	2.70	U	2.70	U	0.85	UJ	1.20	UJ
1,4-Dichlorobenzene	ug/kg	2.70	U	9.30	UJ	4.50	U	4.50	U	1.40	UJ	2	UJ
2-Chloroethylvinyl ether	ug/kg	2.10	U	7.30	UJ	3.50	U	3.50	U	1.10	UJ	1.60	UJ
2-Chlorotoluene	ug/kg	1.90	U	6.70	UJ	3.20	U	3.20	U	1	UJ	1.40	UJ
4-Chlorotoluene	ug/kg	2.10	U	7.30	UJ	3.50	U	3.50	U	1.10	UJ	1.60	UJ
Bromobenzene	ug/kg	1.40	U	5	UJ	2.40	U	2.40	U	0.75	UJ	1.10	UJ
Bromochloromethane	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
Bromodichloromethane	ug/kg	1.90	U	6.70	UJ	3.20	U	3.20	U	1	UJ	1.40	UJ
Bromoform	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
Carbon Tetrachloride	ug/kg	1.20	U	4.30	UJ	2.10	U	2.10	U	0.65	UJ	0.93	UJ
Chlorobenzene	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
Chloroethane	ug/kg	5	U	17	UJ	8.40	U	8.40	U	2.60	UJ	3.70	UJ
Chloroform	ug/kg	0.92	B	3.20	J	2.10	B	1.20	B	0.38	B	0.23	B
Dibromochloromethane	ug/kg	1.50	U	5.30	UJ	2.60	U	2.60	U	0.80	UJ	1.10	UJ
Dibromomethane	ug/kg	1.70	U	6	UJ	2.90	U	2.90	U	0.90	UJ	1.30	UJ
Methyl bromide	ug/kg	5.40	U	19	UJ	9	U	9	U	2.80	UJ	4	UJ
Methyl chloride	ug/kg	4.80	U	17	UJ	8.10	U	8.10	U	2.50	UJ	3.60	UJ
Methylene chloride	ug/kg	5.90	U	0.77	B	6.20		1.90	B	4.80	B	1.70	B
Tetrachloroethylene	ug/kg	1.50	U	5.30	UJ	2.60	U	2.60	U	0.80	UJ	1.10	UJ
Trichloroethylene	ug/kg	1.50	U	5.30	UJ	2.60	U	2.60	U	0.80	UJ	1.10	UJ
Vinyl chloride	ug/kg	5	U	17	UJ	8.40	U	8.40	U	2.60	UJ	3.70	UJ

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD016		SD017		SD018		SD1		SD2		SD3	
SAMPLE ID:		PC-TF4-SD016		PC-TF4-SD017		PC-TF4-SD018		PC-LF6-SD1		PC-LF6-SD2		PC-LF6-SD3	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
2													
1,2-Dichlorobenzene	ug/kg	2.70	U	9.30	UJ	4.50	U	4.50	UJ	0.23	B	2	UJ
1,2-Dimethylbenzene	ug/kg	2.30	U	8	UJ	3.90	U	3.90	UJ	1.20	UJ	1.70	UJ
1,3-Dichlorobenzene	ug/kg	3.50	U	12	UJ	5.80	U	5.80	UJ	1.80	UJ	2.60	UJ
1,3/1,4-Dimethylbenzene	ug/kg	6.20	U	21	UJ	10	U	10	UJ	3.20	UJ	4.60	UJ
1,4-Dichlorobenzene	ug/kg	3.50	U	12	UJ	5.80	U	5.80	UJ	1.80	U	2.60	UJ
Benzene	ug/kg	2.70	U	9.30	UJ	4.50	U	4.50	UJ	1.40	UJ	2	UJ
Chlorobenzene	ug/kg	3.50	U	12	UJ	5.80	U	5.80	UJ	1.80	UJ	2.60	UJ
Ethylbenzene	ug/kg	3.50	U	12	UJ	5.80	U	5.80	UJ	1.80	UJ	2.60	UJ
Methyl-t-Butyl Ether	ug/kg	21	U	73	UJ	35	U	35	UJ	11	UJ	16	UJ
Styrene	ug/kg	2.90	U	10	UJ	4.80	U	4.80	UJ	1.50	UJ	2.10	UJ
Toluene	ug/kg	10	U	35	UJ	17	U	17	UJ	5.30	UJ	7.60	UJ
CLP 3/90													
1,2,4-Trichlorobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
1,2-Dichlorobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
1,3-Dichlorobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
1,4-Dichlorobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,4,5-Trichlorophenol	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
2,4,6-Trichlorophenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,4-Dichlorophenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,4-Dimethylphenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,4-Dinitrophenol	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
2,4-Dinitrotoluene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2,6-Dinitrotoluene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2-Chloronaphthalene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2-Chlorophenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2-Methyl-4,6-Dinitrophenol	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
2-Methylnaphthalene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2-Methylphenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
2-Nitroaniline	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
2-Nitrophenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
3,3'-Dichlorobenzidine	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
3-Nitroaniline	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
4-Bromophenyl phenyl ether	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD016		SD017		SD018		SD1		SD2		SD3	
SAMPLE ID:		PC-TF4-SD016		PC-TF4-SD017		PC-TF4-SD018		PC-LF6-SD1		PC-LF6-SD2		PC-LF6-SD3	
COLLECTION DATE:		08/01/93		08/01/93		08/01/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
4-Chloroaniline	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
4-Chlorophenyl phenyl ether	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
4-Methylphenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
4-Nitroaniline	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
4-Nitrophenol	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U
Acenaphthene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Acenaphthylene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Anthracene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Benzo(a)anthracene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Benzo(a)pyrene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Benzo(b)fluoranthene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Benzo(ghi)perylene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Benzo(k)fluoranthene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Butyl benzyl phthalate	ug/kg	630	U	1800	U	900	U	1100	U	510		55	
Carbazole	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Chrysene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Di-n-butyl phthalate	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Di-n-octyl phthalate	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Dibenzo(a,h)anthracene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Dibenzofuran	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Diethyl phthalate	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Dimethyl phthalate	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Fluoranthene	ug/kg	630	U	1800	U	900	U	1100	U	540		470	U
Fluorene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Hexachlorobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Hexachlorobutadiene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Hexachlorocyclopentadiene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Hexachloroethane	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Indeno(1,2,3-c,d)pyrene	ug/kg	630	U	1800	U	900	U	1100	U	2300	UJ	470	U
Isophorone	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
N-Nitrosodi-N-Propylamine	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
N-Nitrosodiphenylamine	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Naphthalene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Nitrobenzene	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Pentachlorophenol	ug/kg	1500	U	4400	U	2200	U	2600	U	5600	U	1100	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	SD016		SD017		SD018		SD1		SD2		SD3	
	SAMPLE ID:	PC-TF4-SD016		PC-TF4-SD017		PC-TF4-SD018		PC-LF6-SD1		PC-LF6-SD2		PC-LF6-SD3	
	COLLECTION DATE:	08/01/93		08/01/93		08/01/93		08/17/93		08/17/93		08/17/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Phenanthrene	ug/kg	630	U	1800	U	900	U	1100	U	310		470	U
Phenol	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
Pyrene	ug/kg	630	U	1800	U	900	U	1100	U	290		470	U
bis(2-Chloroethoxy)methane	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
bis(2-Chloroethyl) ether	ug/kg	630	U	1800	U	900	U	1100	U	2300	U	470	U
bis(2-Ethylhexyl)phthalate	ug/kg	85	B	1800	U	900	U	1100	U	2300	U	470	U
METALS													
Aluminum	mg/kg	1940		8370		2660		-		-		-	
Antimony	mg/kg	8.70	UL	30.20	UL	14.40	UL	14.30	UL	32.80	UL	6.40	UL
Arsenic	mg/kg	0.95	0	15.60		3.70		2.50	0B	11.90	B	2.80	B
Barium	mg/kg	10.40	0	41.10	0	14.70	0	-		-		-	
Beryllium	mg/kg	0.77	U	2.70	U	1.30	U	1.30	U	2.90	U	0.57	U
Cadmium	mg/kg	0.96	U	3.40	U	1.60	U	1.60	U	3.60	UL	0.71	U
Calcium	mg/kg	13300		141000		57200		-		-		-	
Chromium	mg/kg	4.80		32.20		12.30		4.90	L	15.90		7.60	L
Chromium, Hexavalent	mg/l	-		-		-		0.01	U	0.01	U	0.01	U
Cobalt	mg/kg	1.70	U	6	U	2.90	U	-		-		-	
Copper	mg/kg	2.90	U	10.10	U	4.80	U	6.20	0	16.40	0	11.80	
Iron	mg/kg	2250		10700		3310		-		-		-	
Lead	mg/kg	2.20	B	7.30	B	1.60	B	5.30	K	177	J	19.10	J
Magnesium	mg/kg	1160		8060		5440		-		-		-	
Manganese	mg/kg	22.30		171		55.50		-		-		-	
Mercury	mg/kg	0.19	U	0.67	U	0.32	U	0.32	U	0.73	U	0.14	U
Nickel	mg/kg	6.70	U	23.50	U	11.20	U	11.10	UL	25.50	U	7.90	L
Potassium	mg/kg	439	U	1960	0	729	U	-		-		-	
Selenium	mg/kg	0.58	U	3.30	0	1.20	0	0.95	UL	2.30	0	0.43	UL
Silver	mg/kg	0.77	U	2.70	U	1.30	U	1.30	U	2.90	UL	0.57	U
Sodium	mg/kg	63.90	0	207	0	81.50	0	-		-		-	
Thallium	mg/kg	0.58	U	2	U	0.96	UL	0.95	UL	2.20	UL	0.43	UL
Vanadium	mg/kg	6	0	37.60		13.40	0	-		-		-	
Zinc	mg/kg	7.60	B	40.90	B	14.10	B	20.70	B	199	B	80.70	B
TPH													
Total Petroleum Hydrocarbons	mg/kg	83.60		1060		246		93.40		994		175	

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD4	
SAMPLE ID:		PC-LF6-SD4	
COLLECTION DATE:		08/17/93	
	UNITS:	RESULT	QUAL
8010			
1,1,1,2-Tetrachloroethane	ug/kg	1.40	U
1,1,1-Trichloroethane	ug/kg	0.72	B
1,1,2,2-Tetrachloroethane	ug/kg	0.91	U
1,1,2-Trichloroethane	ug/kg	1.30	U
1,1-Dichloroethane	ug/kg	1.10	U
1,1-Dichloroethylene	ug/kg	1.30	U
1,2,3-Trichloropropane	ug/kg	1.40	U
1,2-Dibromoethane	ug/kg	2	U
1,2-Dichlorobenzene	ug/kg	2.10	U
1,2-Dichloroethane	ug/kg	0.98	U
1,2-Dichloropropane	ug/kg	0.98	U
1,2-trans-Dichloroethylene	ug/kg	1.70	U
1,3-Dichlorobenzene	ug/kg	1.70	UJ
1,3-cis-Dichloropropylene	ug/kg	1.40	U
1,3-trans-Dichloropropylene	ug/kg	1.30	U
1,4-Dichlorobenzene	ug/kg	2.10	UJ
2-Chloroethylvinyl ether	ug/kg	1.70	U
2-Chlorotoluene	ug/kg	1.50	UJ
4-Chlorotoluene	ug/kg	1.70	UJ
Bromobenzene	ug/kg	1.10	UJ
Bromochloromethane	ug/kg	1.40	U
Bromodichloromethane	ug/kg	1.50	U
Bromoform	ug/kg	1.40	U
Carbon Tetrachloride	ug/kg	0.98	U
Chlorobenzene	ug/kg	1.40	UJ
Chloroethane	ug/kg	3.90	U
Chloroform	ug/kg	0.61	B
Dibromochloromethane	ug/kg	1.20	U
Dibromomethane	ug/kg	1.40	U
Methyl bromide	ug/kg	4.20	U
Methyl chloride	ug/kg	3.80	U
Methylene chloride	ug/kg	1.50	B
Tetrachloroethylene	ug/kg	1.20	U
Trichloroethylene	ug/kg	1.20	U
Vinyl chloride	ug/kg	3.90	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD4	
SAMPLE ID:		PC-LF6-SD4	
COLLECTION DATE:		08/17/93	
	UNITS:	RESULT	QUAL
8020			
1,2-Dichlorobenzene	ug/kg	2.10	UJ
1,2-Dimethylbenzene	ug/kg	1.80	UJ
1,3-Dichlorobenzene	ug/kg	2.70	UJ
1,3/1,4-Dimethylbenzene	ug/kg	4.80	UJ
1,4-Dichlorobenzene	ug/kg	2.70	UJ
Benzene	ug/kg	2.10	UJ
Chlorobenzene	ug/kg	2.70	UJ
Ethylbenzene	ug/kg	2.70	UJ
Methyl-t-Butyl Ether	ug/kg	17	UJ
Styrene	ug/kg	2.30	UJ
Toluene	ug/kg	8	UJ
CLP 3/90			
1,2,4-Trichlorobenzene	ug/kg	500	U
1,2-Dichlorobenzene	ug/kg	500	U
1,3-Dichlorobenzene	ug/kg	500	U
1,4-Dichlorobenzene	ug/kg	500	U
2,2'-Oxybis(1-Chloropropane)	ug/kg	500	U
2,4,5-Trichlorophenol	ug/kg	1200	U
2,4,6-Trichlorophenol	ug/kg	500	U
2,4-Dichlorophenol	ug/kg	500	U
2,4-Dimethylphenol	ug/kg	500	U
2,4-Dinitrophenol	ug/kg	1200	U
2,4-Dinitrotoluene	ug/kg	500	U
2,6-Dinitrotoluene	ug/kg	500	U
2-Chloronaphthalene	ug/kg	500	U
2-Chlorophenol	ug/kg	500	U
2-Methyl-4,6-Dinitrophenol	ug/kg	1200	U
2-Methylnaphthalene	ug/kg	500	U
2-Methylphenol	ug/kg	500	U
2-Nitroaniline	ug/kg	1200	U
2-Nitrophenol	ug/kg	500	U
3,3'-Dichlorobenzidine	ug/kg	500	U
3-Nitroaniline	ug/kg	1200	U
4-Bromophenyl phenyl ether	ug/kg	500	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD4	
SAMPLE ID:		PC-LF6-SD4	
COLLECTION DATE:		08/17/93	
	UNITS:	RESULT	QUAL
4-Chloro-3-methyl phenol	ug/kg	500	U
4-Chloroaniline	ug/kg	500	U
4-Chlorophenyl phenyl ether	ug/kg	500	U
4-Methylphenol	ug/kg	500	U
4-Nitroaniline	ug/kg	1200	U
4-Nitrophenol	ug/kg	1200	U
Acenaphthene	ug/kg	500	U
Acenaphthylene	ug/kg	500	U
Anthracene	ug/kg	460	
Benzo(a)anthracene	ug/kg	450	
Benzo(a)pyrene	ug/kg	320	
Benzo(b)fluoranthene	ug/kg	690	
Benzo(ghi)perylene	ug/kg	61	
Benzo(k)fluoranthene	ug/kg	690	
Butyl benzyl phthalate	ug/kg	66	
Carbazole	ug/kg	88	
Chrysene	ug/kg	430	
Di-n-butyl phthalate	ug/kg	64	
Di-n-octyl phthalate	ug/kg	500	U
Dibenzo(a,h)anthracene	ug/kg	500	U
Dibenzofuran	ug/kg	500	U
Diethyl phthalate	ug/kg	500	U
Dimethyl phthalate	ug/kg	500	U
Fluoranthene	ug/kg	650	
Fluorene	ug/kg	500	U
Hexachlorobenzene	ug/kg	500	U
Hexachlorobutadiene	ug/kg	500	U
Hexachlorocyclopentadiene	ug/kg	500	U
Hexachloroethane	ug/kg	500	U
Indeno(1,2,3-c,d)pyrene	ug/kg	120	
Isophorone	ug/kg	500	U
N-Nitrosodi-N-Propylamine	ug/kg	500	U
N-Nitrosodiphenylamine	ug/kg	500	U
Naphthalene	ug/kg	500	U
Nitrobenzene	ug/kg	500	U
Pentachlorophenol	ug/kg	1200	U

Appendix L - Sediment Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SD4	
SAMPLE ID:		PC-LF6-SD4	
COLLECTION DATE:		08/17/93	
	UNITS:	RESULT	QUAL
Phenanthrene	ug/kg	460	
Phenol	ug/kg	500	U
Pyrene	ug/kg	420	
bis(2-Chloroethoxy)methane	ug/kg	500	U
bis(2-Chloroethyl) ether	ug/kg	500	U
bis(2-Ethylhexyl)phthalate	ug/kg	500	U
METALS			
Aluminum	mg/kg	-	
Antimony	mg/kg	6.80	UL
Arsenic	mg/kg	2	B
Barium	mg/kg	-	
Beryllium	mg/kg	0.61	U
Cadmium	mg/kg	0.76	U
Calcium	mg/kg	-	
Chromium	mg/kg	5	L
Chromium, Hexavalent	mg/l	0.01	U
Cobalt	mg/kg	-	
Copper	mg/kg	13.80	
Iron	mg/kg	-	
Lead	mg/kg	62.60	J
Magnesium	mg/kg	-	
Manganese	mg/kg	-	
Mercury	mg/kg	0.15	U
Nickel	mg/kg	5.30	UL
Potassium	mg/kg	-	
Selenium	mg/kg	0.97	L
Silver	mg/kg	0.61	U
Sodium	mg/kg	-	
Thallium	mg/kg	0.46	UL
Vanadium	mg/kg	-	
Zinc	mg/kg	67.40	B
TPH			
Total Petroleum Hydrocarbons	mg/kg	450	

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SW001		SW002		SW003		SW004		SW005		SW006	
		SAMPLE ID:	PC-TF4-SW001		PC-TF4-SW002		PC-TF4-SW003		PC-TF4-SW004		PC-TF4-SW005		PC-TF4-SW006	
		COLLECTION DATE:	07/28/93		07/28/93		07/28/93		07/28/93		07/30/93		07/30/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
1,1,1,2-Tetrachloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.16	B	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l		0.30	U	0.30	U	0.30	U	0.06		0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l		0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l		0.13		0.35	U	0.35	U	0.78	J	0.18		0.20	
Dibromochloromethane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l		0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	U	0.50	U	0.07	J	0.50	U	0.50	U
Methylene chloride	ug/l		0.29	B	0.32	B	0.17	B	1	J	0.18	B	0.33	B
Tetrachloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.05		0.30	U	0.30	U
Trichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.06	J	0.30	U	1.20	
Vinyl chloride	ug/l		0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	SW001		SW002		SW003		SW004		SW005		SW006	
		SAMPLE ID:	PC-TF4-SW001		PC-TF4-SW002		PC-TF4-SW003		PC-TF4-SW004		PC-TF4-SW005		PC-TF4-SW006	
		COLLECTION DATE:	07/28/93		07/28/93		07/28/93		07/28/93		07/30/93		07/30/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020														
1,2-Dichlorobenzene	ug/l		1	B	0.15	U	0.15	U	0.15	U	0.15	U	0.16	
1,2-Dimethylbenzene	ug/l		0.17		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3/1,4-Dimethylbenzene	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l		0.17	B	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
Benzene	ug/l		0.35	U	0.35	U	0.35	U	0.14	B	0.35	U	0.35	U
Chlorobenzene	ug/l		0.09		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l		0.11		0.15		0.20	U	0.16		0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l		0.19		0.14	J	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l		0.16	B	0.11	B	0.33	B	0.18	B	0.25	U	0.25	U
LCBNA														
1,2,4-Trichlorobenzene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chloroaniline	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SW001		SW002		SW003		SW004		SW005		SW006	
SAMPLE ID:		PC-TF4-SW001		PC-TF4-SW002		PC-TF4-SW003		PC-TF4-SW004		PC-TF4-SW005		PC-TF4-SW006	
COLLECTION DATE:		07/28/93		07/28/93		07/28/93		07/28/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	1		0.60		5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	0.80		2		0.80		5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	0.90		3		2		5	U	5	U
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SW001		SW002		SW003		SW004		SW005		SW006	
SAMPLE ID:		PC-TF4-SW001		PC-TF4-SW002		PC-TF4-SW003		PC-TF4-SW004		PC-TF4-SW005		PC-TF4-SW006	
COLLECTION DATE:		07/28/93		07/28/93		07/28/93		07/28/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	10		0.60		0.80		3		0.90	B	1	B
METALS													
Antimony	ug/l	35	U	56.60	B	35	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	45	U	45	U	45	U	45	U	45	U	45	U
Arsenic	ug/l	4	U	4	U	10.10		4	U	4	U	6.30	0
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chromium	ug/l	8	U	8	U	59.50		8	U	8	U	8	U
Chromium, Dissolved	ug/l	10	U	10	U	10	U	10	U	10	U	10	U
Copper	ug/l	4.60	0B	5	0B	25.70		4	U	4	U	4	U
Copper, Dissolved	ug/l	15	U	15	U	15	U	15	U	15	U	15	U
Lead	ug/l	2	U	2	U	4.20		2.20	0	2	U	2	UL
Lead, Dissolved	ug/l	2	U	2	U	2	U	2	U	2	U	2	U
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	21.90	0	18	U	18	U	18	U
Nickel, Dissolved	ug/l	35	U	35	U	35	U	35	U	35	U	35	U
Selenium	ug/l	3	U	3	UL	3	UL	3	U	3	U	3	U
Selenium, Dissolved	ug/l	3	UL	3	U	3	U	3	U	3	U	5.60	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	U	3	U	3	U	3	U	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Zinc	ug/l	4	U	8.60	0	50		17	0	4	U	4	U
Zinc, Dissolved	ug/l	12.80	0	7.40	0	8.70	0	11.40	0	5.90	0	7.20	0
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.25	U	0.40		0.70		0.25	U	0.25	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	SW106		SW007		SW008	
SAMPLE ID:	PC-TF4-SW106		PC-TF4-SW007		PC-TF4-SW008	
COLLECTION DATE:	07/30/93		07/30/93		07/30/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010						
1,1,1,2-Tetrachloroethane ug/l	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane ug/l	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane ug/l	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane ug/l	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane ug/l	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene ug/l	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane ug/l	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane ug/l	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene ug/l	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane ug/l	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane ug/l	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene ug/l	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene ug/l	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene ug/l	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene ug/l	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether ug/l	0.40	U	0.40	U	0.40	U
2-Chlorotoluene ug/l	0.25	U	0.25	U	0.25	U
4-Chlorotoluene ug/l	0.35	U	0.35	U	0.35	U
Bromobenzene ug/l	0.85	U	0.85	U	0.85	U
Bromochloromethane ug/l	0.25	U	0.25	U	0.25	U
Bromodichloromethane ug/l	0.40	U	0.40	U	0.40	U
Bromoform ug/l	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride ug/l	0.35	U	0.35	U	0.35	U
Chlorobenzene ug/l	0.35	U	0.35	U	0.35	U
Chloroethane ug/l	0.50	U	0.50	U	0.50	U
Chloroform ug/l	0.28		0.29	B	0.49	
Dibromochloromethane ug/l	0.30	U	0.30	U	0.30	U
Dibromomethane ug/l	0.40	U	0.40	U	0.40	U
Methyl bromide ug/l	0.45	U	0.45	U	0.45	U
Methyl chloride ug/l	0.50	U	0.50	U	0.50	U
Methylene chloride ug/l	0.37	B	0.15	B	0.34	B
Tetrachloroethylene ug/l	0.30	U	0.30	U	0.30	U
Trichloroethylene ug/l	1.20		0.30	U	0.10	
Vinyl chloride ug/l	0.55	U	0.55	U	0.55	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		SW106		SW007		SW008	
LOCATOR:		SW106		SW007		SW008	
SAMPLE ID:		PC-TF4-SW106		PC-TF4-SW007		PC-TF4-SW008	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93	
UNITS:		RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020							
1,2-Dichlorobenzene	ug/l	1	J	0.15	U	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U
Benzene	ug/l	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.25	U	0.25	U	0.25	U
LCBNA							
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U
4-Chloroaniline	ug/l	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SW106		SW007		SW008	
SAMPLE ID:		PC-TF4-SW106		PC-TF4-SW007		PC-TF4-SW008	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Methylphenol	ug/l	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	0.50		5	U
Dimethyl phthalate	ug/l	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	0.50	
Pyrene	ug/l	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U

Appendix L - Surface Water Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		SW106		SW007		SW008	
SAMPLE ID:		PC-TF4-SW106		PC-TF4-SW007		PC-TF4-SW008	
COLLECTION DATE:		07/30/93		07/30/93		07/30/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	5	U	2	B	5	U
METALS							
Antimony	ug/l	35	U	56.50	B	35	U
Antimony, Dissolved	ug/l	45	U	45	U	45	UL
Arsenic	ug/l	5.30	0	4	U	4	U
Arsenic, Dissolved	ug/l	4.40	0	4	U	4	U
Beryllium	ug/l	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	4	U	4	U	4	U
Cadmium	ug/l	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	5	U	5	U	5	U
Chromium	ug/l	8	U	8	U	8	U
Chromium, Dissolved	ug/l	10	U	10	U	10	U
Copper	ug/l	4	U	4	U	5.40	0B
Copper, Dissolved	ug/l	15	U	15	U	15	U
Lead	ug/l	2	U	2	U	2	U
Lead, Dissolved	ug/l	2	U	2	U	2	U
Mercury	ug/l	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	18	U
Nickel, Dissolved	ug/l	35	U	35	U	35	U
Selenium	ug/l	3	U	3	U	3	U
Selenium, Dissolved	ug/l	3	U	3	U	3	U
Silver	ug/l	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U
Thallium	ug/l	3	U	3	U	3	U
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL
Zinc	ug/l	4	U	4	U	4	U
Zinc, Dissolved	ug/l	6.70	0	7.30	0	5	0
TPH							
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.25	U	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW1		MW2		MW3		MW4		MW6		MW11	
		SAMPLE ID:	PC-P1-MW1-GW4		PC-P1-MW2-GW4		PC-P1-MW3-GW4		PC-P1-MW4-GW4		PC-P1-MW6-GW4		PC-P1-MW11-GW4	
		COLLECTION DATE:	09/15/93		09/09/93		09/10/93		09/10/93		09/15/93		09/14/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
1,1,1,2-Tetrachloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.14		0.35	U
1,1,2,2-Tetrachloroethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l		0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l		0.35	U	0.35	U	0.17		0.35	U	0.14		0.35	U
Dibromochloromethane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l		0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l		0.42	B	0.36		0.42		0.37	B	0.40	B	0.34	B
Tetrachloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l		0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	MW1		MW2		MW3		MW4		MW6		MW11	
SAMPLE ID:	PC-P1-MW1-GW4		PC-P1-MW2-GW4		PC-P1-MW3-GW4		PC-P1-MW4-GW4		PC-P1-MW6-GW4		PC-P1-MW11-GW4	
COLLECTION DATE:	09/15/93		09/09/93		09/10/93		09/10/93		09/15/93		09/14/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020												
1,2-Dichlorobenzene ug/l	0.15	U	0.30	B	0.75	B	0.19	B	8.50	J	0.15	U
1,2-Dimethylbenzene ug/l	0.20	U	0.20	U	0.20	U	0.20	U	5.80	J	0.20	U
1,3-Dichlorobenzene ug/l	0.74	J	0.13	B	0.21	B	0.23	B	2.50		0.20	U
1,3-Dimethylbenzene ug/l	2.80		-		-		-		61		-	
1,3/1,4-Dimethylbenzene ug/l	-		0.50	U	0.50	U	0.50	U	-		0.50	U
1,4-Dichlorobenzene ug/l	0.15	U	0.47	B	0.35	B	0.68	B	25		0.15	U
1,4-Dimethylbenzene ug/l	2.80		-		-		-		61		-	
Benzene ug/l	13		0.35	U	0.09		0.35	U	10		0.60	
Chlorobenzene ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.68		0.25	U
Ethylbenzene ug/l	5.90		0.20	U	0.20	U	0.12		56		0.20	U
Methyl-t-Butyl Ether ug/l	5	U	5	U	5	U	5	U	2.10	J	5	U
Styrene ug/l	0.25	U	0.25	U	0.25	U	0.25	U	8.50	J	0.25	U
Toluene ug/l	0.14		0.25	U	0.25	U	0.11	B	0.29	J	0.25	U
LCBNA												
1,2,4-Trichlorobenzene ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane) ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol ug/l	0.60	J	5	U	5	U	5	U	2	J	5	U
2,4-Dinitrophenol ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene ug/l	5	U	5	U	5	U	5	U	4		5	U
2-Methylphenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW1		MW2		MW3		MW4		MW6		MW11	
		SAMPLE ID:	PC-P1-MW1-GW4		PC-P1-MW2-GW4		PC-P1-MW3-GW4		PC-P1-MW4-GW4		PC-P1-MW6-GW4		PC-P1-MW11-GW4	
		COLLECTION DATE:	09/15/93		09/09/93		09/10/93		09/10/93		09/15/93		09/14/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l		5	U	5	U	5	U	5	U	3		5	U
Acenaphthylene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l		5	U	0.70	B	5	U	5	U	5	U	0.90	B
Di-n-octyl phthalate	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l		5	U	5	U	5	U	5	U	1		5	U
Diethyl phthalate	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Dimethyl phthalate	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l		5	U	5	U	5	U	5	U	1		5	U
Hexachlorobenzene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l		5	U	5	U	5	U	5	U	12		5	U
Nitrobenzene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l		5	U	5	U	5	U	5	U	5	U	0.50	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		MW1		MW2		MW3		MW4		MW6		MW11	
LOCATOR:		PC-P1-MW1-GW4		PC-P1-MW2-GW4		PC-P1-MW3-GW4		PC-P1-MW4-GW4		PC-P1-MW6-GW4		PC-P1-MW11-GW4	
SAMPLE ID:		09/15/93		09/09/93		09/10/93		09/10/93		09/15/93		09/14/93	
COLLECTION DATE:													
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	3	B	5	B	8	B	2	B	2	B	12	B
METALS													
Antimony	ug/l	45	U	35	U	46.20	0B	38.60	0B	45	UL	45	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	35	U	39.20	(B)	39.20	0B
Arsenic	ug/l	7.70	(K)	4	U	4	U	10.90	J	28.60	L	12.60	
Arsenic, Dissolved	ug/l	4.10	0B	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	4	U	1	U	1	U	3.10	0	4	UL	4	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	5	U	3	U	3	U	5.70		5	UL	5	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	38		9.90		8	U	96.20		119	L	62.20	
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	88.90		5.10	(B)	5.70	0B	67.90		84.40	L	31.10	
Copper, Dissolved	ug/l	4	U	6.30	0	4	U	5.10	0	4	U	4	U
Lead	ug/l	34.30		2	U	2	U	31.20		60.30	L	20.50	
Lead, Dissolved	ug/l	2	UL	2	UL	2	UL	2	UL	2	U	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.37	L	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	35	U	18	U	18	U	69		93.50	L	50.90	
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	UL	5.60	B	6	B	20	B	3	UL	3	UL
Selenium, Dissolved	ug/l	R	3	U	3	U	3	UL	R	R			
Silver	ug/l	4	U	4	U	4	U	4	U	4	UL	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UJ	3	UL	3	UL	3	UL	3	UJ	3	UJ
Zinc	ug/l	64.50		12.90	(B)	12.60	0B	131		147	L	99.50	
Zinc, Dissolved	ug/l	4	U	25	B	10.30	(B)	15.90	(B)	4	U	4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	2	B	0.50	B	0.40	B	0.60	B	0.70	B	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW12		MW13		MW14		MW3		MW1		MW2	
SAMPLE ID:		PC-P1-MW12-GW4		PC-P1-MW13-GW4		PC-P1-MW14-GW4		PC-FF7-MW3-GW4		PC-MP2-MW1-GW4		PC-MP2-MW2-GW4	
COLLECTION DATE:		09/14/93		09/14/93		09/15/93		09/15/93		08/10/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.63		0.92		0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.68	J	0.75	J	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	1.90		2.30		0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.15	B	0.12	B	0.21	B	0.24	B	0.17		1	U
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW12		MW13		MW14		MW3		MW1		MW2	
SAMPLE ID:		PC-P1-MW12-GW4		PC-P1-MW13-GW4		PC-P1-MW14-GW4		PC-FF7-MW3-GW4		PC-MP2-MW1-GW4		PC-MP2-MW2-GW4	
COLLECTION DATE:		09/14/93		09/14/93		09/15/93		09/15/93		08/10/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.15	U	0.29	B	0.52	B
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.14	B	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		0.19		0.09		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	-		-		0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.28	B	0.66	B	0.15	U	0.15	U	0.13	B	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		0.19		0.09		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.11		0.10		0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.22	B	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.15	B	0.22	B	0.20		0.21		0.22	B	0.09	B
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW12		MW13		MW14		MW3		MW1		MW2	
SAMPLE ID:		PC-P1-MW12-GW4		PC-P1-MW13-GW4		PC-P1-MW14-GW4		PC-FF7-MW3-GW4		PC-MP2-MW1-GW4		PC-MP2-MW2-GW4	
COLLECTION DATE:		09/14/93		09/14/93		09/15/93		09/15/93		08/10/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	0.80	B	0.90	B	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	0.60	B	0.50	B	0.60	B	5	U	5	U	1	J
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	1		2	B	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		MW12		MW13		MW14		MW3		MW1		MW2	
LOCATOR:		MW12		MW13		MW14		MW3		MW1		MW2	
SAMPLE ID:		PC-P1-MW12-GW4		PC-P1-MW13-GW4		PC-P1-MW14-GW4		PC-FF7-MW3-GW4		PC-MP2-MW1-GW4		PC-MP2-MW2-GW4	
COLLECTION DATE:		09/14/93		09/14/93		09/15/93		09/15/93		08/10/93		08/15/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2	B	2	B	4	B	11	B	1	B	1	B
METALS													
Antimony	ug/l	45	U	45	U	45	U	45	U	35	U	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	35	U	35	U	42.30	0B
Arsenic	ug/l	9.50	(K)	10.90	K	4	U	4	U	14.70		4	U
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4.10	0B	7.20	(B)	14.70	B
Beryllium	ug/l	4	U	4	U	4	U	4	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	5	U	5	U	5	U	5	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	50.10		43.90		10	U	10	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	15	U	35.60		15	U	15	U	27.80		4.50	0B
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	12.70		19.30		2	U	2	U	4.50		2	U
Lead, Dissolved	ug/l	2	UL	2	UL	2	UL	2	UL	2	U	4.10	B
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	UL	0.20	U
Nickel	ug/l	38.30	0	35	U	35	U	35	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	UL	3	UL	3	UL	3.40	0B	3	U	3	U
Selenium, Dissolved	ug/l	R	4.90	(B)	R	R	3	U	3	U			
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	U	3	UL
Thallium, Dissolved	ug/l	3	UJ	3	UJ	3	UJ	3	UJ	R	3	UL	
Zinc	ug/l	89.20		67.10		7.50	0	11.70	0	43.50		100	
Zinc, Dissolved	ug/l	4	U	4	U	4	U	6	0	19.10	0	4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.80	B	0.25	U	0.80	B	2.50	B	5.60	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW9		MW5		MW6		MW1	
SAMPLE ID:		PC-MP2-MW3-GW4		PC-MP2-MW4-GW4		PC-MP2-MW9-GW4		PC-MP2-MW5-GW4		PC-MP2-MW6-GW4		PC-FF7-MW1-GW4	
COLLECTION DATE:		08/16/93		08/16/93		08/16/93		09/16/93		09/09/93		09/09/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.08	B
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	R		0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	R		0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	R		0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	R		0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	R		0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	R		0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	R		0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	R		0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	R		0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	R		0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	R		0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	R		0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	R		0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	R		0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.18		R		0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	R		0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	R		0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	R		0.50	U	0.50	U
Methylene chloride	ug/l	1	U	1	U	0.05		R		0.40		0.32	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.09	
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	R		0.30	U	0.12	
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	R		0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW9		MW5		MW6		MW1	
SAMPLE ID:		PC-MP2-MW3-GW4		PC-MP2-MW4-GW4		PC-MP2-MW9-GW4		PC-MP2-MW5-GW4		PC-MP2-MW6-GW4		PC-FF7-MW1-GW4	
COLLECTION DATE:		08/16/93		08/16/93		08/16/93		09/16/93		09/09/93		09/09/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	0.26	B	0.38	B	0.15	U	R	3.40	B	0.15	U	
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	R	0.20	U	0.20	U	
1,3-Dichlorobenzene	ug/l	0.08	B	0.20	U	0.20	U	R	0.15	B	4.60	B	
1,3-Dimethylbenzene	ug/l	-		-		-		-		0.06		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	R	-		0.50	U	
1,4-Dichlorobenzene	ug/l	0.15	U	0.36	B	0.15	U	R	0.52	B	0.15	U	
1,4-Dimethylbenzene	ug/l	-		-		-		-		0.06		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	R	0.35	U	0.35	U	
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	R	0.25	U	0.25	U	
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	R	0.20	U	0.20	U	
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	R	5	U	5	U	
Styrene	ug/l	0.25	U	0.25	U	0.25	U	R	0.25	U	0.25	U	
Toluene	ug/l	0.17	B	0.21	B	0.26	B	R	0.15		0.25	U	
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW9		MW5		MW6		MW1	
SAMPLE ID:		PC-MP2-MW3-GW4		PC-MP2-MW4-GW4		PC-MP2-MW9-GW4		PC-MP2-MW5-GW4		PC-MP2-MW6-GW4		PC-FF7-MW1-GW4	
COLLECTION DATE:		08/16/93		08/16/93		08/16/93		09/16/93		09/09/93		09/09/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	0.50		5	U	5	U	5	U	5	U	1	B
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	2	J	2	J	3	J	5	U	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	0.60	J	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	0.70	B	5	U	5	U	5	U	0.90		0.60	

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW9		MW5		MW6		MW1	
SAMPLE ID:		PC-MP2-MW3-GW4		PC-MP2-MW4-GW4		PC-MP2-MW9-GW4		PC-MP2-MW5-GW4		PC-MP2-MW6-GW4		PC-FF7-MW1-GW4	
COLLECTION DATE:		08/16/93		08/16/93		08/16/93		09/16/93		09/09/93		09/09/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	5	B	1	B	7	B	3	B	2	B	4	B
METALS													
Antimony	ug/l	44.30	0B	35	U	35	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	46.10	0B	35	U	42.50	0B
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	(L)	4	U
Arsenic, Dissolved	ug/l	4	U	4	U	6.10	0B	4	U	4	U	4	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	4	U	4	U	4.50	0B	4	U	4	U	4	U
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	2	U	2	U	2	U	2	UL	2	U	2	U
Lead, Dissolved	ug/l	2	U	2	U	2	U	2	UL	2	UL	2.30	(L)
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	U	3	U	3	U	3	U	3	U	3.30	0B
Selenium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	UL
Silver	ug/l	4	U	4	U	4	U	4	U	5.40	0	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	R	3	UL	3	UL	
Zinc	ug/l	4	U	193		245		254		9.70	0B	4	U
Zinc, Dissolved	ug/l	4	U	4	U	10.40	0	5.10	0B	5.60	(B)	15.30	(B)
TPH													
Total Petroleum Hydrocarbons	mg/l	0.60	B	0.40	B	0.40		1.10	B	2.30	B	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW7		MW1		MW2		MW3		MW4		MW5	
SAMPLE ID:		PC-MP2-MW7-GW4		PC-CG3-MW1-GW4		PC-CG3-MW2-GW4		PC-CG3-MW3-GW4		PC-CG3-MW4-GW4		PC-CG3-MW5-GW4	
COLLECTION DATE:		09/09/93		08/15/93		08/25/93		08/25/93		08/25/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.08	B
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.17		0.35	U	0.35	U	0.32		0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	UJ	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.42	B	0.08		0.13	B	0.27	B	0.43	B	0.31	B
Tetrachloroethylene	ug/l	6.30		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l	0.36		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW7		MW1		MW2		MW3		MW4		MW5	
		SAMPLE ID:	PC-MP2-MW7-GW4		PC-CG3-MW1-GW4		PC-CG3-MW2-GW4		PC-CG3-MW3-GW4		PC-CG3-MW4-GW4		PC-CG3-MW5-GW4	
		COLLECTION DATE:	09/09/93		08/15/93		08/25/93		08/25/93		08/25/93		08/26/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020														
1,2-Dichlorobenzene	ug/l		0.17	B	0.15	U	1.80	B	0.31	B	0.25	B	0.15	U
1,2-Dimethylbenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.14	B	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l		-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l		0.30	B	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
1,4-Dimethylbenzene	ug/l		-		-		-		-		-		-	
Benzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l		0.18		0.19	B	0.11	B	0.08	B	0.15	B	0.25	U
LCBNA														
1,2,4-Trichlorobenzene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW7		MW1		MW2		MW3		MW4		MW5	
SAMPLE ID:		PC-MP2-MW7-GW4		PC-CG3-MW1-GW4		PC-CG3-MW2-GW4		PC-CG3-MW3-GW4		PC-CG3-MW4-GW4		PC-CG3-MW5-GW4	
COLLECTION DATE:		09/09/93		08/15/93		08/25/93		08/25/93		08/25/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	1	B	5	U	0.80		0.80		0.80		5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	1		7	J	5	U	5	U	5	U	5	U
Dimethyl phthalate	ug/l	5	U	1	J	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	3		5	U	5	U	1	B	0.50	B	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	MW7		MW1		MW2		MW3		MW4		MW5	
	SAMPLE ID:	PC-MP2-MW7-GW4		PC-CG3-MW1-GW4		PC-CG3-MW2-GW4		PC-CG3-MW3-GW4		PC-CG3-MW4-GW4		PC-CG3-MW5-GW4	
	COLLECTION DATE:	09/09/93		08/15/93		08/25/93		08/25/93		08/25/93		08/26/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	3	B	0.90	B	3	B	2	B	2	B	2	B
METALS													
Antimony	ug/l	35	U	35	U	35	U	35	U	35	U	43.10	0B
Antimony, Dissolved	ug/l	35	U	35	U	35	U	35	U	35	U	35	U
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	4	U	4	U	4	U	5.30	0B	4	U	4	U
Copper, Dissolved	ug/l	5.70	0	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	2	UL	2	U	2	U	2	U	2	U	2	U
Lead, Dissolved	ug/l	2	UL	2	0	2	U	2	U	2	UL	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3.20	0B	3	U	3	U	3	U	4.40	0	3	U
Selenium, Dissolved	ug/l	3	UL	3	U	3	U	3	U	3	U	3	U
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Zinc	ug/l	23.80		4	U	4	U	18.50	0B	6.80	0B	8.80	0B
Zinc, Dissolved	ug/l	4.10	(B)	4	U	12.70	0B	5	0B	23.80	B	20.90	B
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	1.80	B	0.90	B	0.25	U	0.25	U	1	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW6		MW7		MW1		MW8		MW2	
SAMPLE ID:		PC-CG3-MW9-GW4		PC-CG3-MW6-GW4		PC-CG3-MW7-GW4		PC-TF4-MW1-GW4		PC-TF4-MW8-GW4		PC-TF4-MW2-GW4	
COLLECTION DATE:		08/26/93		09/10/93		09/13/93		08/17/93		08/17/93		08/11/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.18		0.35	U	0.35	U	R	R	0.35	U		
1,1,1-Trichloroethane	ug/l	0.11	B	0.35	U	0.35	U	R	R	0.35	U		
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	R	R	0.40	U		
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	R	R	0.30	U		
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	R	R	0.30	U		
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	R	R	0.30	U		
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	R	R	0.20	U		
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	R	R	0.30	U		
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	R	R	0.20	U		
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	R	R	0.40	U		
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	R	R	0.85	U		
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	R	R	0.40	U		
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	R	R	0.50	U		
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	R	R	0.35	U		
Chloroethane	ug/l	0.14		0.50	U	0.50	U	R	R	0.50	U		
Chloroform	ug/l	0.13		0.35	U	0.63		R	R	0.35	U		
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	R	R	0.30	U		
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	R	R	0.40	U		
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	R	R	0.45	U		
Methyl chloride	ug/l	0.14		0.50	U	0.50	U	R	R	0.50	U		
Methylene chloride	ug/l	0.35	B	0.28		0.31	B	R	R	0.05			
Tetrachloroethylene	ug/l	0.08		0.30	U	0.30	U	R	R	0.30	U		
Trichloroethylene	ug/l	0.07		0.30	U	0.30	U	R	R	0.30	U		
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	R	R	0.55	U		

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		MW9		MW6		MW7		MW1		MW8		MW2	
LOCATOR:		MW9		MW6		MW7		MW1		MW8		MW2	
SAMPLE ID:		PC-CG3-MW9-GW4		PC-CG3-MW6-GW4		PC-CG3-MW7-GW4		PC-TF4-MW1-GW4		PC-TF4-MW8-GW4		PC-TF4-MW2-GW4	
COLLECTION DATE:		08/26/93		09/10/93		09/13/93		08/17/93		08/17/93		08/11/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.41	B	0.67	B	R	R	1	B		
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	R	R	0.20	U		
1,3-Dichlorobenzene	ug/l	0.20	U	0.29	B	0.20	U	R	R	0.20	U		
1,3-Dimethylbenzene	ug/l	-		-		-		R	-		0.03		
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	-		R	-		
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	R	R	0.15	U		
1,4-Dimethylbenzene	ug/l	-		-		-		R	-		0.03		
Benzene	ug/l	0.35	U	0.51		0.35	U	R	R	0.35	U		
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	R	R	0.25	U		
Ethylbenzene	ug/l	0.20	U	1.40		0.20	U	R	R	0.20	U		
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	R	R	5	U		
Styrene	ug/l	0.25	U	0.25	U	0.11		R	R	0.25	U		
Toluene	ug/l	0.25	U	0.25	U	0.10	B	R	R	0.21	B		
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW6		MW7		MW1		MW8		MW2	
SAMPLE ID:		PC-CG3-MW9-GW4		PC-CG3-MW6-GW4		PC-CG3-MW7-GW4		PC-TF4-MW1-GW4		PC-TF4-MW8-GW4		PC-TF4-MW2-GW4	
COLLECTION DATE:		08/26/93		09/10/93		09/13/93		08/17/93		08/17/93		08/11/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	0.50		5	U	5	U	5	U	0.50	J
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	0.80	B	5	U	0.80		0.80		5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW6		MW7		MW1		MW8		MW2	
SAMPLE ID:		PC-CG3-MW9-GW4		PC-CG3-MW6-GW4		PC-CG3-MW7-GW4		PC-TF4-MW1-GW4		PC-TF4-MW8-GW4		PC-TF4-MW2-GW4	
COLLECTION DATE:		08/26/93		09/10/93		09/13/93		08/17/93		08/17/93		08/11/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2	B	7	B	4	B	5	U	4		3	B
METALS													
Antimony	ug/l	35	U	42.50	0B	45	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	53.80	0B	69.20	B	35	U
Arsenic	ug/l	4	U	9.90	0	4	U	15.60	L	23	L	4.80	0
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	1	U	1	U	4	U	1.40	0	1.50	0	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	4.60	0	5	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	8	U	21.10		10	U	61.10		67.20		16.50	
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	4	U	25.40		15	U	79.90		91.20		18.60	0B
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	2	U	12.90		2	U	56.60		62.70		16.40	
Lead, Dissolved	ug/l	2	UL	2	UL	2	U	2	U	9.40	B	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18.60	0	35	U	56		59.60		18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	U	17.20	B	5.30	B	3	U	3	U	3	UL
Selenium, Dissolved	ug/l	3	UL	3	UL	R	3	U	3	U	3	U	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	U	3	UL	3	UL	3	UL	3	UL	3	U
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UJ	3	UL	3	UL	3	UL
Zinc	ug/l	73.20	B	55.90		10.90	0	137		163		34.60	
Zinc, Dissolved	ug/l	21.80	B	5.90	(B)	4	U	4	U	7.10	0B	4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	0.40	B	0.80	B	0.25	U	1.50	B	0.80	B	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW1		MW2		MW2		MW4	
SAMPLE ID:		PC-TF4-MW3-GW4		PC-TF4-MW4-GW4		PC-SF5-MW1-GW4		PC-SF5-MW2-GW4		PC-SF5-MW3-GW4		PC-SF5-MW4-GW4	
COLLECTION DATE:		08/11/93		08/12/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.06		0.06		0.03		0.11	B	0.31		0.44	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW1		MW2		MW2		MW4			
SAMPLE ID:		PC-TF4-MW3-GW4		PC-TF4-MW4-GW4		PC-SF5-MW1-GW4		PC-SF5-MW2-GW4		PC-SF5-MW3-GW4		PC-SF5-MW4-GW4			
COLLECTION DATE:		08/11/93		08/12/93		08/15/93		08/24/93		08/24/93		08/24/93			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL		
8020															
1,2-Dichlorobenzene	ug/l	0.15	U	1.10	B	4.70		2.20	B	0.15	U	0.28	B		
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.88		0.20	U	0.20	U	0.20	U		
1,3-Dichlorobenzene	ug/l	0.20	U	0.07	B	2.90	J	0.20	U	0.20	U	0.20	U		
1,3-Dimethylbenzene	ug/l	-		0.07		8		-		-		-			
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	-		-		0.50	U	0.50	U	0.50	U		
1,4-Dichlorobenzene	ug/l	0.15	U	0.07	B	3.50		0.15	U	0.15	U	0.15	U		
1,4-Dimethylbenzene	ug/l	-		0.07		8		-		-		-			
Benzene	ug/l	0.35	U	0.35	U	52		0.35	U	0.35	U	0.35	U		
Chlorobenzene	ug/l	0.25	U	0.25	U	0.41	J	0.25	U	0.25	U	0.25	U		
Ethylbenzene	ug/l	0.20	U	0.10		0.68		0.09	B	0.20	U	0.10	B		
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U		
Styrene	ug/l	0.25	U	0.25	U	1.50	J	0.25	U	0.25	U	0.25	U		
Toluene	ug/l	0.29	U	0.11	B	0.11	B	0.14	B	0.11	B	0.23	B		
LCNBA															
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2,4,5-Trichlorophenol	ug/l	20	U	20	U	60	U	20	U	20	U	20	U		
2,4,6-Trichlorophenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2,4-Dichlorophenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2,4-Dimethylphenol	ug/l	5	U	5	U	4	J	5	U	5	U	5	U		
2,4-Dinitrophenol	ug/l	20	U	20	U	60	U	20	U	20	U	20	U		
2,4-Dinitrotoluene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2,6-Dinitrotoluene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2-Chloronaphthalene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2-Chlorophenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	60	U	20	U	20	U	20	U		
2-Methylnaphthalene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2-Methylphenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
2-Nitroaniline	ug/l	20	U	20	U	60	U	20	U	20	U	20	U		
2-Nitrophenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
3-Nitroaniline	ug/l	20	U	20	U	60	U	20	U	20	U	20	U		
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U		

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW1		MW2		MW2		MW4	
SAMPLE ID:		PC-TF4-MW3-GW4		PC-TF4-MW4-GW4		PC-SF5-MW1-GW4		PC-SF5-MW2-GW4		PC-SF5-MW3-GW4		PC-SF5-MW4-GW4	
COLLECTION DATE:		08/11/93		08/12/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	60	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	60	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	15	U	0.70		1	B	0.70	
Di-n-octyl phthalate	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	5	U	15	U	5	U	1		5	U
Dimethyl phthalate	ug/l	5	U	5	U	15	U	5	U	0.60		5	U
Fluoranthene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	60	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	2		0.70	B	4		5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	MW3		MW4		MW1		MW2		MW2		MW4	
	SAMPLE ID:	PC-TF4-MW3-GW4		PC-TF4-MW4-GW4		PC-SF5-MW1-GW4		PC-SF5-MW2-GW4		PC-SF5-MW3-GW4		PC-SF5-MW4-GW4	
	COLLECTION DATE:	08/11/93		08/12/93		08/15/93		08/24/93		08/24/93		08/24/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	15	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2	B	0.90	B	3	B	1	B	11	B	2	B
METALS													
Antimony	ug/l	84.60	B	35	U	35	U	35	U	35	U	35	U
Antimony, Dissolved	ug/l	35	U	36.20	0B	49.90	0B	35	U	35	U	35	U
Arsenic	ug/l	19		4	U	20.50		4	U	4	U	4	U
Arsenic, Dissolved	ug/l	4	U	4	U	22.10	B	4	U	4	U	4	U
Beryllium	ug/l	2.90	B	1	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	8.10		3	U	4.70	0B	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	88		23.30		8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	120		22.50	0B	4	U	5.90	0B	1	U	4	U
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	50.60		17.60	L	6.50		2	UL	2	U	2	U
Lead, Dissolved	ug/l	2	U	3.10		2	U	2	U	2	UL	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	90.50		18	U	18	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	U	3	UL	3	U	3	U	3	U	3	U
Selenium, Dissolved	ug/l	3	UL	3	U	3	U	3	UL	3	U	3	UL
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Zinc	ug/l	246		61.30		14.80	0B	33.60	B	74.50	B	13	0B
Zinc, Dissolved	ug/l	4	U	4	U	4.20	0B	27.90	B	83.50		65.30	B
TPH													
Total Petroleum Hydrocarbons	mg/l	1.10	B	2.10	B	5.80	B	1.70	B	3.80	B	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW5		MW6		MW7		MW8		MW9		MW1	
SAMPLE ID:		PC-SF5-MW5-GW4		PC-SF5-MW6-GW4		PC-SF5-MW7-GW4		PC-SF5-MW8-GW4		PC-SF5-MW9-GW4		PC-LF6-MW1-GW4	
COLLECTION DATE:		09/12/93		09/12/93		09/12/93		09/13/93		09/13/93		08/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.08	B	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.44		0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.17	B	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.74	B	0.45	J	0.39	B	0.28	B	0.30	B	0.08	
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l	0.30	U	0.30	U	0.21		0.63		0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	MW5		MW6		MW7		MW8		MW9		MW1	
	SAMPLE ID:	PC-SF5-MW5-GW4		PC-SF5-MW6-GW4		PC-SF5-MW7-GW4		PC-SF5-MW8-GW4		PC-SF5-MW9-GW4		PC-LF6-MW1-GW4	
	COLLECTION DATE:	09/12/93		09/12/93		09/12/93		09/13/93		09/13/93		08/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.43	B	0.11	B	0.86	B
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.13	J	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.54		0.20	U	0.20	U	0.15	B	0.20	U	0.20	B
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.38	B	0.15	U	0.19	B
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	41		0.26		0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.49	J	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.67	J	0.25	U	0.25	U
Toluene	ug/l	0.25	U	0.24		0.25	U	0.39	B	0.18	B	0.16	B
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		MW5		MW6		MW7		MW8		MW9		MW1	
LOCATOR:		MW5		MW6		MW7		MW8		MW9		MW1	
SAMPLE ID:		PC-SF5-MW5-GW4		PC-SF5-MW6-GW4		PC-SF5-MW7-GW4		PC-SF5-MW8-GW4		PC-SF5-MW9-GW4		PC-LF6-MW1-GW4	
COLLECTION DATE:		09/12/93		09/12/93		09/12/93		09/13/93		09/13/93		08/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U	0.50		0.50		5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	0.60		0.50		5	U	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	5	U	5	U	0.50	B	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		MW5		MW6		MW7		MW8		MW9		MW1	
LOCATOR:		MW5		MW6		MW7		MW8		MW9		MW1	
SAMPLE ID:		PC-SF5-MW5-GW4		PC-SF5-MW6-GW4		PC-SF5-MW7-GW4		PC-SF5-MW8-GW4		PC-SF5-MW9-GW4		PC-LF6-MW1-GW4	
COLLECTION DATE:		09/12/93		09/12/93		09/12/93		09/13/93		09/13/93		08/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	4	B	5	B	3	B	2	B	3	B	2	B
METALS													
Antimony	ug/l	38.50	0B	35	U	35	U	45	U	45	UL	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	UL	35	U	35	U	35	U
Arsenic	ug/l	4	U	4.30	0	4	U	7		10.50	L	4	U
Arsenic, Dissolved	ug/l	4	UL	4	U	4	UL	4.20	0B	4.50	0B	4	U
Beryllium	ug/l	1	U	1	U	1	U	4	U	4	UL	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	UL	1	U	1	U	1	U
Cadmium	ug/l	3	U	3	U	3	U	5	U	5	UL	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	UL	3	U	3	U	3	U
Chromium	ug/l	8	U	9.80	0	8	U	10	U	81.70	L	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	UL	8	U	8	U	8	U
Copper	ug/l	4.40	0B	10.10	0B	4	U	15	U	73.30	L	4	U
Copper, Dissolved	ug/l	4	U	4	U	4	UL	4	U	4	U	4	U
Lead	ug/l	2	U	2	U	2	U	2	UL	44.10	L	2	U
Lead, Dissolved	ug/l	2	UL	2	U	2	UL	2	UL	2	UL	2	U
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	UL	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	UL	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	18	U	35	U	69.90	L	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	UL	18	U	18	U	18	U
Selenium	ug/l	9.50	B	3	UL	7.50	B	3	UL	3	UL	3	U
Selenium, Dissolved	ug/l	3	U	3	UL	3	UL	R	7.30		3	U	
Silver	ug/l	4	U	4	U	4	U	4	U	4	UL	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	UL	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	U	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UJ	3	UJ	3	UL
Zinc	ug/l	7.10	0B	33.60	B	14.70	0B	33.10		259		4	U
Zinc, Dissolved	ug/l	6.80		9.40	0B	18.20	0B	61		38.60		4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	0.30	B	1.10	B	1	B	0.25	U	0.25	U	1.60	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW3		MW4		MW5		MW6		MW8	
SAMPLE ID:		PC-LF6-MW2-GW4		PC-LF6-MW3-GW4		PC-LF6-MW4-GW4		PC-LF6-MW5-GW4		PC-LF6-MW6-GW4		PC-LF6-MW8-GW4	
COLLECTION DATE:		08/11/93		08/26/93		09/12/93		09/12/93		09/12/93		09/08/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	UJ	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.25		0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	UJ	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	UJ	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	UJ	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	UJ	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	1.10		0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.14		0.35	U	0.35	UJ	0.35	U	0.35	U
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	UJ	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	UJ	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U	0.50	U
Methylene chloride	ug/l	0.03		0.17	U	0.34	B	0.35	B	0.21	U	0.42	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	UJ	0.30	U	0.30	U
Trichloroethylene	ug/l	0.30	U	1.70		0.30	U	0.30	UJ	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	UJ	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW2		MW3		MW4		MW5		MW6		MW8	
		SAMPLE ID:	PC-LF6-MW2-GW4		PC-LF6-MW3-GW4		PC-LF6-MW4-GW4		PC-LF6-MW5-GW4		PC-LF6-MW6-GW4		PC-LF6-MW8-GW4	
		COLLECTION DATE:	08/11/93		08/26/93		09/12/93		09/12/93		09/12/93		09/08/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020														
1,2-Dichlorobenzene	ug/l		0.58	B	0.15	U	0.15	U	0.15	B	0.15	U	1	B
1,2-Dimethylbenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	UJ	0.20	U	0.26	
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	UJ	0.20	U	0.27	B
1,3-Dimethylbenzene	ug/l		-		-		-		-		-		1.70	
1,3/1,4-Dimethylbenzene	ug/l		0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U	-	
1,4-Dichlorobenzene	ug/l		0.15	U	0.15	U	0.15	U	0.15	UJ	0.15	U	0.27	B
1,4-Dimethylbenzene	ug/l		-		-		-		-		-		1.70	
Benzene	ug/l		0.07		0.35	U	0.35	U	0.35	UJ	0.35	U	0.35	U
Chlorobenzene	ug/l		0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.17	
Ethylbenzene	ug/l		0.16		0.20	U	0.20	U	0.74	J	0.20	U	4.70	
Methyl-t-Butyl Ether	ug/l		5	U	5	U	5	U	5	UJ	5	U	5	U
Styrene	ug/l		0.25	U	0.25	U	0.25	U	0.25	UJ	0.25	U	0.25	U
Toluene	ug/l		0.15	B	0.25	U	0.25	U	0.25	UJ	0.25	U	0.24	
LCBNA														
1,2,4-Trichlorobenzene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l		20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l		5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l		5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW3		MW4		MW5		MW6		MW8	
SAMPLE ID:		PC-LF6-MW2-GW4		PC-LF6-MW3-GW4		PC-LF6-MW4-GW4		PC-LF6-MW5-GW4		PC-LF6-MW6-GW4		PC-LF6-MW8-GW4	
COLLECTION DATE:		08/11/93		08/26/93		09/12/93		09/12/93		09/12/93		09/08/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	2	
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	0.80	B	5	U	5	U	5	U	1	J
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	0.70	B	2		2		0.60		0.90	
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	3	B	3		5	U	5	U	2	

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	MW2		MW3		MW4		MW5		MW6		MW8	
	SAMPLE ID:	PC-LF6-MW2-GW4		PC-LF6-MW3-GW4		PC-LF6-MW4-GW4		PC-LF6-MW5-GW4		PC-LF6-MW6-GW4		PC-LF6-MW8-GW4	
	COLLECTION DATE:	08/11/93		08/26/93		09/12/93		09/12/93		09/12/93		09/08/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2	B	5	B	4	B	9	B	4	B	8	B
METALS													
Antimony	ug/l	48.40	0B	35	U	39.20	0	35	U	35.20	0B	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	35	U	35	U	35	U
Arsenic	ug/l	4	U	4	U	4	U	4	U	4	U	13.40	J
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	1	U	1	U	1	U	1	U	1	U	2.40	
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	3	U	3	U	3	U	3	U	5.40	
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	8	U	8	U	8	U	8	U	8	U	75.90	
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	4	U	4.20	0B	8.20	0B	4.90	0B	5.20	0B	53.30	
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	8.20	0
Lead	ug/l	2	U	2.10	(L)	2	U	2	U	2	UL	38.20	
Lead, Dissolved	ug/l	2	U	2	UL	2	UL	2	UL	2	UL	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	18	U	18	U	18	U	18	U	43.10	
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	UL	3	U	3	U	3	U	3	U	77.10	
Selenium, Dissolved	ug/l	3	U	3	UL	3	U	3	U	3	U	3	U
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	U	3	U	3	U	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Zinc	ug/l	6.90	0B	4.30	0B	20.40	B	11.60	0B	67.70	B	167	
Zinc, Dissolved	ug/l	4	U	4	U	8.80	0B	10	0B	38.20	B	4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	0.50	B	0.50	B	0.50	B	0.25	U	2.30	B	0.60	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW10		MW1		MW2		MW3		MW4	
SAMPLE ID:		PC-LF6-MW9-GW4		PC-LF6-MW10-GW4		PC-HN8-MW1-GW4		PC-HN8-MW2-GW4		PC-HN8-MW3-GW4		PC-HN8-MW4-GW4	
COLLECTION DATE:		09/08/93		09/16/93		08/15/93		09/12/93		09/12/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,1,1,2-Tetrachloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l	0.35	U	0.30		0.35	U	0.35	UJ	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l	0.85	U	0.85	U	0.85	U	0.85	UJ	0.85	U	0.85	U
Bromochloromethane	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l	0.35	U	0.35	U	0.35	U	0.35	UJ	0.35	U	0.33	B
Dibromochloromethane	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l	0.68	B	0.10	B	0.11	B	0.83	B	0.50	B	0.83	B
Tetrachloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	1.20	J	0.30	U
Trichloroethylene	ug/l	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW10		MW1		MW2		MW3		MW4	
SAMPLE ID:		PC-LF6-MW9-GW4		PC-LF6-MW10-GW4		PC-HN8-MW1-GW4		PC-HN8-MW2-GW4		PC-HN8-MW3-GW4		PC-HN8-MW4-GW4	
COLLECTION DATE:		09/08/93		09/16/93		08/15/93		09/12/93		09/12/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	2.40	B	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.19	B	0.50	U	0.53	B	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.21	B	0.15	U	0.15	U	0.25	B	0.15	U	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.11		0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.25	U	0.25	U	0.24		0.24	B	0.25	U	0.20	
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW10		MW1		MW2		MW3		MW4	
SAMPLE ID:		PC-LF6-MW9-GW4		PC-LF6-MW10-GW4		PC-HN8-MW1-GW4		PC-HN8-MW2-GW4		PC-HN8-MW3-GW4		PC-HN8-MW4-GW4	
COLLECTION DATE:		09/08/93		09/16/93		08/15/93		09/12/93		09/12/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	1	J	5	U	5	U	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	1		5	U	5	J	5	U	0.60		0.70	
Dimethyl phthalate	ug/l	5	U	5	U	1	J	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	3		5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW10		MW1		MW2		MW3		MW4	
SAMPLE ID:		PC-LF6-MW9-GW4		PC-LF6-MW10-GW4		PC-HN8-MW1-GW4		PC-HN8-MW2-GW4		PC-HN8-MW3-GW4		PC-HN8-MW4-GW4	
COLLECTION DATE:		09/08/93		09/16/93		08/15/93		09/12/93		09/12/93		09/12/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	3	B	2	B	3	B	2	B	3	B	7	B
METALS													
Antimony	ug/l	42.40	0B	45	U	52.30	0B	35	U	35	U	35	U
Antimony, Dissolved	ug/l	35	U	35	U	46.10	0B	35	U	35	U	35	U
Arsenic	ug/l	8.20	0	10.90		4	U	4	U	4	U	4	U
Arsenic, Dissolved	ug/l	4	U	4.60	0B	4	U	4	U	4	U	4	U
Beryllium	ug/l	1.80		4	U	1	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	5.50		5	U	3	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	62		60.50		8	U	8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	44.40		57.80		4	U	4	U	4	U	4	U
Copper, Dissolved	ug/l	8.90		4	U	4	U	4	U	4	U	4	U
Lead	ug/l	23.90		127		2	U	2	U	2	U	2	U
Lead, Dissolved	ug/l	2	UL	2	UL	4.80	B	2	UL	2	UL	2	UL
Mercury	ug/l	0.20	U	0.36		0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	46.80		37.10		18	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	24.50	B	3	UL	3	UL	3	U	3	U	3	U
Selenium, Dissolved	ug/l	3	UL	3	(B)	3	U	3	UL	3	U	3	UL
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UJ	3	UL	3	UL	3	UL	3	UL
Zinc	ug/l	123		258		4	U	9.20	0B	7.90	0B	15.30	0B
Zinc, Dissolved	ug/l	4.70	(B)	4.80	0	4	U	15.90	0B	6.80	0B	6.20	0B
TPH													
Total Petroleum Hydrocarbons	mg/l	0.25	U	0.90	B	2.30	B	0.60	B	1	B	0.25	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW9		MW5		MW2		MW1		MW2		MW3	
		SAMPLE ID:	PC-HN8-MW9-GW4		PC-HN8-MW5-GW4		PC-FF7-MW2-GW4		PC-RT9-MW1-GW4		PC-RT9-MW2-GW4		PC-RT9-MW3-GW4	
		COLLECTION DATE:	09/12/93		09/14/93		09/14/93		08/27/93		08/27/93		08/27/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
1,1,1,2-Tetrachloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.07	B
1,1,2,2-Tetrachloroethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l		0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.16		0.35	U
Dibromochloromethane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l		0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l		0.66	B	0.21	B	0.16	B	0.26	B	0.53	J	0.23	B
Tetrachloroethylene	ug/l		0.30	U	0.30	U	0.30	U	1	J	0.30	U	0.30	U
Trichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.60	J	0.30	U	0.30	U
Vinyl chloride	ug/l		0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW5		MW2		MW1		MW2		MW3	
SAMPLE ID:		PC-HN8-MW9-GW4		PC-HN8-MW5-GW4		PC-FF7-MW2-GW4		PC-RT9-MW1-GW4		PC-RT9-MW2-GW4		PC-RT9-MW3-GW4	
COLLECTION DATE:		09/12/93		09/14/93		09/14/93		08/27/93		08/27/93		08/27/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
1,2-Dichlorobenzene	ug/l	2.20		0.14	B	0.15	U	0.15	U	0.15	U	0.15	U
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.20	U	0.20	U	0.14	B	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		-		-		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
1,4-Dimethylbenzene	ug/l	-		-		-		-		-		-	
Benzene	ug/l	0.35	U	0.35	U	0.09		0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.12		0.20	U	0.20	U	0.20	U	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.15	B	0.17	B	0.36	B	0.25	U	0.25	U	0.25	U
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW5		MW2		MW1		MW2		MW3	
SAMPLE ID:		PC-HN8-MW9-GW4		PC-HN8-MW5-GW4		PC-FF7-MW2-GW4		PC-RT9-MW1-GW4		PC-RT9-MW2-GW4		PC-RT9-MW3-GW4	
COLLECTION DATE:		09/12/93		09/14/93		09/14/93		08/27/93		08/27/93		08/27/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	5	U	5	U	0.60	B	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	5	U	2	B	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW9		MW5		MW2		MW1		MW2		MW3	
SAMPLE ID:		PC-HN8-MW9-GW4		PC-HN8-MW5-GW4		PC-FF7-MW2-GW4		PC-RT9-MW1-GW4		PC-RT9-MW2-GW4		PC-RT9-MW3-GW4	
COLLECTION DATE:		09/12/93		09/14/93		09/14/93		08/27/93		08/27/93		08/27/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	8	B	3	B	2	B	7	B	5	B	5	B
METALS													
Antimony	ug/l	35	U	45	U	45	U	35	U	35.30	0B	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	35	U	35	U	35	U
Arsenic	ug/l	4	U	13.30		17.40		45.90	0	30.90		25.50	
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	1	U	4	U	4	U	1	U	1	0B	1	0B
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	5	U	5	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	8	U	46.30		52.20		8.20	0	42.70		32.70	
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	4	U	55.60		66.70		61.70		56.80		62.60	
Copper, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	2	U	44		58.50		64.60		68.60		55.10	
Lead, Dissolved	ug/l	2	UL	2	U	2	U	2	UL	2	UL	2	UL
Mercury	ug/l	0.20	U	0.20	U	0.23		0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Nickel	ug/l	18	U	61.30		74.70		18	U	41.70		38.20	0
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	3	UL	3	UL	3	0B	3	U	3	UL	3	UL
Selenium, Dissolved	ug/l	3	UL	6.20	B	R	3	U	3	UL	3	UL	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	U	3	UL
Thallium, Dissolved	ug/l	3	UL	3	UJ	3	UJ	3	UL	3	UL	3	UL
Zinc	ug/l	6.70	0B	137		156		32	B	103	B	77.80	B
Zinc, Dissolved	ug/l	11.80	0B	4	U	27.80		4.40	0B	10.60	0B	4	U
TPH													
Total Petroleum Hydrocarbons	mg/l	0.60	B	0.40	B	0.60	B	0.40	B	0.80	B	0.60	B

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

		LOCATOR:	MW4		MW5		MW6		PW1		PW2		PW3	
		SAMPLE ID:	PC-RT9-MW4-GW4		PC-RT9-MW5-GW4		PC-RT9-MW6-GW4		PC-PW-PW1-GW4		PC-PW-PW2-GW4		PC-PW-PW3-GW4	
		COLLECTION DATE:	09/08/93		09/15/93		09/15/93		08/10/93		08/10/93		08/10/93	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
1,1,1,2-Tetrachloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,1-Trichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1,2,2-Tetrachloroethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
1,1,2-Trichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,1-Dichloroethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,1-Dichloroethylene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2,3-Trichloropropane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dibromoethane	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
1,2-Dichlorobenzene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-Dichloroethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,2-Dichloropropane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,2-trans-Dichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
1,3-cis-Dichloropropylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
1,3-trans-Dichloropropylene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
1,4-Dichlorobenzene	ug/l		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
2-Chloroethylvinyl ether	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
2-Chlorotoluene	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
4-Chlorotoluene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Bromobenzene	ug/l		0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Bromochloromethane	ug/l		0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
Bromodichloromethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Bromoform	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon Tetrachloride	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	1.20	
Chlorobenzene	ug/l		0.35	U	0.35	U	0.35	U	0.35	U	0.35	U	0.35	U
Chloroethane	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	ug/l		0.35	U	0.13		0.35	UJ	0.35	U	0.35	U	0.28	
Dibromochloromethane	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Dibromomethane	ug/l		0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U
Methyl bromide	ug/l		0.45	U	0.45	U	0.45	U	0.45	U	0.45	U	0.45	U
Methyl chloride	ug/l		0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	ug/l		0.81	B	0.83	B	0.19	B	0.28		0.37		0.16	U
Tetrachloroethylene	ug/l		1.70		0.30	U	1.50		0.30	U	0.30	U	0.30	U
Trichloroethylene	ug/l		0.30	U	0.30	U	0.30	U	0.30	U	0.30	U	0.30	U
Vinyl chloride	ug/l		0.55	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:	MW4		MW5		MW6		PW1		PW2		PW3	
SAMPLE ID:	PC-RT9-MW4-GW4		PC-RT9-MW5-GW4		PC-RT9-MW6-GW4		PC-PW-PW1-GW4		PC-PW-PW2-GW4		PC-PW-PW3-GW4	
COLLECTION DATE:	09/08/93		09/15/93		09/15/93		08/10/93		08/10/93		08/10/93	
UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020												
1,2-Dichlorobenzene	ug/l	0.15	U	0.15	U	3.60		0.76	B	0.31	B	0.23	B
1,2-Dimethylbenzene	ug/l	0.20	U	0.20	U	860	E	0.20	U	0.20	U	0.20	U
1,3-Dichlorobenzene	ug/l	0.75	B	0.20	U	0.19	B	0.20	U	0.20	U	0.20	U
1,3-Dimethylbenzene	ug/l	-		-		800		0.03		-		-	
1,3/1,4-Dimethylbenzene	ug/l	0.50	U	0.50	U	-		-		0.50	U	0.50	U
1,4-Dichlorobenzene	ug/l	0.15	U	0.18	B	18		0.15	U	0.36	B	0.38	B
1,4-Dimethylbenzene	ug/l	-		-		510		0.03		-		-	
Benzene	ug/l	0.35	U	0.35	U	3.90	J	0.35	U	0.35	U	0.35	U
Chlorobenzene	ug/l	0.25	U	0.25	U	0.93		0.25	U	0.25	U	0.25	U
Ethylbenzene	ug/l	0.20	U	0.20	U	1.40	J	0.20	U	0.09	J	0.20	U
Methyl-t-Butyl Ether	ug/l	5	U	5	U	1.30	J	5	U	5	U	5	U
Styrene	ug/l	0.25	U	0.25	U	0.78		0.25	U	0.25	U	0.25	U
Toluene	ug/l	0.25	U	0.22	B	3.10		0.12	B	0.17	B	0.18	B
LCBNA													
1,2,4-Trichlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,2'-Oxybis(1-Chloropropane)	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4,6-Trichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dichlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	ug/l	5	U	5	U	25	J	5	U	5	U	5	U
2,4-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2,4-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chloronaphthalene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Chlorophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Methyl-4,6-Dinitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Methylnaphthalene	ug/l	5	U	5	U	47		5	U	5	U	5	U
2-Methylphenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
2-Nitrophenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3,3'-Dichlorobenzidine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Bromophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chloro-3-methyl phenol	ug/l	5	U	5	U	5	U	5	U	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

LOCATOR:		MW4		MW5		MW6		PW1		PW2		PW3	
SAMPLE ID:		PC-RT9-MW4-GW4		PC-RT9-MW5-GW4		PC-RT9-MW6-GW4		PC-PW-PW1-GW4		PC-PW-PW2-GW4		PC-PW-PW3-GW4	
COLLECTION DATE:		09/08/93		09/15/93		09/15/93		08/10/93		08/10/93		08/10/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
4-Chloroaniline	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
4-Methylphenol	ug/l	5	U	5	U	2		5	U	5	U	5	U
4-Nitroaniline	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
4-Nitrophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Acenaphthene	ug/l	5	U	5	U	1		5	U	5	U	5	U
Acenaphthylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(a)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(b)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(ghi)perylene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Benzo(k)fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Butyl benzyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Chrysene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butyl phthalate	ug/l	5	U	0.60	B	1	B	5	U	5	U	5	U
Di-n-octyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzo(a,h)anthracene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	ug/l	5	U	5	U	5	U	0.90	J	5	U	5	U
Dimethyl phthalate	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluoranthene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Fluorene	ug/l	5	U	5	U	0.80		5	U	5	U	5	U
Hexachlorobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorobutadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Hexachloroethane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Indeno(1,2,3-c,d)pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Isophorone	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodi-N-Propylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
N-Nitrosodiphenylamine	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Naphthalene	ug/l	5	U	5	U	48		5	U	5	U	5	U
Nitrobenzene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
Pentachlorophenol	ug/l	20	U	20	U	20	U	20	U	20	U	20	U
Phenanthrene	ug/l	5	U	5	U	0.80		5	U	5	U	5	U
Phenol	ug/l	5	U	5	U	5	U	2	J	5	U	5	U

Appendix L - Groundwater Analytical Results from Remedial Investigation
Alpena CRTC, Alpena, MI

	LOCATOR:	MW4		MW5		MW6		PW1		PW2		PW3	
	SAMPLE ID:	PC-RT9-MW4-GW4		PC-RT9-MW5-GW4		PC-RT9-MW6-GW4		PC-PW-PW1-GW4		PC-PW-PW2-GW4		PC-PW-PW3-GW4	
	COLLECTION DATE:	09/08/93		09/15/93		09/15/93		08/10/93		08/10/93		08/10/93	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Pyrene	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethoxy)methane	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Chloroethyl) ether	ug/l	5	U	5	U	5	U	5	U	5	U	5	U
bis(2-Ethylhexyl)phthalate	ug/l	2	B	2	B	4	B	1	B	0.60	B	0.90	B
METALS													
Antimony	ug/l	61.60	B	35	U	45	U	44.40	B	35	U	35	U
Antimony, Dissolved	ug/l	35	U	35	U	35	U	38.50	0B	35	U	35	U
Arsenic	ug/l	23		4	U	10.80	K	6.40	(J)	4	U	4	U
Arsenic, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Beryllium	ug/l	2.70	0	1	U	4	U	1	U	1	U	1	U
Beryllium, Dissolved	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
Cadmium	ug/l	3	U	3	U	5	U	3	U	3	U	3	U
Cadmium, Dissolved	ug/l	3	U	3	U	3	U	3	U	3	U	3	U
Chromium	ug/l	78.80		8	U	25.20		8	U	8	U	8	U
Chromium, Dissolved	ug/l	8	U	8	U	8	U	8	U	8	U	8	U
Copper	ug/l	90.10		4	U	57.80		4.60	B	4.10	(B)	4	U
Copper, Dissolved	ug/l	5.70	0	4	U	4	U	4	U	4	U	4	U
Lead	ug/l	89		2	U	267		2	U	2	U	2.70	0
Lead, Dissolved	ug/l	2	UL	2	UL	15.90		2	U	2	U	2	U
Mercury	ug/l	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
Mercury, Dissolved	ug/l	0.20	U	0.20	U	0.20	U	0.20	UL	0.20	UL	0.20	UL
Nickel	ug/l	74.70		18	U	35	U	18	U	18	U	18	U
Nickel, Dissolved	ug/l	18	U	18	U	18	U	18	U	18	U	18	U
Selenium	ug/l	22.70	B	3	U	3	UL	3	UL	3	UL	3	U
Selenium, Dissolved	ug/l	3	U	3	UL	R	3	U	3	U	3	U	
Silver	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Silver, Dissolved	ug/l	4	U	4	U	4	U	4	U	4	U	4	U
Thallium	ug/l	3	UL	3	UL	3	UL	3	UL	3	UL	3	U
Thallium, Dissolved	ug/l	3	UL	3	UL	3	UJ	3	UL	R	3	UL	
Zinc	ug/l	176		4	U	67.20		15.70	0	16.40	0	111	
Zinc, Dissolved	ug/l	5.60	(B)	4	U	6.30	0	8.60	0	8.90	0	112	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.40	B	1.10	B	11.40	B	0.30		0.70		4	

Appendix M: Facilty-wide Soil and Groundwater Background Determination Data

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Facility-wide Soil Background Determination and Data

When local background levels are higher than the health based cleanup criteria for metals, MDNR allows the use of the local background levels in place of the cleanup criteria. Soil samples have been collected during three separate sampling events (Engineering Science 1990, Earth Technology, July 1992, and the summer 1993 RI sampling activities) to provide the data necessary to calculate facility-wide inorganic background concentrations. Soil samples during all three events were collected from areas relatively undisturbed by human activity or away from known waste handling areas. The following sections describe the method of calculating background levels at the installation.

The area primarily consists of fine - to - medium grained quartz sand, with clay only in some areas. To obtain background levels that are most representative of the area, samples of both soil types were collected. Fifteen quartz sand samples were collected in the Sports Field and five additional quartz sand samples were collected north of Site 5. The samples were analyzed for 12 priority pollutant metals and the results were statistically analyzed, (according to MDNR, "Verification of Soil Remediation", October 25, 1990), to determine high outliers. After any high outliers were eliminated, background was determined for each metal.

The statistical analysis was completed by determining the mean, variance, standard deviation, and coefficient of variation. If the coefficient of variation was greater than 0.5, the highest number was chosen as a suspected outlier. If the suspected outlier was greater than three times the standard deviation of the mean of all the values except the suspected outlier, that value was eliminated from the data. When all necessary outliers were eliminated, background levels were calculated by adding the statistically analyzed mean to three times the standard deviation of that mean. Table M-1presents the quartz sand data and statistical analysis results without coefficient of variation modification. Table M-2 presents the quartz sand data with coefficient of variation modifications.

Four quartz sand samples containing clay were collected from Sites 4 and 6. The results were statistically analyzed in the same manner as stated above. The statistical analysis detected high outliers in the arsenic and selenium data. Since MDNR requires at least four samples to determine background, these outliers were replaced with data from samples PCHN8MW1SS1. The statistical analysis was performed again. The arsenic data produced a coefficient of variation below 0.5, but the selenium data produced a coefficient of variation greater than 0.5 and the result from sample PCHN8MW1SS1 was greater than three times the standard deviation of the statistically analyzed mean. Since no additional background samples were taken, the MDNR health-based background level was used for selenium. Table M-3 presents the quartz sand with clay data and statistical analysis results without coefficient of variation modification. Table M-4 presents the quartz sand with clay data with the coefficient of variation modifications.

Table M-5 presents final background levels. Since there are no distinct delineations at the installation where the sand contains large amounts of clay, the quartz sand background levels were averaged with the quartz sand with clay background levels. These final background values provide levels that are most representative of the installation. The final background levels were compared to the MDNR cleanup criteria and the higher of the two levels was chosen as the background value.

Table M-1
Data for Background Determination
Quartz Sand Data - Statistically Unmodified
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

Site:	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1
Locator:	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1
Date:								
Depth:	0"-6"	12"-18"	24"-30"	12"-18"	24"-30"	0"-6"	0"-6"	12"-18"
Lab:	CCL	CCL	CCL	CCL	CCL	CCL	CCL	CCL
Source:	*	*	*	*	*	*	*	*
Antimony:		3.8		3.9	3.8	4.7	3.9	3.7
Arsenic:	1.9	0.61	0.71	0.65	0.81	1.7	0.82	0.88
Cadmium:		0.53		0.55	0.53	0.65	0.54	0.52
Chromium:	1.4	3.4	2.9	3.7	3.3	1.7	2.9	3.4
Copper:	1.6	1.1	0.75	3.9	0.85	2.8	0.91	0.8
Lead:	3.5	1.5	0.89	2.8	1.7	13.8	1.5	1.5
Mercury:		0.11		0.11	0.11	0.13	0.11	0.1
Nickel:	0.93	2.7	2.2	3.2	2.1	1.1	1.9	2.4
Selenium:	1.1	0.32	0.31	0.33	0.32	0.39	0.32	0.31
Silver:		0.64		0.66	0.64	0.78	0.65	0.62
Thallium:	0.86	0.21	0.21	0.22	0.21	0.26	0.22	0.21
Zinc:	6.3	4.7	3.1	8.8	10.9	13.9	4.3	3.2

* = Earth Technology, July 1992 sampling activities

Table M-1, continued

Site:	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	P00
Locator:	SB3	SB4	SB4	SB4	SB5	SB5	SB5	B1
Date:								
Depth:	24"-30"	12"-18"	24"-30"	0"-6"	0"-6"	12"-18"	24"-30"	2'-3'
Lab:	CCL	CCL	CCL	CCL	CCL	CCL	CCL	CCL
Source:	*	*	*	*	*	*	*	@
Antimony:	3.7	3.7	3.7	4				4.7
Arsenic:	0.57	0.77	0.52	0.85	2.9	0.81	1.5	0.48
Cadmium:	0.52	0.52	0.52	0.55				0.53
Chromium:	2.9	4.2	2.5	2	2.5	3.8	3.6	2.8
Copper:	13.3	1.2	0.68	0.99	0.24	1.7	1.9	1.6
Lead:	0.96	1.4	0.7	2.3	18.7	1.4	0.77	1.1
Mercury:	0.1	0.1	0.1	0.11				0.11
Nickel:	1.5	3.9	2	1	3.6	3.1	3.1	3.7
Selenium:	0.31	0.31	0.31	0.33	0.47	0.41	0.41	0.32
Silver:	0.62	0.62	0.62	0.67				0.42
Thallium:	0.21	0.21	0.21	0.22	0.35	0.3	0.31	0.32
Zinc:	14.9	3.9	3.4	4.6	22.3	6.1	14.9	3.8

* = Earth Technology, July 1992 sampling activities
@ = Earth Technology, summer 1993 sampling activities

Table M-1, continued

Site:	P00	P00	P00	P00					
Locator:	B1	B2	B2	B1					
Date:									
Depth:	9'-10'	0'-1'	2'-3'	0'-1'					
Lab:	CCL	CCL	CCL	CCL					
Source:	@	@	@	@					
					MEAN	VARIANCE	STD DEV	CV	BACKGROUND
Antimony	4.7	5.8	5.3	4.8	4.28	0.42	0.65	0.15	6.23
Arsenic:	0.57	0.52	1.7	0.78	1.00	0.37	0.61	0.60	2.82
Cadmium:	0.53	0.64	0.58	0.53	0.55	0.00	0.04	0.07	0.67
Chromium:	2.1	2.6	4.5	5.2	3.07	0.86	0.92	0.30	5.84
Copper:	1.6	1.9	2.6	1.6	2.10	7.28	2.70	1.28	10.20
Lead:	0.88	1.4	1.4	3	3.06	20.47	4.52	1.48	16.63
Mercury:	0.11	0.13	0.12	0.11	0.11	8.62E-5	0.01	0.08	0.14
Nickel:	3.7	4.5	4.1	3.7	2.72	1.14	1.07	0.39	5.93
Selenium:	0.32	0.39	0.63	0.32	0.40	0.03	0.18	0.45	0.93
Silver:	0.42	0.52	0.47	0.42	0.58	0.01	0.10	0.18	0.90
Thallium:	0.32	0.39	0.35	0.32	0.30	0.02	0.14	0.48	0.72
Zinc:	3.8	15.3	9.6	11.4	8.46	28.48	5.34	0.63	24.47

@ = Earth Technology, summer 1993 sampling activities

Table M-2
Data for Background Determination
Quartz Sand - Statistically Modified
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

Site:	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1
Locator:	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1
Date:								
Depth:	0"-6"	12"-18"	24"-30"	12"-18"	24"-30"	0"-6"	0"-6"	12"-18"
Lab:	CCL	CCL	CCL	CCL	CCL	CCL	CCL	CCL
Source:	*	*	*	*	*	*	*	*
Antimony:		3.8		3.9	3.8	4.7	3.9	3.7
Arsenic:	1.9	0.61	0.71	0.65	0.81	1.7	0.82	0.88
Cadmium:		0.53		0.55	0.53	0.65	0.54	0.52
Chromium:	1.4	3.4	2.9	3.7	3.3	1.7	2.9	3.4
Copper:	1.6	1.1	0.75		0.85	2.8	0.91	0.8
Lead:	3.5	1.5	0.89	2.8	1.7		1.5	1.5
Mercury:		0.11		0.11	0.11	0.13	0.11	0.1
Nickel:	0.93	2.7	2.2	3.2	2.1	1.1	1.9	2.4
Selenium:	1.1	0.32	0.31	0.33	0.32	0.39	0.32	0.31
Silver:		0.64		0.66	0.64	0.78	0.65	0.62
Thallium:	0.86	0.21	0.21	0.22	0.21	0.26	0.22	0.21
Zinc:	6.3	4.7	3.1	8.8	10.9		4.3	3.2

* = Earth Technology, July 1992 sampling activities

Table M-2, continued

Site:	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	PCBG1	P00
Locator:	SB3	SB4	SB4	SB4	SB5	SB5	SB5	B1
Date:								
Depth:	24"-30"	12"-18"	24"-30"	0"-6"	0"-6"	12"-18"	24"-30"	2'-3'
Lab:	CCL	CCL	CCL	CCL	CCL	CCL	CCL	CCL
Source:	*	*	*	*	*	*	*	@
Antimony:	3.7	3.7	3.7	4				4.7
Arsenic:	0.57	0.77	0.52	0.85		0.81	1.5	0.48
Cadmium:	0.52	0.52	0.52	0.55				0.53
Chromium:	2.9	4.2	2.5	2	2.5	3.8	3.6	2.8
Copper:		1.2	0.68	0.99	0.24	1.7	1.9	1.6
Lead:	0.96	1.4	0.7	2.3		1.4	0.77	1.1
Mercury:	0.1	0.1	0.1	0.11				0.11
Nickel:	1.5	3.9	2	1	0.36	3.1	3.1	3.7
Selenium:	0.31	0.31	0.31	0.33	0.47	0.41	0.41	0.32
Silver:	0.62	0.62	0.62	0.67				0.42
Thallium:	0.21	0.21	0.21	0.22	0.35	0.3	0.31	0.32
Zinc:		3.9	3.4	4.6		6.1		3.8

* = Earth Technology, July 1992 sampling activities

@ = Earth Technology, summer 1993 sampling activities

Table M-2, continued

Site:	P00	P00	P00	P00					
Locator:	B1	B2	B2	B1					
Date:									
Depth:	9'-10'	0'-1'	2'-3'	0'-1'					
Lab:	CCL	CCL	CCL	CCL					
Source:	@	@	@	@					
					MEAN	VARIANCE	STD DEV	CV	BACKGROUND
Antimony:	4.7	5.8	5.3	4.8	4.28	0.42	0.65	0.15	6.23
Arsenic:	0.57	0.52	1.7	0.78	0.90	0.19	0.43	0.48	2.20
Cadmium:	0.53	0.64	0.58	0.53	0.54	0.00	0.04	0.07	0.67
Chromium:	2.1	2.6	4.5	5.2	3.07	0.86	0.92	0.30	5.84
Copper:	1.6	1.9	2.6	1.6	1.38	0.42	0.65	0.47	3.33
Lead:	0.88	1.4	1.4	3	1.59	0.60	0.78	0.49	3.93
Mercury:	0.11	0.13	0.12	0.11	0.11	8.62E-5	0.01	0.08	0.14
Nickel:	3.7	4.5	4.1	3.7	2.72	1.14	1.07	0.39	5.93
Selenium:	0.32	0.39	0.63	0.32	0.40	0.03	0.18	0.45	0.93
Silver:	0.42	0.52	0.47	0.42	0.58	0.01	0.10	0.18	0.90
Thallium:	0.32	0.39	0.35	0.32	0.29	0.02	0.14	0.48	0.72
Zinc:	3.8		9.6	11.4	5.86	7.83	2.80	0.48	14.25

@ = Earth Technology, summer 1993 sampling activities

Table M-3
Data for Background Determination
Quartz Sand with Clay - Statistically Unmodified
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

Site:	PCTF4	PCTF4	PCLF6	PCLF6					
Locator:	MW1	MW1	MW1	MW1					
Date:									
Depth:	5'	10'	2.5'	10'					
Lab:	CCL	CCL	CCL	CCL					
Source:	#	#	#	#					
					MEAN	VARIANCE	STD DEV	CV	BACKGROUND
Antimony:	3	3	3	3	3	0	0	0	3
Arsenic:	0.51	0.36	1.3	1.5	0.92	0.24	0.49	0.53	2.39
Cadmium:	0.4	0.4	0.4	0.4	0.4	0	0	0	0.4
Chromium:	9	4.5	3.6	4.8	5.48	4.34	2.08	0.38	11.72
Copper:	0.85	0.66	0.78	1.3	0.90	0.06	0.24	0.27	1.62
Lead:	6.2	1.2	4.3	5.3	4.25	3.55	1.88	0.44	9.90
Mercury:	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1
Nickel:	1.6	2.8	2.4	1.9	2.18	0.21	0.46	0.21	3.56
Selenium:	0.4	0.31	2	1.5	1.05	0.52	0.72	0.68	3.21
Silver:	0.7	0.7	0.7	0.7	0.7	0	0	0	0.7
Thallium:	4	4	4	4	4	0	0	0	4
Zinc:	6.2	5.6	3.1	3.9	3.9	1.57	1.25	0.27	8.45

= Engineering Science, 1990 sampling activities

Table M-4
Data for Background Determination
Quartz Sand with Clay - Statistically Modified
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

Site:	PCTF4	PCTF4	PCLF6	PCLF6	PCHN8					
Locator:	MW1	MW1	MW1	MW1	MW1					
Date:										
Depth:	5'	10'	2.5'	10'	2.5'-5'					
Source:	#	#	#	#	#					
						MEAN	VARIANCE	STD DEV	CV	BACKGROUND
Antimony:	3	3	3	3		3	0	0	0.00	3
Arsenic:	0.51	0.36	1.3		1.3	0.87	0.19	0.44	0.50	2.17
Cadmium:	0.4	0.4	0.4	0.4		0.40	0	0	0.00	0.40
Chromium:	9	4.5	3.6	4.8		5.48	4.34	2.08	0.38	11.72
Copper:	0.85	0.66	0.78	1.3		0.90	0.06	0.24	0.27	1.62
Lead:	6.2	1.2	4.3	5.3		4.25	3.55	1.88	0.44	9.90
Mercury:	0.1	0.1	0.1	0.1		0.10	0	0	0.00	0.10
Nickel:	1.6	2.8	2.4	1.9		2.18	0.21	0.46	0.21	3.56
Selenium:	0.4	0.31		1.5	0.5	0.68	0.23	0.48	0.71	2.12
Silver:	0.7	0.7	0.7	0.7		0.70	0	0	0.00	0.70
Thallium:	4	4	4	4		4	0	0	0.00	4
Zinc:	6.2	5.6	3.1	3.9		4.7	1.56	1.25	0.27	8.45

= Engineering Science, 1990 sampling activities

Table M-5
Data for Background Determination
Quartz Sand Background Values Averaged with Quartz Sand with Clay Background Values
MIANG, Alpena CRTC, Alpena, MI
Units: mg/kg

	Quartz Sand Background Values	Quartz Sand with Clay Background Values	Final Local Background Values
Antimony	6.23	3	4.62
Arsenic	2.2	2.17	2.18
Cadmium	0.67	0.40	0.54
Chromium	5.84	11.72	8.78
Copper	3.33	1.62	2.48
Lead	3.93	9.90	6.92
Mercury	0.14	0.10	0.12
Nickel	5.93	3.56	4.74
Selenium	0.93	2.12	1.52
Silver	0.90	0.70	0.80
Thallium	0.72	4	2.36
Zinc	14.25	8.45	11.35

Groundwater Background Determination Data

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-MP2-MW1-GW1	GROUNDWATE	Potassium, Dissolved	830.00		ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Sodium, Dissolved	12000.00		ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Mercury, Dissolved	0.25	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Nickel, Dissolved	7.50	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Selenium, Dissolved	1.00	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Silver, Dissolved	3.50	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Thallium, Dissolved	20.00	ND	ug/l	CLP
PC-MP2-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Potassium, Dissolved	1900.00		ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Sodium, Dissolved	900.00		ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Mercury, Dissolved	0.25	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Nickel, Dissolved	7.50	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Selenium, Dissolved	1.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Silver, Dissolved	3.50	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Thallium, Dissolved	20.00	ND	ug/l	CLP
PC-CG3-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Mercury, Dissolved	0.25	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Nickel, Dissolved	7.50	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Selenium, Dissolved	1.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Silver, Dissolved	3.50	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Thallium, Dissolved	20.00	ND	ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-TF4-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	ND	ug/l	CLP
PC-TF4-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Potassium, Dissolved	1700.00		ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Sodium, Dissolved	12000.00		ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Antimony, Dissolved	16.00	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Chromium, Dissolved	3.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Copper, Dissolved	3.00	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Lead, Dissolved	0.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Mercury, Dissolved	0.25	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Nickel, Dissolved	7.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Selenium, Dissolved	1.00	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Silver, Dissolved	3.50	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Thallium, Dissolved	20.00	ND	ug/l	CLP
PC-SF5-MW2-GW1	GROUNDWATE	Zinc, Dissolved	1.00	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Antimony, Dissolved	16.00	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Arsenic, Dissolved	0.50	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Beryllium, Dissolved	0.15	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Cadmium, Dissolved	2.00	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Chromium, Dissolved	3.50	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Copper, Dissolved	3.00	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Lead, Dissolved	0.50	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Mercury, Dissolved	0.25	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Nickel, Dissolved	7.50	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Selenium, Dissolved	1.00	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Silver, Dissolved	3.50	ND	ug/l	CLP
PC-HN8-MW1-GW1	GROUNDWATE	Thallium, Dissolved	20.00	ND	ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-HN8-MW1-GW1	GROUNDWATE	Zinc, Dissolved	1.00	ND	ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Antimony, Dissolved	18.00		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Barium, Dissolved	0.50		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Calcium, Dissolved	80800.00		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Iron, Dissolved	5.50	J	ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	U	ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	9220.00		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Potassium, Dissolved	365.00		ug/l	CLP
PC-MP2-MW1-GW3	GROUNDWATE	Sodium, Dissolved	5950.00	J	ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Antimony, Dissolved	18.00	U	ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Barium, Dissolved	4.60		ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Calcium, Dissolved	50600.00		ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Copper, Dissolved	25.30		ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	U	ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	7900.00		ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	U	ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Potassium, Dissolved	3560.00		ug/l	CLP
PC-CG3-MW1-GW3	GROUNDWATE	Sodium, Dissolved	3470.00	J	ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Barium, Dissolved	6.10		ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Calcium, Dissolved	51300.00		ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Iron, Dissolved	24.40		ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	7920.00		ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	U	ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Mercury, Dissolved	0.23	J	ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Nickel, Dissolved	4.00	U	ug/l	CLP
PC-TF4-MW1-GW3	GROUNDWATE	Potassium, Dissolved	2500.00		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Arsenic, Dissolved	2.50	U	ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Barium, Dissolved	9.00		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Calcium, Dissolved	35700.00		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Iron, Dissolved	21.70		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Lead, Dissolved	1.00	UL	ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Magnesium, Dissolved	13300.00		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Manganese, Dissolved	2.30		ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Potassium, Dissolved	3510.00		ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-SF5-MW2-GW3	GROUNDWATE	Sodium, Dissolved	8080.00	J	ug/l	CLP
PC-SF5-MW2-GW3	GROUNDWATE	Vanadium, Dissolved	3.00	U	ug/l	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Calcium, Dissolved	69900.00		ug/l	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Lead, Dissolved	1.00	U	ug/l	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Magnesium, Dissolved	9820.00		ug/l	CLP
PC-HN8-MW1-GW3	GROUNDWATE	Manganese, Dissolved	0.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Antimony, Dissolved	17.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	7.20	()	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Lead, Dissolved	1.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	UL	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Zinc, Dissolved	19.10	()	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Arsenic	14.70	K	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Chromium	4.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Copper	27.80		ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Lead	4.50		ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Selenium	1.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Silver	2.00	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Thallium	1.50	U	ug/l	CLP
PC-MP2-MW1-GW4	GROUNDWATE	Zinc	43.50		ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Arsenic	2.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-P1-MW2-GW4	GROUNDWATE	Chromium	9.90		ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Copper	5.10		ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Lead	1.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Silver	2.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Zinc	12.90	(J)	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Antimony, Dissolved	17.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	UL	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Copper, Dissolved	6.30	()	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Lead, Dissolved	1.00	UL	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Mercury, Dissolved	0.10	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Selenium, Dissolved	1.50	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Thallium, Dissolved	1.50	UL	ug/l	CLP
PC-P1-MW2-GW4	GROUNDWATE	Zinc, Dissolved	25.00		ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Antimony, Dissolved	17.50	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Lead, Dissolved	2.00	()	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Thallium, Dissolved	1.50	UL	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	U	ug/l	CLP
PC-CG3-MW1-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	SW-846

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-CG3-MW1-GW4	GROUNDWATE	Arsenic	2.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Chromium	4.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Copper	2.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Lead	1.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Selenium	1.50	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Silver	2.00	U	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	SW-846
PC-CG3-MW1-GW4	GROUNDWATE	Zinc	2.00	U	ug/l	SW-846
PC-TF4-MW1-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Arsenic	15.60	L	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Beryllium	1.40	()	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Chromium	61.10		ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Copper	79.90	J	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Lead	56.60		ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Nickel	56.00		ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Selenium	1.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Silver	2.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Zinc	137.00		ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Lead, Dissolved	1.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	U	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-TF4-MW1-GW4	GROUNDWATE	Thallium, Dissolved	1.50	UL	ug/l	CLP
PC-TF4-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Arsenic	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Chromium	4.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Lead	1.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Selenium	1.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Silver	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Antimony	17.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Arsenic	2.00	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Chromium	4.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Lead	1.00	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Selenium	1.50	UN	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Silver	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Antimony, Dissolved	17.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Copper, Dissolved	2.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Lead, Dissolved	1.00	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Mercury, Dissolved	0.10	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Selenium, Dissolved	1.50	UL	ug/l	CLP
PC-SF5-MW2-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP

Data for Background Calculations of Groundwater
Alpena CRTC, Alpena, MI

SAMPLE ID	MATRIX	ANALYTE	RESULT	QUALIFIER	UNITS	METHOD
PC-SF5-MW2-GW4	GROUNDWATE	Thallium, Dissolved	1.50	UL	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Arsenic, Dissolved	2.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Beryllium, Dissolved	0.50	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Cadmium, Dissolved	1.50	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Chromium, Dissolved	4.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Copper, Dissolved	2.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Mercury, Dissolved	0.10	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Nickel, Dissolved	9.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Selenium, Dissolved	1.50	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Silver, Dissolved	2.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Thallium, Dissolved	1.50	UL	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Zinc, Dissolved	2.00	U	ug/l	CLP
PC-HN8-MW1-GW4	GROUNDWATE	Arsenic	2.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Beryllium	0.50	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Cadmium	1.50	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Chromium	4.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Copper	2.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Lead	1.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Mercury	0.10	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Nickel	9.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Selenium	1.50	UL	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Silver	2.00	U	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Thallium	1.50	UL	ug/l	SW-846
PC-HN8-MW1-GW4	GROUNDWATE	Zinc	2.00	U	ug/l	SW-846

Appendix N: Analytical Results; Round Three Groundwater and Background Soil Sampling Fixed Base Laboratory Data Summary

Appendix N: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB1		SB1		SB2		SB2		SB2	
SAMPLE ID:		PC-BG1-SB1-SS06		PC-BG1-SB1-SS12-18		PC-BG1-SB1-SS24-30		PC-BG1-SB2-SS06		PC-BG1-SB2-SS12-18		PC-BG1-SB2-SS24-30	
COLLECTION DATE:		10/17/91		10/17/91		10/17/91		10/17/91		10/17/91		10/17/91	
UNITS:		RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	755		4400		2070		1350		0		3730	
Arsenic	mg/kg	1.90		0		0		1.70		0		0	
Barium	mg/kg	0		0		0		0		0		0	
Beryllium	mg/kg	0.12	U	0.11	U	0.10	U	0.13	U	0		0.11	U
Butylbenzylphthalate	ug/kg	380	U	350	U	340	U	92	B	350	U	130	B
Calcium	mg/kg	0	J	0	J	0	J	1240	J	0		0	J
Chromium	mg/kg	1.40		3.40		2.90		1.70		0		3.30	
Cobalt	mg/kg	0.58	U	0		0		0.65	U	0		0	
Copper	mg/kg	0	K	0	K	0	K	0	K	0		0	K
Diethyl phthalate	ug/kg	380	U	350	U	340	U	420	U	70		350	U
Iron	mg/kg	688		2750		1960		1100		0		2660	
Lead	mg/kg	3.50		1.50		0.89		13.80		0		1.70	
Magnesium	mg/kg	0		0		0		0		0		0	
Manganese	mg/kg	43.20		12		19.50		99.60		0		28.40	
Methylene Chloride	ug/kg	26	B	34	B	23	B	38	B	0		20	B
Nickel	mg/kg	0.93	U	0		0		0		0		0	
Pentachlorophenol	ug/kg	-		-		-		-		-		-	
Potassium	mg/kg	0	B	0		75.50	U	0		0		0	
Selenium	mg/kg	1.10		0.32	U	0.31	U	0.39	U	0		0.32	U
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	0	B	0	B	0	B	0	B	0		0	B
Thallium	mg/kg	0		0.21	U	0.21	U	0.26	U	0		0.21	U
Total Petroleum Hydrocarbons	mg/kg	130		25	U	25	U	210		0		25	U
Vanadium	mg/kg	0		0		0		0		0		5.40	
Zinc	mg/kg	6.30	J	4.70	J	3.10	J	13.90	J	0		10.90	J
bis(2-Ethylhexyl)phthalate	ug/kg	44	B	350	U	39	B	43	J	170	B	350	U

Appendix N: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB3		SB3		SB3		SB4		SB4		SB4	
SAMPLE ID:		PC-BG1-SB3-SS06		PC-BG1-SB3-SS12-18		PC-BG1-SB3-SS24-30		PC-BG1-SB4-SS06		PC-BG1-SB4-SS12-18		PC-BG1-SB4-SS24-30	
COLLECTION DATE:		10/17/91		10/17/91		10/17/91		10/17/91		10/17/91		10/17/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	4480		3610		2150		1760		3790		1490	
Arsenic	mg/kg	0		0		0		0		0		0.52	U
Barium	mg/kg	0		0		0		0		0		0	
Beryllium	mg/kg	0.11	U	0.10	U	0.10	U	0.11	U	0		0.10	U
Butylbenzylphthalate	ug/kg	160	B	340	U	340	U	160	BJ	340	U	83	BJ
Calcium	mg/kg	0	J	0	J	0	J	0	J	0	J	0	J
Chromium	mg/kg	2.90		3.40		2.90		2		4.20		2.50	
Cobalt	mg/kg	0		0		0		0		0		0	
Copper	mg/kg	0	J	0.80	K	13.30	K	0	K	0	K	0	K
Diethyl phthalate	ug/kg	360	U	270	B	340	U	370	U	340	U	340	U
Iron	mg/kg	2970		2630		2290		1530		2740		1770	
Lead	mg/kg	1.50		1.50		0.96		2.30		1.40		0.70	
Magnesium	mg/kg	0		0		0		0		0		0	
Manganese	mg/kg	22.10		13.30		20.20		22.20		14.40		23.50	
Methylene Chloride	ug/kg	32	B	32	B	17	B	29	B	13.40	B	15	B
Nickel	mg/kg	0		0		0		0		0		0	
Pentachlorophenol	ug/kg	-		-		-		-		-		-	
Potassium	mg/kg	0		75.90	U	0		0		75.90	U	75.60	U
Selenium	mg/kg	0.32	U	0.31	U	0.31	U	0.33	U	0.31	U	0.31	U
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	0	B	0	B	0		0	B	0	B	0	B
Thallium	mg/kg	0.22	U	0.21	U	0.21	U	0.22	U	0.21	U	0.21	U
Total Petroleum Hydrocarbons	mg/kg	25	U	25	U	25	U	25	U	25	U	25	U
Vanadium	mg/kg	5.80		0	B	0	B	0		5.30		0	
Zinc	mg/kg	4.30	J	3.20	J	14.90	J	4.60	J	3.90	J	3.40	J
bis(2-Ethylhexyl)phthalate	ug/kg	360	U	340	U	340	U	42	J	340	U	340	U

Appendix N: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB5		SB5		SB5		SB1		SB1		SB2	
SAMPLE ID:		PC-BG1-SB5-SS06		PC-BG1-SB5-SS12-18		PC-BG1-SB5-SS24-30		PC-SF5-SB1-SS06		PC-SF5-SB1-SS48-54		PC-SF5-SB2-SS06	
COLLECTION DATE:		10/17/91		10/17/91		10/17/91		10/18/91		10/18/91		10/18/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	1850		3000		2210		3180		1600		2590	
Arsenic	mg/kg	2.90	L	0	L	1.50	L	1.30		0.54	U	1.60	
Barium	mg/kg	24.60		0		0		0		0		0	
Beryllium	mg/kg	0.24	U	0.21	U	0.21	U	-		-		-	
Butylbenzylphthalate	ug/kg	0		0		0		120	BJ	390	U	350	U
Calcium	mg/kg	2170		374	U	377	U	2190	J	0	J	51300	
Chromium	mg/kg	2.50	J	3.80	J	3.60	J	4.10		3.20		2.80	
Cobalt	mg/kg	0		0		0		0		0		0	
Copper	mg/kg	0		0		0		14.80	K	0	K	16.70	K
Diethyl phthalate	ug/kg	0		0		0		380	U	390	U	350	U
Iron	mg/kg	1740		2240		1980		2580		1660		2360	
Lead	mg/kg	18.70	L	1.40	L	0.77	L	52.50		11.50		5.90	
Magnesium	mg/kg	0		0		0		525		0		8970	
Manganese	mg/kg	100		12.50		12.40		22.10		14.20		60.20	
Methylene Chloride	ug/kg	0		0		0		20	B	9.60	B	39	B
Nickel	mg/kg	3.60	U	3.10	U	3.10	U	0		0		0	
Pentachlorophenol	ug/kg	-		-		-		910	U	130		850	U
Potassium	mg/kg	0		254	U	257	U	0		0		0	
Selenium	mg/kg	0		0.41	U	0.41	U	0.31	U	0.33	U	0.32	U
Silver	mg/kg	-		-		-		1.10	J	0.65	UJ	0.64	U
Sodium	mg/kg	0		0		0		0	B	0	B	0	
Thallium	mg/kg	0.35	U	0.30	UL	0.31	UL	0.21	U	0.22	U	0.21	U
Total Petroleum Hydrocarbons	mg/kg	57		25	U	25	U	130		1400		25	U
Vanadium	mg/kg	0		0		0		0		0		5.40	
Zinc	mg/kg	22.30	J	6.10	J	14.90	J	43.90	J	23.90	J	17	J
bis(2-Ethylhexyl)phthalate	ug/kg	0		0		0		380	U	110	B	40	BJ

Appendix N: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB2		SB3		SB3		SB4		SB4		SB5	
SAMPLE ID:		PC-SF5-SB2-SS48-54		PC-SF5-SB3-SS06		PC-SF5-SB3-SS48-54		PC-SF5-SB4-SS06		PC-SF5-SB4-SS48-54		PC-SF5-SB5-SS06	
COLLECTION DATE:		10/18/91		10/18/91		10/18/91		10/18/91		10/18/91		10/18/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	1230		3180		2090		2820		1040		4820	
Arsenic	mg/kg	0.54	U	0.50	L	0.54	UL	0.57	UL	0.52	UL	0	
Barium	mg/kg	0		0.10		0.10		0.10		0.10		0	
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	110	BJ	350	U	40	BJ	55	BJ	340	U	350	U
Calcium	mg/kg	0	J	0	J	0	J	0	J	0	J	753	
Chromium	mg/kg	3.10		4		3.20	J	3.20	J	6.20	J	3.50	
Cobalt	mg/kg	0		0.50		0.50		0.57	U	0.51	U	0	
Copper	mg/kg	3.20	K	0.60		3		4.70		4		0	K
Diethyl phthalate	ug/kg	350	U	350	U	380	U	380	U	340	U	350	U
Iron	mg/kg	2010		2180		2040		1830		1440		3950	
Lead	mg/kg	1.10		1.40		1.20		3.70		0.81		1.70	
Magnesium	mg/kg	0		3.50		3.50		3.50		3.50		0	
Manganese	mg/kg	18.40		20		16.10		21.70		12.30		13.40	
Methylene Chloride	ug/kg	31	B	31	B	26	B	30	B	17	B	23	B
Nickel	mg/kg	0		0.80		0.80		0.80		4.70		0	
Pentachlorophenol	ug/kg	850	U	840	U	930	U	930	U	830	U	840	UL
Potassium	mg/kg	0		73		73		73		73		81.30	U
Selenium	mg/kg	0.32	U	R	R	0.30	L	0.59	L	0.33	U		
Silver	mg/kg	0.64	UJ	0.62	U	0.66	U	0.68	U	0.61	U	0.67	U
Sodium	mg/kg	0	B	0	B	0	B	0	B	0	B	0	B
Thallium	mg/kg	0.21	U	0.21	U	0.22	U	0.23	U	3.90	J	0.22	U
Total Petroleum Hydrocarbons	mg/kg	26		-		-		-		-		25	U
Vanadium	mg/kg	0		0.60		0.60		0.60		0.60		7.90	
Zinc	mg/kg	4.60	J	6.10		28.80		17.50		5.60		4.90	J
bis(2-Ethylhexyl)phthalate	ug/kg	350	U	350	U	51	J	39	J	340	U	350	U

Appendix N: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB5		SB6		SB6	
SAMPLE ID:		PC-SF5-SB5-SS48-54		PC-SF5-SB6-SS06		PC-SF5-SB6-SS48-54	
COLLECTION DATE:		10/18/91		10/18/91		10/18/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	1810		2450		1050	
Arsenic	mg/kg	0.53	U	0.52	U	0.52	U
Barium	mg/kg	0		0		0	
Beryllium	mg/kg	-		-		-	
Butylbenzylphthalate	ug/kg	340	U	360	UJ	340	U
Calcium	mg/kg	0	J	1320	J	0	J
Chromium	mg/kg	2.90		3.20		2.70	
Cobalt	mg/kg	0		0		0	
Copper	mg/kg	0		0	K	0	K
Diethyl phthalate	ug/kg	53	J	1200	B	340	U
Iron	mg/kg	1810		2020		1490	
Lead	mg/kg	1.20		1.90		0.88	
Magnesium	mg/kg	0		657		0	
Manganese	mg/kg	12.80		17.90		10.90	
Methylene Chloride	ug/kg	25	B	23	B	4	B
Nickel	mg/kg	0		0		0	
Pentachlorophenol	ug/kg	820	U	870	U	820	U
Potassium	mg/kg	0		0		76	U
Selenium	mg/kg	0.32	U	0.31	U	0.31	U
Silver	mg/kg	0.63	U	0.63	U	0.62	U
Sodium	mg/kg	0	B	0	B	0	B
Thallium	mg/kg	0.21	U	0.21	U	0.21	U
Total Petroleum Hydrocarbons	mg/kg	25	U	25	U	25	U
Vanadium	mg/kg	0		0		0	
Zinc	mg/kg	11.70	J	4.80	J	2.80	J
bis(2-Ethylhexyl)phthalate	ug/kg	40	B	360	U	340	U

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW1		MW2		MW3		MW4		MW5		MW1	
SAMPLE ID:		PC-MP2-MW1-GW3		PC-MP2-MW2-GW3		PC-MP2-MW3-GW3		PC-MP2-MW4-GW3		PC-MP2-MW5-GW3		PC-CG3-MW1-GW3	
COLLECTION DATE:		10/11/91		10/11/91		10/11/91		10/11/91		10/10/91		10/12/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	0	B	0	B	0	B	238	B	0	B	0	B
Arsenic	mg/kg	-		-		-		-		-		-	
Barium	mg/kg	1		1		1		1		1		1	
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	-		-		-		-		-		1	
Calcium	mg/kg	80800		39900		42200		54000		11200		50600	
Chromium	mg/kg	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	-		-		-		-		-		25.30	
Diethyl phthalate	ug/kg	5	U	1	B	1	B	5	U	5	U	5	U
Iron	mg/kg	11	J	11	B	101	J	705	J	11	J	R	
Lead	mg/kg	2	U	2	U	2	U	4.60	B	2	U	2	U
Magnesium	mg/kg	9220		35		5550		9050		35		7900	
Manganese	mg/kg	1		16.60		43.80		1		1		1	U
Methylene Chloride	ug/kg	-		-		-		-		-		-	
Nickel	mg/kg	-		-		-		-		-		-	
Pentachlorophenol	ug/kg	-		-		-		-		-		-	
Potassium	mg/kg	730		730		730		730		730		730	
Selenium	mg/kg	-		-		-		-		-		-	
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	5950	J	0	J	0	J	0	J	322000	J	0	J
Thallium	mg/kg	-		-		-		-		-		-	
Total Petroleum Hydrocarbons	mg/kg	-		-		-		-		-		-	
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	2	B	2	B	2	B	2	B	2	B	2	B
bis(2-Ethylhexyl)phthalate	ug/kg	5	U	5	U	5	U	2	B	4	B	5	B

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW3		MW4		MW5		MW6		MW1	
SAMPLE ID:		PC-CG3-MW2-GW3		PC-CG3-MW3-GW3		PC-CG3-MW4-GW3		PC-CG3-MW5-GW3		PC-CG3-MW6-GW3		PC-TF4-MW1-GW3	
COLLECTION DATE:		10/12/91		10/11/91		10/11/91		10/11/91		10/11/91		10/14/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	0	B	219	B	0	B	0	B	0	B	0	B
Arsenic	mg/kg	-		-		-		-		-		-	
Barium	mg/kg	1		1		1		1		1		1	
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	5	U	5	U	12		5	U	3		-	
Calcium	mg/kg	98700		67200		46600		46800		84000		51300	
Chromium	mg/kg	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	6	U	6	U	6	U	6	U	6	U	-	
Diethyl phthalate	ug/kg	1	B	1	B	2	B	5	U	2	B	1	B
Iron	mg/kg	11	B	293	J	R	11	B	11	B	11		
Lead	mg/kg	2		2	U	2	U	2		2	U	-	
Magnesium	mg/kg	12000		7840		8760		8750		6920		7920	
Manganese	mg/kg	1	U	1		1		1		550		1	U
Methylene Chloride	ug/kg	-		-		-		-		-		-	
Nickel	mg/kg	-		-		-		-		-		8	U
Pentachlorophenol	ug/kg	-		-		-		-		-		-	
Potassium	mg/kg	730		730	B	730		730		6320		730	
Selenium	mg/kg	-		-		-		-		-		-	
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	14700	J	0	J	0	J	0	J	0	J	0	B
Thallium	mg/kg	-		-		-		-		-		-	
Total Petroleum Hydrocarbons	mg/kg	-		-		-		-		-		1	U
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	2	B	2	B	2	B	2	B	2	B	2	B
bis(2-Ethylhexyl)phthalate	ug/kg	13	B	2	B	5	U	5	U	5	U	7	B

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW3		MW4		MW1		MW2		MW3	
SAMPLE ID:		PC-TF4-MW2-GW3		PC-TF4-MW3-GW3		PC-TF4-MW4-GW3		PC-SF5-MW1-GW3		PC-SF5-MW2-GW3		PC-SF5-MW3-GW3	
COLLECTION DATE:		10/14/91		10/14/91		10/14/91		10/15/91		10/15/91		10/15/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	0	B	0	B	0	B	64	(B)	110	(B)	91.70	(B)
Arsenic	mg/kg	-		-		-		10.60		5	U	5	U
Barium	mg/kg	1		1		1		34.40	0	9	0	9.20	0
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	-		-		-		-		-		-	
Calcium	mg/kg	90800		76500		56400		128000		35700		37800	
Chromium	mg/kg	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	-		-		-		-		-		-	
Diethyl phthalate	ug/kg	5	U	10	B	5	U	15	B	10		3	B
Iron	mg/kg	11		11		11		9640		21.70	0	27.10	0
Lead	mg/kg	-		-		-		2.20	(B)	2	UL	2	UL
Magnesium	mg/kg	35	U	9870		8910		11800		13300		11300	
Manganese	mg/kg	1		1		1	U	519		2.30	0	1	U
Methylene Chloride	ug/kg	-		-		-		-		-		-	
Nickel	mg/kg	8	B	8	U	8	U	-		-		-	
Pentachlorophenol	ug/kg	-		-		-		20	U	20	U	1	J
Potassium	mg/kg	730		730		730		2940	0	3510	0	4740	0
Selenium	mg/kg	-		-		-		-		-		-	
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	0	J	0		0	J	1530	(B)	8080	(J)	1850	(B)
Thallium	mg/kg	-		-		-		-		-		-	
Total Petroleum Hydrocarbons	mg/kg	1	U	1	U	1.90		1.60		1	U	1	U
Vanadium	mg/kg	-		-		-		7.60	0	6	U	6	U
Zinc	mg/kg	2	B	2	B	2	B	5.30	B	11.20	B	6.40	(B)
bis(2-Ethylhexyl)phthalate	ug/kg	3	B	4	B	6	B	2	B	1	B	5	U

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW4		MW1		MW2		MW3		MW1		MW2	
SAMPLE ID:		PC-SF5-MW4-GW3		PC-LF6-MW1-GW3		PC-LF6-MW2-GW3		PC-LF6-MW3-GW3		PC-HN8-MW1-GW3		PC-HN8-MW2-GW3	
COLLECTION DATE:		10/15/91		10/15/91		10/15/91		10/14/91		10/12/91		10/14/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	101	(B)	0	B	0	B	0	B	83.10	B	123	B
Arsenic	mg/kg	5	U	-		-		-		-		-	
Barium	mg/kg	8.50	0	1		0		1		19.20	B	5.80	B
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	-		-		-		-		2	J	5	U
Calcium	mg/kg	33900		37000		50500		53400		69900		64300	
Chromium	mg/kg	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	-		-		-		-		14.90	B	6	U
Diethyl phthalate	ug/kg	5	B	-		-		-		0.80	J	5	U
Iron	mg/kg	27.10	0	11	B	0	B	11	B	18.60	B	16.30	B
Lead	mg/kg	2	UL	2	UL	0	UL	3.10	B	2	U	2	U
Magnesium	mg/kg	7970		11200		15000		14600		9820		8340	
Manganese	mg/kg	4.30	0	1		23.60		43.30		1	U	1	U
Methylene Chloride	ug/kg	-		-		-		-		-		-	
Nickel	mg/kg	-		-		-		-		-		-	
Pentachlorophenol	ug/kg	20	U	-		-		-		-		-	
Potassium	mg/kg	3690	0	730		0		730		4570	B	1690	B
Selenium	mg/kg	-		-		-		-		-		-	
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	4720	(J)	6880	J	7450	J	0	J	4090	B	4050	B
Thallium	mg/kg	-		-		-		-		-		-	
Total Petroleum Hydrocarbons	mg/kg	1	U	-		-		-		-		-	
Vanadium	mg/kg	6	U	-		-		-		-		-	
Zinc	mg/kg	9.10	(B)	2	B	0	B	2	B	6	B	30.30	
bis(2-Ethylhexyl)phthalate	ug/kg	2	B	12	B	3	B	18	B	5	U	4	J

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW4		MW5		MW1		MW2		MW3	
SAMPLE ID:		PC-HN8-MW3-GW3		PC-HN8-MW4-GW3		PC-HN8-MW5-GW3		PC-RT9-MW1-GW3		PC-RT9-MW2-GW3		PC-RT9-MW3-GW3	
COLLECTION DATE:		10/14/91		10/14/91		10/14/91		10/12/91		10/13/91		10/13/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	118	B	91.10	B	76.70	B	0	B	0	B	0	B
Arsenic	mg/kg	-		-		-		-		-		-	
Barium	mg/kg	23	B	6.40	B	26.80	B	1		1		1	
Beryllium	mg/kg	-		-		-		-		-		-	
Butylbenzylphthalate	ug/kg	5	U	5	U	5	U	-		-		-	
Calcium	mg/kg	126000		42900		136000		71900		77100		71800	
Chromium	mg/kg	-		-		-		-		-		-	
Cobalt	mg/kg	-		-		-		-		-		-	
Copper	mg/kg	6	U	11.10	B	12.70	B	6		6	U	6	
Diethyl phthalate	ug/kg	5	U	4	J	5	U	1	J	5	U	5	U
Iron	mg/kg	11	U	11	U	18.60	B	R	R	11	J		
Lead	mg/kg	2	U	2	U	2.80	B	2	B	2	U	2	B
Magnesium	mg/kg	16000		6030		16900		9660		11300		7950	
Manganese	mg/kg	1	B	1.30	B	1	U	1	U	1	U	1	
Methylene Chloride	ug/kg	-		-		-		-		-		-	
Nickel	mg/kg	-		-		-		-		-		-	
Pentachlorophenol	ug/kg	-		-		-		-		-		-	
Potassium	mg/kg	6060		1790	B	7500		5150		730		730	
Selenium	mg/kg	-		-		-		-		-		-	
Silver	mg/kg	-		-		-		-		-		-	
Sodium	mg/kg	61300		3020	B	64800		0		0	J	0	J
Thallium	mg/kg	-		-		-		-		-		-	
Total Petroleum Hydrocarbons	mg/kg	-		-		-		-		-		-	
Vanadium	mg/kg	-		-		-		-		-		-	
Zinc	mg/kg	19.40	B	5.90	B	4.80	B	2	B	2	B	2	B
bis(2-Ethylhexyl)phthalate	ug/kg	3	J	3	J	6		3	B	2	B	1	B

Appendix N: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW4		MW5	
SAMPLE ID:		PC-RT9-MW4-GW3		PC-RT9-MW5-GW3	
COLLECTION DATE:		10/13/91		10/13/91	
	UNITS:	RESULT	QUAL	RESULT	QUAL
Aluminum	mg/kg	0	B	0	B
Arsenic	mg/kg	-		-	
Barium	mg/kg	1		1	B
Beryllium	mg/kg	-		-	
Butylbenzylphthalate	ug/kg	-		-	
Calcium	mg/kg	71100		83500	
Chromium	mg/kg	-		-	
Cobalt	mg/kg	-		-	
Copper	mg/kg	6		6	
Diethyl phthalate	ug/kg	5	U	5	U
Iron	mg/kg	R	11	B	
Lead	mg/kg	2	U	2	B
Magnesium	mg/kg	9660		13800	
Manganese	mg/kg	1	U	1	
Methylene Chloride	ug/kg	-		-	
Nickel	mg/kg	-		-	
Pentachlorophenol	ug/kg	-		-	
Potassium	mg/kg	730		730	
Selenium	mg/kg	-		-	
Silver	mg/kg	-		-	
Sodium	mg/kg	0	J	7180	J
Thallium	mg/kg	-		-	
Total Petroleum Hydrocarbons	mg/kg	-		-	
Vanadium	mg/kg	-		-	
Zinc	mg/kg	2	B	2	B
bis(2-Ethylhexyl)phthalate	ug/kg	19	B	2	B

Appendix O: Analytical Results; SI Fixed Base Laboratory Data Summary

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW1		MW1		SB1		SB1		MW1		MW1	
SAMPLE ID:		PC-MP2-MW1-SS1-2.5		PC-MP2-MW1-SS2-10		PC-MP2-SB1-SS1-5		PC-MP2-SB1-SS2-10		PC-CG3-MW1-SS1-2.5		PC-CG3-MW1-SS2-10	
COLLECTION DATE:		09/18/87		09/18/87		10/04/87		10/04/87		09/20/87		09/22/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	2.40		0.43		0.72		0.37		0.15		0.70	
Beryllium, Dissolved	mg/kg	0.08		0.15		0.09		0.11		0.08		0.21	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	3.60		5.50		4.70		3.30		3.80		5.60	
Copper, Dissolved	mg/kg	0	ND	0.97		1.40		2		1.80		1.90	
Lead, Dissolved	mg/kg	1.70		4.10		1		1		1.50		2.80	
Nickel, Dissolved	mg/kg	2.60		2.70		4.30		2.70		3.10		3	
Selenium, Dissolved	mg/kg	0	ND	0.13		0	ND	0	ND	1.50		0	ND
Zinc, Dissolved	mg/kg	5.80		6.90		4.30		6.60		4.20		4.20	
TPH													
Total Petroleum Hydrocarbons	mg/kg	42		140		8.20		14		10		17	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB1		SB1		SB10		SB10		SB2		SB2	
	SAMPLE ID:	PC-CG3-SB1-SS1-10		PC-CG3-SB1-SS1-5		PC-CG3-SB10-SS1-5		PC-CG3-SB10-SS2-10		PC-CG3-SB2-SS1-5		PC-CG3-SB2-SS2-10	
	COLLECTION DATE:	10/04/87		10/04/87		10/04/87		10/04/87		10/04/87		10/04/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	5		0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	0.57		0.88		0.43		1		0	ND	0.35	
Beryllium, Dissolved	mg/kg	0.04		0.08		0.08		0.08		0.14		0.05	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	1.60		3.80		2.20		3.80		3.20		1.50	
Copper, Dissolved	mg/kg	2.20		3.60		0.97		1.40		4.90		2.10	
Lead, Dissolved	mg/kg	0.59		1.20		1		2.40		0.76		0.60	
Nickel, Dissolved	mg/kg	2		3.30		2		2.80		3.10		2.30	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg	4.10		5.30		3.70		9.30		9.20		3.90	
TPH													
Total Petroleum Hydrocarbons	mg/kg	35		0	ND	8.30		22		12		35	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

		LOCATOR:	SB3		SB3		SB4		SB4		SB5		SB5	
		SAMPLE ID:	PC-CG3-SB3-SS1-5		PC-CG3-SB3-SS2-10		PC-CG3-SB4-SS1-5		PC-CG3-SB4-SS2-10		PC-CG3-SB5-SS1-5		PC-CG3-SB5-SS2-10	
		COLLECTION DATE:	10/04/87		10/04/87		10/03/87		10/03/87		10/04/87		10/04/87	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010														
Tetrachloroethylene	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020														
Benzene	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625														
bis(2-Ethylhexyl)phthalate	mg/kg		-		-		-		-		-		-	
CLP METALS														
Arsenic, Dissolved	mg/kg		0.64		0.59		0.47		0.53		0.46		0.67	
Beryllium, Dissolved	mg/kg		0.09		0.06		0.07		0.06		0.07		0.04	
Cadmium, Dissolved	mg/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg		2.60		1.50		1.40		1.90		1.60		0.94	
Copper, Dissolved	mg/kg		3		4		2.30		2.60		2.30		1.70	
Lead, Dissolved	mg/kg		1		13		0.94		1.10		0.90		0.39	
Nickel, Dissolved	mg/kg		2.70		2.20		2.10		2.40		2.10		1.50	
Selenium, Dissolved	mg/kg		0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg		4.60		4.30		3.70		5.70		4.10		13	
TPH														
Total Petroleum Hydrocarbons	mg/kg		12		8.20		12		16		12		13	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB6		SB6		SB7		SB7		SB8		SB8	
	SAMPLE ID:	PC-CG3-SB6-SS1-10		PC-CG3-SB6-SS2-15		PC-CG3-SB7-SS1-2		PC-CG3-SB7-SS2-5		PC-CG3-SB8-SS1-5		PC-CG3-SB8-SS2-15	
	COLLECTION DATE:	10/03/87		10/03/87		10/03/87		10/03/87		10/04/87		10/04/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	7.20		0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	310	
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	21	
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	560	
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	0.56		0.50		1		0.80		0.58		0.29	
Beryllium, Dissolved	mg/kg	0.05		0.06		0.10		0.09		0.10		0.06	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	1.80		2.30		2.50		2.50		2.90		1.80	
Copper, Dissolved	mg/kg	2.80		3		2.90		3.20		1.20		1.30	
Lead, Dissolved	mg/kg	0.93		0.59		0.93		0.96		1.10		0.94	
Nickel, Dissolved	mg/kg	1.90		1.80		2.40		2.30		2.60		1.90	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg	4.70		3.70		3.30		4.10		5		5.60	
TPH													
Total Petroleum Hydrocarbons	mg/kg	12		13		12		12		26		4600	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB9		SB9		MW1		MW1		SB1		SB1	
	SAMPLE ID:	PC-CG3-SB9-SS1-5		PC-CG3-SB9-SS2-10		PC-TF4-MW1-SS1-5		PC-TF4-MW1-SS2-10		PC-TF4-SB1-SS1-2-6.5		PC-TF4-SB1-SS2-15-16.5	
	COLLECTION DATE:	10/04/87		10/04/87		09/18/87		09/18/87		09/30/87		09/30/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	-	
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	-	
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	230		-	
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	200		-	
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	500		-	
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	870		-	
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	0.60		1.20		0.51		0.36		0.79		-	
Beryllium, Dissolved	mg/kg	0.05		0.12		0.03		0.05		0.30		-	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0.10		-	
Chromium, Dissolved	mg/kg	1.50		6.20		0.90		4.50		8.60		-	
Copper, Dissolved	mg/kg	2		1.80		0.85		0.66		2.60		-	
Lead, Dissolved	mg/kg	0.83		0	ND	6.20		1.20		5.50		-	
Nickel, Dissolved	mg/kg	2		4.60		1.60		2.80		4.40		-	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0.40		0.31		0	ND	-	
Zinc, Dissolved	mg/kg	6.20		6.60		6.20		5.60		17		-	
TPH													
Total Petroleum Hydrocarbons	mg/kg	12		8.30		10		26		3700		-	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB1		SB2		SB2		SB3		SB3		SB4	
SAMPLE ID:		PC-TF4-SB1-SS3-25-26.5		PC-TF4-SB2-SS1-1.5-3		PC-TF4-SB2-SS2-5-6.5		PC-TF4-SB3-SS1-1.5-3.0		PC-TF4-SB3-SS2-5-6.5		PC-TF4-SB4-SS1-1-6.5	
COLLECTION DATE:		09/30/87		09/22/87		09/22/87		09/22/87		09/22/87		09/30/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	-		0	ND	0	ND	-		0	ND	0	ND
Vinyl chloride	ug/kg	-		0	ND	0	ND	-		0	ND	0	ND
8020													
Benzene	ug/kg	-		0	ND	0	ND	-		0	ND	0	ND
Ethylbenzene	ug/kg	-		8.20		0	ND	-		0	ND	0	ND
Toluene	ug/kg	-		0	ND	0	ND	-		0	ND	0	ND
Xylenes (TOTAL)	ug/kg	-		25		0	ND	-		0	ND	580	
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	-		0.96		0.13		-		1.20		0.95	
Beryllium, Dissolved	mg/kg	-		0.21		0.12		-		0.11		0.11	
Cadmium, Dissolved	mg/kg	-		0	ND	0	ND	-		0	ND	0	ND
Chromium, Dissolved	mg/kg	-		6.40		5.40		-		3.60		2.50	
Copper, Dissolved	mg/kg	-		2		1.20		-		1.50		4.40	
Lead, Dissolved	mg/kg	-		5.70		0.96		-		1.10		2.80	
Nickel, Dissolved	mg/kg	-		4.60		2.70		-		2.70		3.60	
Selenium, Dissolved	mg/kg	-		0	ND	0	ND	-		0	ND	0	ND
Zinc, Dissolved	mg/kg	-		22		4.40		-		4.60		11	
TPH													
Total Petroleum Hydrocarbons	mg/kg	-		200		43		-		220		410	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB5		MW1		MW1		SB1		SB1	
SAMPLE ID:		PC-TF4-SB4-SS2-15-16.5		PC-TF4-SB5-SS1-0-4		PC-SF5-MW1-SS1-2.5		PC-SF5-MW1-SS2-10		PC-SF5-SB1-SS1-2-3.5		PC-SF5-SB1-SS2-4-5.5	
COLLECTION DATE:		09/30/87		11/13/87		09/16/87		09/16/87		09/21/87		09/21/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	-		0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	-		0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	-		0	ND	0	ND	37		0	ND	0	ND
Ethylbenzene	ug/kg	-		0	ND	0	ND	0	ND	0	ND	380	
Toluene	ug/kg	-		0	ND	0	ND	0	ND	0	ND	180	
Xylenes (TOTAL)	ug/kg	-		0	ND	0	ND	0	ND	5.80		2000	
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		0	ND	-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	-		0.53		0.32		0.67		0.20		6.80	
Beryllium, Dissolved	mg/kg	-		0.08		0.26		0.31		0.50		0.31	
Cadmium, Dissolved	mg/kg	-		0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	-		2.60		6.10		4.50		12		9.90	
Copper, Dissolved	mg/kg	-		1		2		6.20		3.10		5.80	
Lead, Dissolved	mg/kg	-		1		7.70		5.50		7		2.80	
Nickel, Dissolved	mg/kg	-		2.10		3		6.30		6		6.40	
Selenium, Dissolved	mg/kg	-		0	ND	0.23		0.19		0.63		0.10	
Zinc, Dissolved	mg/kg	-		3.90		5.60		12		8.50		11	
TPH													
Total Petroleum Hydrocarbons	mg/kg	-		0	ND	28		18		130		83	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB2		SB2		SB3		SB3		SB4		SB4	
	SAMPLE ID:	PC-SF5-SB2-SS1-2-3.5		PC-SF5-SB2-SS2-4-5.5		PC-SF5-SB3-SS1-2-3.5		PC-SF5-SB3-SS2-4-5.5		PC-SF5-SB4-SS1-2		PC-SF5-SB4-SS2-5	
	COLLECTION DATE:	09/21/87		09/21/87		09/21/87		09/21/87		10/19/87		10/19/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	120		0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	960		0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	1700		0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		0	ND	0	ND
CLP METALS													
Arsenic, Dissolved	mg/kg	0.91		1.10		0.43		0.98		1.60		0.76	
Beryllium, Dissolved	mg/kg	0.50		0.37		0.27		0.08		0.11		0.07	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	12		11		6.30		2.50		3.90		2.70	
Copper, Dissolved	mg/kg	5.20		5.60		1.30		1.10		0	ND	0.60	
Lead, Dissolved	mg/kg	6.20		4.90		5.70		1.20		1.70		0.79	
Nickel, Dissolved	mg/kg	7.50		6.10		3		1.90		2.60		1.80	
Selenium, Dissolved	mg/kg	0	ND	0.12		0	ND	0	ND	1.70		0.79	
Zinc, Dissolved	mg/kg	11		9.80		5.10		2.80		4		2.70	
TPH													
Total Petroleum Hydrocarbons	mg/kg	11		580		76		75		15		10	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	MW1		MW1		SB1		SB1		SB2		SB3	
	SAMPLE ID:	PC-LF6-MW1-SS1-2.5		PC-LF6-MW1-SS2-10		PC-LF6-SB1-SS1-2		PC-LF6-SB1-SS2-5		PC-LF6-SB2-SS1-0-5		PC-LF6-SB3-SS1-0-4	
	COLLECTION DATE:	09/17/87		09/17/87		10/19/87		10/19/87		11/13/87		11/13/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	1.60		0	ND	0	ND	0	ND	0	ND	0	ND
CLP METALS													
Arsenic, Dissolved	mg/kg	1.30		1.50		0.90		0.90		1.20		0.92	
Beryllium, Dissolved	mg/kg	0.24		0.27		0.09		0.09		0.12		0.28	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	3.60		4.80		4.20		4.30		3.60		8.60	
Copper, Dissolved	mg/kg	0.78		1.30		1.40		0.66		0	ND	17	
Lead, Dissolved	mg/kg	4.30		5.30		9		1.80		0.50		31	
Nickel, Dissolved	mg/kg	2.40		1.90		1.60		1.90		2.70		4.70	
Selenium, Dissolved	mg/kg	2		1.50		9		1.80		0	ND	0	ND
Zinc, Dissolved	mg/kg	3.10		3.90		15		3.80		3		93	
TPH													
Total Petroleum Hydrocarbons	mg/kg	21		24		40		19		20		55	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB4		SB5		SB6		SB1		SB1		SB2	
	SAMPLE ID:	PC-LF6-SB4-SS1-0-5		PC-LF6-SB5-SS1-0-2		PC-LF6-SB6-SS1-8-9		PC-FF7-SB1-SS1-1-2.5		PC-FF7-SB1-SS2-5-6.5		PC-FF7-SB2-SS1-1-2.5	
	COLLECTION DATE:	11/13/87		11/13/87		11/13/87		09/21/87		09/21/87		09/21/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
CLP METALS													
Arsenic, Dissolved	mg/kg	0.46		4.10		1.50		1.80		0.12		0.38	
Beryllium, Dissolved	mg/kg	0.06		0.31		0.36		0.25		0.29		0.23	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	2.10		9.90		10.40		5.10		10		5.30	
Copper, Dissolved	mg/kg	0.81		4.50		2.70		0.91		4.40		1.50	
Lead, Dissolved	mg/kg	0.21		40		4.60		4.30		3.40		8	
Nickel, Dissolved	mg/kg	1.80		2.80		5.30		2.60		5.50		2.30	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0.55		0	ND	0	ND
Zinc, Dissolved	mg/kg	2.90		30		12		3.60		11		8.10	
TPH													
Total Petroleum Hydrocarbons	mg/kg	0	ND	45		0	ND	5.10		31		20	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB2		SB3		SB3		SB4		SB4		MW1	
	SAMPLE ID:	PC-FF7-SB2-SS2-5-6.5		PC-FF7-SB3-SS1-4-5.5		PC-FF7-SB3-SS2-8-9.5		PC-FF7-SB4-SS1-0.5-2		PC-FF7-SB4-SS2-10-11.5		PC-HN8-MW1-SS1-2.5-5	
	COLLECTION DATE:	09/21/87		09/21/87		09/21/87		09/22/87		09/22/87		09/19/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	0	ND	0	ND	0	ND	-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	1.80		1.40		0.13		0.16		-		1.30	
Beryllium, Dissolved	mg/kg	0.33		0.09		0.06		0.29		-		0.15	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	-		0	ND
Chromium, Dissolved	mg/kg	5.60		4.40		2.90		9.30		-		11	
Copper, Dissolved	mg/kg	2.50		1.30		0.83		5.40		-		1	
Lead, Dissolved	mg/kg	6		4.80		1.50		2.80		-		1.50	
Nickel, Dissolved	mg/kg	3		2.10		1.80		6.80		-		3.90	
Selenium, Dissolved	mg/kg	0	ND	4.80		0	ND	0	ND	-		0	ND
Zinc, Dissolved	mg/kg	4.80		6.30		3.70		13		-		8.60	
TPH													
Total Petroleum Hydrocarbons	mg/kg	5.10		16		10		10		-		15	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	MW1		SB1		SB1		SB1		MW1		MW1	
	SAMPLE ID:	PC-HN8-MW1-SS2-10		PC-HN8-SB1-SS1-4		PC-HN8-SB1-SS2-8		PC-HN8-SB1-SS3-14		PC-RT9-MW1-SS1-2.5		PC-RT9-MW1-SS2-10	
	COLLECTION DATE:	09/19/87		10/05/87		10/05/87		10/05/87		09/19/87		09/19/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	0	ND	1.20		1.20		0.14		1.30		0	ND
Beryllium, Dissolved	mg/kg	0.08		0.11		0.22		0.08		0.30		0.25	
Cadmium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	4		5.80		5		2.30		7.40		8.10	
Copper, Dissolved	mg/kg	1.30		2.20		2.10		2.10		1.40		1.80	
Lead, Dissolved	mg/kg	0.62		1.50		1.80		2.30		6		15	
Nickel, Dissolved	mg/kg	2.40		4.30		3		2.50		3.40		4	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	6		0.53	
Zinc, Dissolved	mg/kg	3.70		13		6.60		64		7.70		5.40	
TPH													
Total Petroleum Hydrocarbons	mg/kg	15		16		8.30		8.20		20		20	

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SB1		SB1		SB2		SB2		SB3		SB3	
	SAMPLE ID:	PC-RT9-SB1-SS1-2-3.5		PC-RT9-SB1-SS2-5-11.5		PC-RT9-SB2-SS1-1-2.5		PC-RT9-SB2-SS2-5-6.5		PC-RT9-SB3-SS1-2-3.5		PC-RT9-SB3-SS2-5-6.5	
	COLLECTION DATE:	09/22/87		09/22/87		09/22/87		09/22/87		09/22/87		09/22/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	1.70		-		1.20		0.73		1.40		1.30	
Beryllium, Dissolved	mg/kg	0.13		-		0.16		0.11		0.19		0.20	
Cadmium, Dissolved	mg/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	6.30		-		7		4		3.90		4	
Copper, Dissolved	mg/kg	1.50		-		0.92		1.50		1.10		2.10	
Lead, Dissolved	mg/kg	1.70		-		1.40		0.90		1.70		1.10	
Nickel, Dissolved	mg/kg	3.60		-		4		3		2.60		2.70	
Selenium, Dissolved	mg/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg	6.70		-		7.70		5.70		5.10		5.90	
TPH													
Total Petroleum Hydrocarbons	mg/kg	19		-		5.20		9.70		0	ND	0	ND

Appendix O: Soil Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SB4		SB4		SB5		SB5		SB6		SB6	
SAMPLE ID:		PC-RT9-SB4-SS1-2-6.5		PC-RT9-SB4-SS2-10-11.5		PC-RT9-SB5-SS1-2-3.5		PC-RT9-SB5-SS2-5-6.5		PC-RT9-SB6-SS1-2-3.5		PC-RT9-SB6-SS2-5-6.5	
COLLECTION DATE:		09/23/87		09/33/87		09/23/87		09/23/87		09/23/87		09/23/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Tetrachloroethylene	ug/kg	27		-		0	ND	0	ND	0	ND	0	ND
Vinyl chloride	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Toluene	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
Xylenes (TOTAL)	ug/kg	0	ND	-		0	ND	0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	0.12		-		1.10		0.55		1.60		1.80	
Beryllium, Dissolved	mg/kg	0.19		-		0.26		0.21		0.20		0.24	
Cadmium, Dissolved	mg/kg	0.53		-		0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg	4.20		-		7		5.50		6.30		6.40	
Copper, Dissolved	mg/kg	2.20		-		10		1.50		1		1	
Lead, Dissolved	mg/kg	8.80		-		2		3		1.70		2.10	
Nickel, Dissolved	mg/kg	3		-		5.10		3		3.40		2.70	
Selenium, Dissolved	mg/kg	0	ND	-		2		1.70		1.10		0	ND
Zinc, Dissolved	mg/kg	15		-		4.90		6		4.60		5.90	
TPH													
Total Petroleum Hydrocarbons	mg/kg	19		-		5		10		10		10	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW1		MW1		MW2		MW2		MW3		MW3	
SAMPLE ID:		PC-MP2-MW1-GW1		PC-MP2-MW1-GW2		PC-MP2-MW2-GW1		PC-MP2-MW2-GW2		PC-MP2-MW3-GW1		PC-MP2-MW3-GW2	
COLLECTION DATE:		11/05/87		08/14/88		11/09/87		08/15/88		11/09/87		08/16/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	3.70		0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	4.60		0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	5.40		0	ND	5.50		0	ND	6		0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	0.83		-		1.10		-		2.20		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	12		-		3		-		3.60		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.22		0	ND	0	ND	0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	330		240		210		130		260		260	
E300.1													
Chloride	mg/l	40		-		0.76		-		16.20		-	
Fluoride	mg/l	0	ND	-		0	ND	-		0	ND	-	
Nitrate Nitrogen	mg/l	0.75		-		0.49		-		2.10		-	
Nitrite Nitrogen	mg/l	0	ND	-		0	ND	-		0	ND	-	
Sulfate	mg/l	60		-		4.40		-		8.40		-	
ortho-Phosphate	mg/l	0	ND	-		0	ND	-		0	ND	-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW4		MW4		MW5		MW5		MW1		MW1	
SAMPLE ID:		PC-MP2-MW4-GW1		PC-MP2-MW4-GW2		PC-MP2-MW5-GW1		PC-MP2-MW5-GW2		PC-CG3-MW1-GW1		PC-CG3-MW1-GW2	
COLLECTION DATE:		11/10/87		08/15/88		11/09/87		08/15/88		11/05/87		08/14/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	5.70		0	ND	4.30		0	ND	5.50		0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	1.20		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		1.70		-		1.90		-	
Sodium	mg/l	3		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		790		-		0.90		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	460		1.10		0	ND	0	ND	0.22		0	ND
E160.1													
Total Dissolved Solids	mg/l	200		220		1800		780		210		200	
E300.1													
Chloride	mg/l	6		-		960		-		16		-	
Fluoride	mg/l	0	ND	-		0	ND	-		0	ND	-	
Nitrate Nitrogen	mg/l	1.80		-		0	ND	-		0	ND	-	
Nitrite Nitrogen	mg/l	0	ND	-		0	ND	-		0	ND	-	
Sulfate	mg/l	12		-		70		-		24		-	
ortho-Phosphate	mg/l	0	ND	-		0	ND	-		0	ND	-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW2		MW3		MW3		MW4		MW4	
SAMPLE ID:		PC-CG3-MW2-GW1		PC-CG3-MW2-GW2		PC-CG3-MW3-GW1		PC-CG3-MW3-GW2		PC-CG3-MW4-GW1		PC-CG3-MW4-GW2	
COLLECTION DATE:		11/09/87		08/17/88		11/09/87		08/17/88		11/09/87		08/18/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	1.90		0	ND	4.60		0	ND	0	ND	0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	3.70		-		1.20		-		1.40		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	5.80		-		3.90		-		2.70		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		4		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	1		0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	340		570		240		260		270		280	
E300.1													
Chloride	mg/l	17		-		22		-		7.40		-	
Fluoride	mg/l	0	ND	-		0	ND	-		0	ND	-	
Nitrate Nitrogen	mg/l	0.81		-		0.58		-		1		-	
Nitrite Nitrogen	mg/l	0	ND	-		0	ND	-		0	ND	-	
Sulfate	mg/l	37		-		11		-		16		-	
ortho-Phosphate	mg/l	0	ND	-		0.22		-		0.07		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	MW5		MW5		MW1		MW1		MW2		MW2	
	SAMPLE ID:	PC-CG3-MW5-GW1		PC-CG3-MW5-GW2		PC-TF4-MW1-GW1		PC-TF4-MW1-GW2		PC-TF4-MW2-GW1		PC-TF4-MW2-GW2	
	COLLECTION DATE:	11/10/87		08/18/88		11/05/87		08/17/88		11/06/87		08/17/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	6.40		0	ND	1.10		0	ND	0	ND	0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	0.52		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	1.70		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	13		-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	180		0	ND	0	ND	0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	310		140		344		210		320		390	
E300.1													
Chloride	mg/l	1.10		-		-		-		-		-	
Fluoride	mg/l	0	ND	-		-		-		-		-	
Nitrate Nitrogen	mg/l	0.58		-		-		-		-		-	
Nitrite Nitrogen	mg/l	0	ND	-		-		-		-		-	
Sulfate	mg/l	11		-		-		-		-		-	
ortho-Phosphate	mg/l	0	ND	-		-		-		-		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW3		MW3		MW4		MW4		MW1		MW1	
SAMPLE ID:		PC-TF4-MW3-GW1		PC-TF4-MW3-GW2		PC-TF4-MW4-GW1		PC-TF4-MW4-GW2		PC-SF5-MW1-GW1		PC-SF5-MW1-GW2	
COLLECTION DATE:		11/06/87		08/17/88		11/06/87		08/18/88		11/06/87		08/21/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	5		0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	3.20		27	
Benzene	ug/l	-		0	ND	-		0	ND	-		150	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	2.40		0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		47	
Methyl chloride	ug/l	1.60		0	ND	1.50		0	ND	2.60		0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		77	
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		200		-	
Toluene	ug/l	0	ND	-		0	ND	-		28		-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		1.40		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		4.20		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0.35		2.20	
E160.1													
Total Dissolved Solids	mg/l	390		370		310		260		269		510	
E300.1													
Chloride	mg/l	-		-		-		-		-		-	
Fluoride	mg/l	-		-		-		-		-		-	
Nitrate Nitrogen	mg/l	-		-		-		-		-		-	
Nitrite Nitrogen	mg/l	-		-		-		-		-		-	
Sulfate	mg/l	-		-		-		-		-		-	
ortho-Phosphate	mg/l	-		-		-		-		-		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW2		MW3		MW3		MW4		MW4	
SAMPLE ID:		PC-SF5-MW2-GW1		PC-SF5-MW2-GW2		PC-SF5-MW3-GW1		PC-SF5-MW3-GW2		PC-SF5-MW4-GW1		PC-SF5-MW4-GW2	
COLLECTION DATE:		11/05/87				11/06/87		08/21/88		11/06/87		08/21/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		38		-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	1.70		-		1.60		-		0.62		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	12		-		4.90		-		2.30		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.77		0	ND	0.42		0	ND	0.34		0	ND
E160.1													
Total Dissolved Solids	mg/l	780		-		292		360		250		91	
E300.1													
Chloride	mg/l	380		-		-		-		-		-	
Fluoride	mg/l	0.39		-		-		-		-		-	
Nitrate Nitrogen	mg/l	0	ND	-		-		-		-		-	
Nitrite Nitrogen	mg/l	0	ND	-		-		-		-		-	
Sulfate	mg/l	160		-		-		-		-		-	
ortho-Phosphate	mg/l	0	ND	-		-		-		-		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW5 [1]		MW5		MW6 [2]		MW1		MW1		MW2	
SAMPLE ID:		PC-SF5-MW5-GW1		PC-SF5-MW5-GW2		PC-SF5-MW6-GW2		PC-LF6-MW1-GW1		PC-LF6-MW1-GW2		PC-LF6-MW2-GW1	
COLLECTION DATE:		11/05/87		08/21/88		08/21/88		11/10/87		08/14/88		11/10/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	20		0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		170		0	ND	-		0	ND	-	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		36		0	ND	-		5.10		-	
Methyl chloride	ug/l	0	ND	0	ND	0	ND	2.40		0	ND	2.50	
Methylene chloride	ug/l	0	ND	0	ND	7.50		0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		120		0	ND	-		0	ND	-	
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		-		0	ND	-		0	ND
Toluene	ug/l	0	ND	-		-		0	ND	-		0	ND
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		0	ND	-		0	ND
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		-		0	ND	-		0	ND
Beryllium, Dissolved	ug/l	0	ND	-		-		0	ND	-		0	ND
Copper, Dissolved	ug/l	0	ND	-		-		0	ND	-		0	ND
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	1.80		-		-		-		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	12		-		-		-		-		-	
Zinc, Dissolved	ug/l	0	ND	-		-		3		-		2	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.50		0	ND	0	ND	200		0	ND	130	
E160.1													
Total Dissolved Solids	mg/l	830		480		220		210		170		220	
E300.1													
Chloride	mg/l	420		-		-		1.40		-		2	
Fluoride	mg/l	0.42		-		-		0	ND	-		0	ND
Nitrate Nitrogen	mg/l	0	ND	-		-		0	ND	-		0	ND
Nitrite Nitrogen	mg/l	0	ND	-		-		0	ND	-		0	ND
Sulfate	mg/l	190		-		-		37		-		37	
ortho-Phosphate	mg/l	0	ND	-		-		0.06		-		0	ND

1) duplicate of SF5-MW5-GW1
2) duplicate of SF5-MW4-GW2

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW3		MW3		MW4 [1]		MW4		MW5	
SAMPLE ID:		PC-LF6-MW2-GW2		PC-LF6-MW3-GW1		PC-LF6-MW3-GW2		PC-LF6-MW4-GW1		PC-LF6-MW4-GW2		PC-LF6-MW5-GW1	
COLLECTION DATE:		08/21/88		11/10/87		08/21/88		11/09/87		08/21/88		11/10/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	14		6.30		0	ND	5.70		0	ND
Ethylbenzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Methyl chloride	ug/l	0	ND	3.80		0	ND	5		0	ND	2.40	
Methylene chloride	ug/l	0	ND	0	ND	5.40		0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Trichloroethylene	ug/l	0	ND	12		12		0	ND	11		0	ND
8020													
Benzene	ug/l	-		7.40		-		0	ND	-		0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		0	ND	-		0	ND	-		0	ND
CLP METALS													
Arsenic, Dissolved	ug/l	-		0	ND	-		0	ND	-		0	ND
Beryllium, Dissolved	ug/l	-		0	ND	-		0	ND	-		0	ND
Copper, Dissolved	ug/l	-		0	ND	-		0	ND	-		0	ND
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		0	ND	-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		0.04		-		-	
Zinc, Dissolved	ug/l	-		0	ND	-		0	ND	-		0	ND
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	41		0	ND	0	ND	1.20		33	
E160.1													
Total Dissolved Solids	mg/l	190		190		230		1		230		0	ND
E300.1													
Chloride	mg/l	-		6.50		-		0	ND	r		0.13	
Fluoride	mg/l	-		0	ND	-		0	ND	-		0	ND
Nitrate Nitrogen	mg/l	-		0	ND	-		0	ND	-		0	ND
Nitrite Nitrogen	mg/l	-		0	ND	-		0	ND	-		0	ND
Sulfate	mg/l	-		33		-		0	ND	-		0	ND
ortho-Phosphate	mg/l	-		0	ND	-		0	ND	-		0	ND

1) duplicate of LF6-MW3-GW1

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW1		MW1		MW2		MW2		MW3		MW3	
SAMPLE ID:		PC-HN8-MW1-GW1		PC-HN8-MW1-GW2		PC-HN8-MW2-GW1		PC-HN8-MW2-GW2		PC-HN8-MW3-GW1		PC-HN8-MW3-GW2	
COLLECTION DATE:		11/05/87		08/18/88		11/07/87		08/19/88		11/07/87		08/19/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	4		0	ND	3.80		0	ND	4.60		0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	3.80		0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		18		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	284		340		270		280		330		220	
E300.1													
Chloride	mg/l	-		-		23		-		27		-	
Fluoride	mg/l	-		-		0	ND	-		0	ND	-	
Nitrate Nitrogen	mg/l	-		-		1.10		-		3.20		-	
Nitrite Nitrogen	mg/l	-		-		0	ND	-		0	ND	-	
Sulfate	mg/l	-		-		10		-		14		-	
ortho-Phosphate	mg/l	-		-		0	ND	-		1.20		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW4		MW4		MW5		MW5		MW1		MW1	
SAMPLE ID:		PC-HN8-MW4-GW1		PC-HN8-MW4-GW2		PC-HN8-MW5-GW1		PC-HN8-MW5-GW2		PC-RT9-MW1-GW1		PC-RT9-MW1-GW2	
COLLECTION DATE:		11/07/87		08/19/88		11/07/87		08/19/88		11/05/87		08/15/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	3.30		0	ND	5.10		0	ND	1.80		0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	1.40		0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	5.80		0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		0	ND	-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	17		-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	22		-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	180		190		0	ND	220		184		270	
E300.1													
Chloride	mg/l	3.50		-		0.12		-		-		-	
Fluoride	mg/l	0	ND	-		0.13		-		-		-	
Nitrate Nitrogen	mg/l	1.40		-		0	ND	-		-		-	
Nitrite Nitrogen	mg/l	0	ND	-		0	ND	-		-		-	
Sulfate	mg/l	9.40		-		0	ND	-		-		-	
ortho-Phosphate	mg/l	0.06		-		0	ND	-		-		-	

1) duplicate of HN8-MW5-GW1

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW2		MW2		MW3		MW3		MW4		MW4	
SAMPLE ID:		PC-RT9-MW2-GW1		PC-RT9-MW2-GW2		PC-RT9-MW3-GW1		PC-RT9-MW3-GW2		PC-RT9-MW4-GW1		PC-RT9-MW4-GW2	
COLLECTION DATE:		11/11/87		08/19/88		11/11/87		08/19/88		11/11/87			
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	-		0	ND	-		0	ND
Methyl chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	12		0	ND
Toluene	ug/l	-		0	ND	-		0	ND	-		0	ND
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		0	ND	-		0	ND	-	
Toluene	ug/l	0	ND	-		0	ND	-		0	ND	-	
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Beryllium, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Copper, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	0	ND	-		0	ND	-		0	ND	-	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	280		300		280		490		684		-	
E300.1													
Chloride	mg/l	-		-		-		-		-		-	
Fluoride	mg/l	-		-		-		-		-		-	
Nitrate Nitrogen	mg/l	-		-		-		-		-		-	
Nitrite Nitrogen	mg/l	-		-		-		-		-		-	
Sulfate	mg/l	-		-		-		-		-		-	
ortho-Phosphate	mg/l	-		-		-		-		-		-	

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		MW5		MW5		MW6		GW1		GW2		GW1	
SAMPLE ID:		PC-RT9-MW5-GW1		PC-RT9-MW5-GW2		PC-RT9-MW6-GW2		PC-PW1-GW1		PC-PW1-GW2		PC-PW2-GW1	
COLLECTION DATE:		11/11/87		08/21/88				11/03/87		08/18/88		11/03/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	-		0	ND	0	ND	-		0	ND	-	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		0	ND	0	ND	-		0	ND	-	
Methyl chloride	ug/l	2.50		0	ND	0	ND	5.60		0	ND	5.50	
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	0	ND	-		0	ND	-	
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	0	ND	-		-		0	ND	-		0	ND
Toluene	ug/l	0	ND	-		-		0	ND	-		0	ND
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		-		-		15		-		0	ND
CLP METALS													
Arsenic, Dissolved	ug/l	0	ND	-		-		5		-		6	
Beryllium, Dissolved	ug/l	0	ND	-		-		0	ND	-		0	ND
Copper, Dissolved	ug/l	0	ND	-		-		0	ND	-		0	ND
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		0.88		-		0.62	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		96		-		230	
Zinc, Dissolved	ug/l	7		-		-		0	ND	-		0	ND
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0	ND	0.10	
E160.1													
Total Dissolved Solids	mg/l	330		300		-		1300		950		840	
E300.1													
Chloride	mg/l	-		-		-		480		-		370	
Fluoride	mg/l	-		-		-		0	ND	-		0.23	
Nitrate Nitrogen	mg/l	-		-		-		0.82		-		0.20	
Nitrite Nitrogen	mg/l	-		-		-		0	ND	-		0	ND
Sulfate	mg/l	-		-		-		17		-		19	
ortho-Phosphate	mg/l	-		-		-		0	ND	-		0	ND

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		GW2		GW1		GW2		GW1		GW1		GW1	
SAMPLE ID:		PC-PW2-GW2		PC-PW3-GW1		PC-PW3-GW2		PC-PW4-GW1		PC-PW5-GW1		PC-PW6-GW1	
COLLECTION DATE:		08/18/88		11/03/87		08/18/88		11/03/87		11/04/87		11/04/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Benzene	ug/l	0	ND	-		0	ND	-		-		-	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	1.70		0	ND	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	0	ND	-		0	ND	-		-		-	
Methyl chloride	ug/l	0	ND	5.50		0	ND	4.30		9		6.30	
Methylene chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Toluene	ug/l	0	ND	-		0	ND	-		-		-	
Trichloroethylene	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
8020													
Benzene	ug/l	-		0	ND	-		0	ND	0	ND	0	ND
Toluene	ug/l	-		0	ND	-		0	ND	0	ND	0	ND
625													
bis(2-Ethylhexyl)phthalate	ug/l	-		0	ND	-		49		0	ND	0	ND
CLP METALS													
Arsenic, Dissolved	ug/l	-		0	ND	-		0	ND	0	ND	0	ND
Beryllium, Dissolved	ug/l	-		0	ND	-		0.30		0	ND	0	ND
Copper, Dissolved	ug/l	-		0	ND	-		0	ND	0	ND	0	ND
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		2		-		0.46		0.77		0.71	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		7.90		-		6.70		39		0.64	
Zinc, Dissolved	ug/l	-		160		-		2		37		39	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0.10		0.29		0.10	
E160.1													
Total Dissolved Solids	mg/l	1500		160		200		120		137		119	
E300.1													
Chloride	mg/l	-		19		-		2.40		1.90		0.84	
Fluoride	mg/l	-		0	ND	-		0.69		1.40		0.04	
Nitrate Nitrogen	mg/l	-		2.20		-		0	ND	0.27		0	ND
Nitrite Nitrogen	mg/l	-		0.13		-		0	ND	0	ND	0	ND
Sulfate	mg/l	-		13		-		4.80		18		17	
ortho-Phosphate	mg/l	-		0	ND	-		0	ND	0	ND	0	ND

Appendix O: Groundwater Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		GW1		GW1		GW1	
SAMPLE ID:		PC-TWA-GW1		PC-TWB-GW1		PC-TWC-GW1	
COLLECTION DATE:							
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010							
1,2-Dichloroethane	ug/l	0	ND	0	ND	0	ND
1,2-trans-Dichloroethylene	ug/l	0	ND	0	ND	0	ND
Benzene	ug/l	-		-		-	
Bromodichloromethane	ug/l	0	ND	0	ND	0	ND
Chloroform	ug/l	0	ND	0	ND	0	ND
Ethylbenzene	ug/l	-		-		-	
Methyl chloride	ug/l	5.10		6.20		6.70	
Methylene chloride	ug/l	0	ND	0	ND	0	ND
Tetrachloroethylene	ug/l	0	ND	0	ND	0	ND
Toluene	ug/l	-		-		-	
Trichloroethylene	ug/l	0	ND	0	ND	0	ND
8020							
Benzene	ug/l	0	ND	0	ND	0	ND
Toluene	ug/l	0	ND	0	ND	0	ND
625							
bis(2-Ethylhexyl)phthalate	ug/l	190		0	ND	290	
CLP METALS							
Arsenic, Dissolved	ug/l	0	ND	0	ND	0	ND
Beryllium, Dissolved	ug/l	0	ND	0	ND	0	ND
Copper, Dissolved	ug/l	0	ND	0	ND	0	ND
Potassium	mg/l	-		-		-	
Potassium, Dissolved	mg/l	1.40		0.51		0.43	
Sodium	mg/l	-		-		-	
Sodium, Dissolved	mg/l	13		0.99		1.30	
Zinc, Dissolved	ug/l	49		50		10	
TPH							
Total Petroleum Hydrocarbons	mg/l	0.10		0.38		-	
E160.1							
Total Dissolved Solids	mg/l	270		30		60	
E300.1							
Chloride	mg/l	1.20		1.20		1.40	
Fluoride	mg/l	0.04		0	ND	0	ND
Nitrate Nitrogen	mg/l	0	ND	0	ND	0	ND
Nitrite Nitrogen	mg/l	0	ND	0	ND	0	ND
Sulfate	mg/l	31		24		21	
ortho-Phosphate	mg/l	0	ND	0	ND	0	ND

Appendix O: Sediment Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SD1		SD2		SD3		SD4		SD5		SD1	
	SAMPLE ID:	PC-MP2-SD1		PC-MP2-SD2		PC-MP2-SD3		PC-MP2-SD4		PC-MP2-SD5		PC-TF4-SD1	
	COLLECTION DATE:	09/30/87		09/30/87		09/30/87		09/30/87		09/30/87		09/30/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
625													
Di-n-octyl phthalate	mg/kg	-		-		-		-		-		-	
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		-	
CLP METALS													
Arsenic, Dissolved	mg/kg	1		0.15		0.55		1.40		0.29		0.95	
Beryllium, Dissolved	mg/kg	0.05		0.06		0.26		0.06		0.05		0.08	
Cadmium, Dissolved	mg/kg	0.87		0	ND	0.76		0	ND	0	ND	0.03	
Chromium, Dissolved	mg/kg	2.80		1.60		4.50		1.50		1.30		3.50	
Copper, Dissolved	mg/kg	5		1.40		5.10		0.85		0.91		1.60	
Lead, Dissolved	mg/kg	29		5.60		48		0.98		0.85		2.50	
Nickel, Dissolved	mg/kg	2.50		2.20		3.80		1.60		1.50		2.70	
Selenium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Thallium, Dissolved	mg/kg	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg	33		110		150		15		2.40		4.30	
TPH													
Total Petroleum Hydrocarbons	mg/kg	460		23		59		9.70		0		16	

Appendix O: Sediment Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SD2		SD3		SD4		SD5		SD6		SD9	
	SAMPLE ID:	PC-TF4-SD2		PC-TF4-SD3		PC-TF4-SD4		PC-TF4-SD5		PC-TF4-SD6		PC-TF4-SD9	
	COLLECTION DATE:	09/30/87		09/30/87		09/30/87		09/30/87		09/30/87		11/12/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020													
Toluene	ug/kg	0	ND	0	ND	0	ND	0	ND	0	ND	96	
625													
Di-n-octyl phthalate	mg/kg	-		-		-		-		-		1	
bis(2-Ethylhexyl)phthalate	mg/kg	-		-		-		-		-		120	
CLP METALS													
Arsenic, Dissolved	mg/kg	2.10		1.70		0.50		1.20		5.90		11	
Beryllium, Dissolved	mg/kg	0.07		0.18		0.18		0.44		0.51		0.60	
Cadmium, Dissolved	mg/kg	0.01		0.01		0.04		0.28		0.57		0.19	
Chromium, Dissolved	mg/kg	9.20		3.90		3.70		13		16		25	
Copper, Dissolved	mg/kg	1.30		1.30		1.80		7.20		12		19	
Lead, Dissolved	mg/kg	1.40		2.70		3.50		0.20		23		21	
Nickel, Dissolved	mg/kg	5.30		2.10		2.70		6.70		9.20		11	
Selenium, Dissolved	mg/kg	0	ND	0.22		0.28		0.38		0.38		0	ND
Thallium, Dissolved	mg/kg	0	ND	0.34		0.26		0.15		0.29		0	ND
Zinc, Dissolved	mg/kg	5.60		3.40		6.30		26		44		44	
TPH													
Total Petroleum Hydrocarbons	mg/kg	21		15		230		250		560		4100	

Appendix O: Sediment Analytical Results
Alpena CRTC, Alpena, MI

		LOCATOR:	SP7		SP8		SD1		SD2		SD3	
		SAMPLE ID:	PC-TF4-SP7-SD1		PC-TF4-SP8-SD1		PC-LF6-SD1		PC-LF6-SD2		PC-LF6-SD3	
		COLLECTION DATE:	10/19/87		10/19/87		10/01/87		10/01/87		10/01/87	
		UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8020												
Toluene	ug/kg		0	ND	0	ND	0	ND	0	ND	0	ND
625												
Di-n-octyl phthalate	mg/kg		0	ND	0	ND	0.59		0	ND	0	ND
bis(2-Ethylhexyl)phthalate	mg/kg		0	ND	0	ND	170		0	ND	0	ND
CLP METALS												
Arsenic, Dissolved	mg/kg		0.71		3.80		1.20		0.95		1.40	
Beryllium, Dissolved	mg/kg		0.06		0.05		0.20		0.25		0.08	
Cadmium, Dissolved	mg/kg		0	ND	0	ND	0	ND	0	ND	0	ND
Chromium, Dissolved	mg/kg		3.90		2.80		2.60		4.30		3.20	
Copper, Dissolved	mg/kg		0.79		0.67		1.20		2		1.20	
Lead, Dissolved	mg/kg		1		0.71		5.20		6.40		1.80	
Nickel, Dissolved	mg/kg		1.70		0	ND	2.10		3.10		2.40	
Selenium, Dissolved	mg/kg		1		0.71		1.20		0	ND	0	ND
Thallium, Dissolved	mg/kg		0	ND	0	ND	0	ND	0	ND	0	ND
Zinc, Dissolved	mg/kg		2.70		1.70		4.80		10		4.20	
TPH												
Total Petroleum Hydrocarbons	mg/kg		33		35		14		9.60		9.60	

Appendix O: Surface Water Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SW1		SW4		SW5		SP1		SP1		SP1A	
	SAMPLE ID:	PC-MP2-SW1		PC-MP2-SW4		PC-MP2-SW5		PC-TF4-SP1-SW1		PC-TF4-SP1-SW2		PC-TF4-SP1A-SW2	
	COLLECTION DATE:	10/22/87		10/22/87		10/22/87		10/16/87		08/14/88		08/21/88	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Methyl chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
CLP METALS													
Chromium, Dissolved	ug/l	0	ND	0	ND	0	ND	0	ND	-		-	
Copper, Dissolved	ug/l	0	ND	0	ND	0	ND	0	ND	-		-	
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	-		-		-		3.20		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	-		-		-		39		-		-	
Zinc, Dissolved	ug/l	10		3		4		2		-		-	
TPH													
Total Petroleum Hydrocarbons	mg/l	2.20		0	ND	0	ND	0.10		0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	65		240		85		1000		250		250	
E300.1													
Chloride	mg/l	-		-		-		110		-		-	
Fluoride	mg/l	-		-		-		0.10		-		-	
Nitrate Nitrogen	mg/l	-		-		-		1.90		-		-	
Nitrite Nitrogen	mg/l	-		-		-		0	ND	-		-	
Sulfate	mg/l	-		-		-		17		-		-	
ortho-Phosphate	mg/l	-		-		-		0.09		-		-	

Appendix O: Surface Water Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SP2		SP2		SP3		SP3		SP4		SP7	
SAMPLE ID:		PC-TF4-SP2-SW1		PC-TF4-SP2-SW2		PC-TF4-SP3-SW1		PC-TF4-SP3-SW3		PC-TF4-SP4-SW2		PC-TF4-SP7-SW1	
COLLECTION DATE:		10/16/87		08/14/88		10/16/87		08/14/88		08/22/88		10/19/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Methyl chloride	ug/l	0	ND	0	ND	0	ND	0	ND	0	ND	0	ND
CLP METALS													
Chromium, Dissolved	ug/l	0	ND	-		0	ND	-		-		0	ND
Copper, Dissolved	ug/l	6		-		0	ND	-		-		0	ND
Potassium	mg/l	-		-		-		-		-		-	
Potassium, Dissolved	mg/l	0.67		-		0.54		-		-		-	
Sodium	mg/l	-		-		-		-		-		-	
Sodium, Dissolved	mg/l	1.30		-		1.20		-		-		-	
Zinc, Dissolved	ug/l	8		-		2		-		-		8	
TPH													
Total Petroleum Hydrocarbons	mg/l	0.20		0	ND	0.20		0	ND	0	ND	0	ND
E160.1													
Total Dissolved Solids	mg/l	432		210		388		190		260		270	
E300.1													
Chloride	mg/l	0.60		-		0.40		-		-		2.20	
Fluoride	mg/l	0	ND	-		0	ND	-		-		0	ND
Nitrate Nitrogen	mg/l	2.30		-		0.94		-		-		0	ND
Nitrite Nitrogen	mg/l	0	ND	-		0	ND	-		-		0	ND
Sulfate	mg/l	12		-		9.90		-		-		33	
ortho-Phosphate	mg/l	0	ND	-		0	ND	-		-		0	ND

Appendix O: Surface Water Analytical Results
Alpena CRTC, Alpena, MI

	LOCATOR:	SP7		SP8		SP8		SW10		SW10		SW4	
	SAMPLE ID:	PC-TF4-SP7-SW2		PC-TF4-SP8-SW1		PC-TF4-SP8-SW2		PC-TF4-SW10		PC-TF4-SW10-SW2		PC-TF4-SW4	
	COLLECTION DATE:	08/21/88		10/19/87		08/21/88		11/12/87		08/12/88		10/16/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Methyl chloride	ug/l	0	ND	0	ND	0	ND	5.80		0	ND	0	ND
CLP METALS													
Chromium, Dissolved	ug/l	-		0	ND	-		10		-		0	ND
Copper, Dissolved	ug/l	-		0	ND	-		7		-		0	ND
Potassium	mg/l	-		-		-		0.52		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	-		-		-		4.40		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	-		3		-		5		-		2	
TPH													
Total Petroleum Hydrocarbons	mg/l	0	ND	0	ND	0	ND	0	ND	0	ND	0.56	
E160.1													
Total Dissolved Solids	mg/l	320		260		260		240		230		563	
E300.1													
Chloride	mg/l	-		18		-		22		-		-	
Fluoride	mg/l	-		0	ND	-		0	ND	-		-	
Nitrate Nitrogen	mg/l	-		0.16		-		1		-		-	
Nitrite Nitrogen	mg/l	-		0	ND	-		0	ND	-		-	
Sulfate	mg/l	-		24		-		15		-		-	
ortho-Phosphate	mg/l	-		0	ND	-		0	ND	-		-	

Appendix O: Surface Water Analytical Results
Alpena CRTC, Alpena, MI

LOCATOR:		SW5		SW6		SW6		SW9		SW9		SW1	
SAMPLE ID:		PC-TF4-SW5		PC-TF4-SW6		PC-TF4-SW6-SW2		PC-TF4-SW9		PC-TF4-SW9-SW2		PC-LF6-SW1	
COLLECTION DATE:		10/16/87		10/16/87		08/16/88		11/12/87		08/12/88		10/15/87	
	UNITS:	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL	RESULT	QUAL
8010													
Methyl chloride	ug/l	0	ND	0	ND	0	ND	4.70		0	ND	0	ND
CLP METALS													
Chromium, Dissolved	ug/l	0	ND	0	ND	-		10		-		0	ND
Copper, Dissolved	ug/l	0	ND	0	ND	-		8		-		0	ND
Potassium	mg/l	-		-		-		0.55		-		-	
Potassium, Dissolved	mg/l	-		-		-		-		-		-	
Sodium	mg/l	-		-		-		4.50		-		-	
Sodium, Dissolved	mg/l	-		-		-		-		-		-	
Zinc, Dissolved	ug/l	3		3		-		4		-		0	ND
TPH													
Total Petroleum Hydrocarbons	mg/l	0.95		0.20		0	ND	0	ND	0	ND	0.20	
E160.1													
Total Dissolved Solids	mg/l	514		413		190		240		240		230	
E300.1													
Chloride	mg/l	-		-		-		24		-		9	
Fluoride	mg/l	-		-		-		0	ND	-		0.27	
Nitrate Nitrogen	mg/l	-		-		-		1		-		0	ND
Nitrite Nitrogen	mg/l	-		-		-		0	ND	-		0	ND
Sulfate	mg/l	-		-		-		16		-		13	
ortho-Phosphate	mg/l	-		-		-		0	ND	-		0	ND

Appendix O: Surface Water Analytical Results
Alpena CRTC, Alpena, MI

		LOCATOR:	SW2		SW3	
		SAMPLE ID:	PC-LF6-SW2		PC-LF6-SW3	
		COLLECTION DATE:	10/15/87		10/15/87	
	UNITS:		RESULT	QUAL	RESULT	QUAL
8010						
Methyl chloride	ug/l		0	ND	0	ND
CLP METALS						
Chromium, Dissolved	ug/l		0	ND	0	ND
Copper, Dissolved	ug/l		0	ND	0	ND
Potassium	mg/l		-		-	
Potassium, Dissolved	mg/l		-		-	
Sodium	mg/l		-		-	
Sodium, Dissolved	mg/l		-		-	
Zinc, Dissolved	ug/l		0	ND	3	
TPH						
Total Petroleum Hydrocarbons	mg/l		0.10		0.20	
E160.1						
Total Dissolved Solids	mg/l		220		190	
E300.1						
Chloride	mg/l		8.60		9.40	
Fluoride	mg/l		0.22		0.29	
Nitrate Nitrogen	mg/l		0	ND	0	ND
Nitrite Nitrogen	mg/l		0	ND	0.05	
Sulfate	mg/l		7.80		13	
ortho-Phosphate	mg/l		0	ND	0	ND

1993 ABBREVIATED SI DATA

Data Summary Table: Soils Site 1 POL Storage Area

MIANG, Alpena CRTC, Alpena County Regional Airport, Alpena, Michigan

Sample Number:	P01B010001	P01B010203	P01B010203D *	P01B020001	
Site:	PC-01	PC-01	PC-01	PC-01	
Locator:	SB01	SB01	SB01	SB02	
Depth (ft):	0 to 1	2 to 3	2 to 3	0 to 1	
Date Sampled:	Nov-13-92	Nov-13-92	Nov-13-92	Nov-13-92	
Laboratory:	CompuChem	CompuChem	CompuChem	CompuChem	
Associated QC Samples:	EB-2 ,P-TB5 FB1,FB2	EB-2 ,P-TB5 FB1,FB2	EB-2 ,P-TB5 FB1,FB2	EB-2 ,P-TB5 FB1,FB2	MDNR Cleanup Levels**
	Result Q	Result Q	Result Q	Result Q	
Method: 418.100,MG/KG					
TPH	30.1	2220		18.5	
Method: 8010,UG/KG					
1,1,1,2-Tetrachloroethane	1.1 U	1 U		.97 U	20
1,2-Dichloroethane	.76 U	.75 U		.7 U	8
1,4-Dichlorobenzene	1.6 U	1.6 U		1.5 U	20
Dibromomethane	1.1 U	1 U		.97 U	1400
Tetrachloroethene	.94 U	.92 U		.86 U	14
Trichloroethene	.94 U	.92 U		.86 U	60
Method: 8020,UG/KG					
1,2-Dimethylbenzene	1.4 U	2900 E	1500	1.3 U	6000
1,4-Dichlorobenzene	42 UZ	2.1 U	8600 UZ	1.9 U	20
Benzene	1.6 U	.35	50 U	1.5 U	20
Chlorobenzene	2.1 U	130 E	6200 E	1.9 U	2000
Ethylbenzene	.2	6300 E	7900 E	1.9 U	1400
Styrene	1.8 U	740 E	7800 E	1.6 U	20

** Act 307 Type B cleanup levels
* - dilution run for 8020 compounds only
U - Not detected. Value listed is detection limit.
B - Not detected. Compound found in blank samples.
J - Concentration is estimated.
Z - Compound not confirmed on 8010 analyses.
E - Concentration exceeds calibration range.

Data Summary Table : Soils Site 1 POL Storage Area

MIANG, Alpena CRTC, Alpena County Regional Airport, Alpena, Michigan

Sample Number:	P01B020305		P01B030103		P01B030507		
Site:	PC-01		PC-01		PC-01		
Locator:	SB02		SB03		SB03		
Depth (ft):	3 to 5		1 to 3		5 to 7		
Date Sampled:	Nov-13-92		Nov-13-92		5 to 7		
Laboratory:	CompuChem		CompuChem		CompuChem		
Associated QC Samples:	EB-2 ,P-TB5 FB1,FB2		EB-2 ,P-TB5 FB1,FB2		EB-2 ,P-TB5 FB1,FB2		MDNR Cleanup Levels**
	Result	Q	Result	Q	Result	Q	
Method: 418.100,(MG/KG)							
TPH	533		28.9		40.4		
Method: 8010,(UG/KG)							
1,1,1,2-Tetrachloroethane	.99	U	.23	J	.96	UJ	20
1,2-Dichloroethane	.71	U	.43	J	.69	UJ	8
1,4-Dichlorobenzene	1.5	U	.8	J	1.5	UJ	20
Dibromomethane	.99	U	.95	J	.96	UJ	1400
Tetrachloroethene	.88	U	.63	J	.85	UJ	14
Trichloroethene	.88	U	.64	J	.85	UJ	60
Method: 8020,(UG/KG)							
1,2-Dimethylbenzene	.32	B	1.3	U	1.3	UJ	6000
1,4-Dichlorobenzene	1.5	UZ	2.6		1.9	UJ	20
Benzene	.089	J	1.6	U	1.5	UJ	20
Chlorobenzene	.31	J	2	U	1.9	UJ	2000
Ethylbenzene	.14	J	2	U	1.9	UJ	1400
Styrene	.66	J	1.7	U	1.6	UJ	20

** Act 307 Type B cleanup levels

U - Non detect. Value listed is detection level.

B - Non detect. Compound was found in the blank.

J - Concentration is estimated.

E - Compound exceeds calibration range.

Z - Compound not confirmed on 8010 analyses.

[] - Concentration is between the CRDL and the IDL.