report. rcra. 915244.
1989-01-17. SV_ results_
report

RTD/ File: GE Buffalo Service Shop
R9

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

Thomas C. Jorling
Commissioner

JAN 17 1989

Mr. Frank Langone
New York Facilities Section
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Dear Mr. Langone:

Re: G.E. Buffalo Service Shop
EPA I.D. No. NYD067539940

Enclosed please find the RFA draft final report for the above facility. Laboratory results for the Sampling Visit (SV) have recently been sent to Ms. Ellen Doering, of your staff. The final report of SV results, including QA/QC deliverables, will be submitted by G.E. sometime in January, 1989.

Should you have any questions concerning this letter, please contact Mr. Douglas Nevel, of my staff, at (518) 457-9696.

Sincerely,

Steve Kaminski for PRC

Paul R. Counterman, P.E.
Director
Bureau of Hazardous Waste Facility Permitting
Division of Hazardous Substances Regulation

Enclosure

cc w/enc. - S. Chetty
D. Nevel
E. Belmore

RCRA Facility Assessment (RFA)
Draft Final Report

General Electric Company
Buffalo Service Shop
Tonawanda, New York

EPA I.D. No. NYD067539940

December 1988

I. Introduction

The RCRA Facility Assessment (RFA) is a three-stage process for identifying and gathering information on releases at RCRA facilities. The RFA evaluates solid waste management units (SWMUs) and other areas of concern for releases to all media and makes preliminary determinations regarding releases of concern and the need for further actions and interim measures at the facility.

Information is gathered and evaluated to determine whether there are releases from SWMU's or other areas of concern that warrant further investigation or other action. The three-stage process consists of the preliminary review, the visual site inspection, and the sampling visit.

II. Preliminary Review

The Preliminary Review (PR) is conducted to gather and evaluate existing information on the facility in order to identify and characterize potential releases and to focus the activities to be conducted during the visual site inspection and sampling visit. The PR was prepared by the NYSDEC in July 1987. The report describes the unit conditions, release description, target populations or environments and recommendations for further action for each SWMU. Twelve SWMUs were identified and additional work was recommended for seven of these.

III. Visual Site Inspection

The Visual Site Inspection (VSI) is conducted to inspect the facility for evidence of releases and to identify additional areas of concern. A VSI was conducted at G.E. Buffalo Service Shop in Tonawanda, New York on July 8, 1987. The report lists each SWMU and describes their condition. A total of 12 SWMUs were inspected.

IV. Sampling Visit

The Sampling Visit (SV) was conducted on September 8, 1988. The SV work plan, dated August 1988 and revised September 1988, was approved by the NYSDEC on September 7, 1988. Oversight of the SV was provided by Mr. Douglas Nevel of the NYSDEC. During the SV, soil sampling was performed at three SWMUs: the RCRA Container Storage Area (CSA), the PCB CSA, and the Virgin Oil Tank. Sampling was not conducted at the Rail Spur during the SV, as recommended in the PR, since it was determined that sampling should be conducted during the RFI instead. The SV analytical results show that the parameters of concern are present in the soil pathway, and therefore, there is indirect evidence of releases from the RCRA CSA and the PCB CSA. Petroleum hydrocarbons were detected at the Virgin Oil Tank, but this is not a hazardous waste constituent.

V. Conclusions and Recommendations

G.E. Buffalo Service Shop has twelve SWMUs. Table 1 lists these SWMUs and the recommendations for the next phase of activity at each one. Hazardous waste constituents have been detected in the surficial soils at the facility.

There have been releases to the soil on the site evidenced by the detection of various hazardous constituents in the surficial soils. Further investigations of the soil and groundwater are needed to properly characterize the releases which have been detected. A RCRA Facility Investigation (RFI) workplan outline will be developed which will focus investigatory efforts on those areas mentioned in Table 1.

The following areas will be investigated during the RFI: the RCRA Container Storage Area (CSA), the PCB CSA, the Oil/Water Separators, and the Rail Spur.

Table 1

Unit	Location*	No Action	RFA Sampling Visit	RCRA Facility Investigation (RFI)	Corrective Measures
1. RCRA CSA	A			X	
2. PCB CSA	B			X	
3. Waste Oil CSA	C	X			
4. Waste Accumulation CSA	D1/D2	X			
5. Scrap Oil Tank	E	X			
6. Rinse Water Tank	F				X
7. Virgin Oil Tank	G	X			
8. Fuel Oil Tank	H	X			
9. PCB Work Area	I				X
10. Oil/Water Separators	J1/J2			X	
11. Floor Drains and Sewers	K				X
12. Rail Spur	L			X	

*See the map in the PR
CSA - Container Storage Area

Lawler, Matusky & Skelly Engineers

Environmental Science & Engineering Consultants

JOHN P. LAWLER, P. E.
FELIX E. MATUSKY, P. E.
MICHAEL J. SKELLY, P. E.
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2 December 1988
File No. 337-016

NYS Dept of Environmental Conservation,
Paul R. Counterman, Chief
Bureau of Hazardous Waste Technology
Division of Hazardous Waste
50 Wolf Road
Albany, NY 12233-4016

ATTN: Mr. Douglas Nevell

RE: GENERAL ELECTRIC COMPANY
Buffalo Service Shop

EPA I.D. NO. NYD067539940

Dear Mr. Nevell:

At Mr. Michael Ianniello's request, I am enclosing copies of the laboratory summary sheets, overall Lawler, Matusky & Skelly Engineers (LMS) summary and chain-of-custody records for the RCRA facility assessment sampling visit conducted in September 1988. The data are not yet reviewed by me and are therefore preliminary.

Yours very truly,

Stuart E. Bassell, P.E.
Project Manager

SEB:cmr
encl.
cc: Mr. M. Ianniello

RESULTS FOR RCRA CONTAIER STORAGE AREA

LMS SAMPLE I.D.	LOCATION	SOLIDS (%)	CONCENTRATION (ug/Kg) a					
			METHYLENE CHLORIDE	1,1,1-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,1-DICHLOROETHENE	1,2-DICHLOROETHANE	TOLUENE
Method Blank	Field Blank		0.9	----	----	----	----	----
4471 4475 4476	Field Blank		8.4B	0.8	----	----	----	----
Method Blank	RCRA CSA #1 b 2-4		4.6	----	----	----	----	----
7332 7347	RCRA CSA #1 2-4		100B;290B	1300;1000	58;46	17;12*	----	----
Method Blank	RCRA CSA #1 4-6/6-8		----	----	----	----	----	----
7342 7252	RCRA CSA #1 4-6		4L	20000	290	170	29	18
7423 7344	RCRA CSA #1 6-8		3L	20000	48	120	61	120

---- Less than
* BMDL
L Suspected laboratory contamination
B Analyte found in blank
a Wet weight
b Sample and replicate concentrations are shown

LAWLER, MATUSKY & SKELLY ENGINEERS
ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS
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PEARL RIVER, NEW YORK 10965

BY _____ DATE _____ SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____ JOB NO. _____

385-7204

SUBJECT _____

RESULTS FOR PCB CONTAINER STORAGE AREA AND VIRGIN OIL TANKS

LMS SAMPLR ID	LOCATION	SOLIDS (%)	CONCENTRATION (mg/kg)[a] PCB-1260	PHC
METHOD BLANK	PCB FIELD BLANK	—	U	—
4474 4477 7263	PCB FIELD BLANK	—	U	—
7262	PCB CSA #1	?	175	—
4471 4475 4476	PHC FIELD BLANK	—	—	<5
7261	VOT #1: 0-3"	70.39	—	2200
7258	VOT #1: 1-3'	80.06	—	380
7259[b]	VOT #1: 3-5'	84.61	—	500; 360
7260	VOT #1: 5-7'	86.89	—	< 50

a wet weight

b sample and replicate values shown

U no PCBs detected

— not analyzed.

LAWLER, MATUSKY & SKELLY ENGINEERS
CHAIN OF CUSTODY RECORD

PROJECT No. 237-016
LMS FACILITY Nyack

PROJECT GE [illegible]
COLLECTION SITE see above
FIELD PERSONNEL [illegible]

SAMPLE TYPE (Circle):
Drinking Water | Stream/Pond | Monitoring Wells | Bottom Sediment
Industrial Waste | River/Ocean | Treatment Facility | Soil (circled)
Coliform (T / F) | Leachate | Other ______

SAMPLE ID NUMBER	DATE	TIME	SAMPLE SITE	PARAMETERS	SAMPLE PREP PRESERVATIVE	SAMPLE PREP FILTER (Y/N)
7232	9-8-88	1120	RCRA CSA #1 2-4'	VOC's See Analytical Requirement Sheets	4°C	
7247	↓	↓	↓	↓	↓	↓
7247		1130	RCRA CSA #1 4-6'			
7252		↓	↓			
7423		1148	RCRA CSA #1 6-8'			
7344	↓	↓	↓	↓	↓	↓
4471	9-8-88	1355	Field Blank	VOC's See Analytical Requirement Sheets	Aquatec Supplied Field Blank H₂O	
4475	↓	↓	↓	↓	↓	
4476	↓	↓	Field Blank	PHC's	LMS supplied Field Blank (DI) water	
7258	9-8-88	1425	VOT #1 1-3'	PHC's : See Analytical Requirement Sheets	LMS supplied bottles	
7259		1436	VOT #1 3-5'	PHC's :		
7260		1455	VOT #1 5-7'	PHC's :		
7261	↓	1535	VOT #1 0-3"	PHC's See Analytical Requirement Sheets		
4474 4477 7263	9-8-88	1555	Field Blank	PCBs and PCBs	analyze as one sample	
7262	9-8-88	1610	PCB CSA #1	PCB's		

LMS supplied bottles (7258–7260)
LMS supplied bottle (7263)

Relinquished By:	Date/Time:	No. Bottles:	Received By:

Relinquished By:	Date/Time:	Received By:
John M. Guzewich	9-8-88 / 1720	
Relinquished By:	Date/Time:	Received By:

Messenger:	Shipped To:	Received at Laboratory By:

Remarks: Sealed and shipped Fed-X

Sample Container Size
a) VOCs : 40 ml vials
b) PHC soil : 250 ml Amber bottle
c) PHC water 500 ml Amber bottle

* For 4476 PHC Field Blank sample, no H_2SO_4 was provide to preserve it

Sealed w/ Seal #'s : 001, 002, 003, 004, 005

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TEL. 802/658-1074

ANALYTICAL REPORT

Lawler, Matusky and Skelly Engineers

Date: 10/18/88
Project No: 88400
ETR No: 14944
Sample(s) Received On: 9 September 1988
Page of

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Parameter	88885	88887	88888	88888 REP	88889	88890		
Petroleum Hydrocarbons (mg/l)	<5							
Petroleum Hydrocarbons (mg/Kg as received)		380	500	360	<50	2200		
% Solids		80.06	84.61		86.89	70.39		

Lab No.	Sample Description
88885.	Water sample labeled 4471, 4475, 4476 field blank.
88887.	Soil sample labeled 7258.
88888.	Soil sample labeled 7259.
88888REP.	Replicate of soil sample labeled 7259.
88889.	Soil sample labeled 7260.
88890.	Soil sample labeled 7261.

Submitted By: Joseph Comeau Aquatec Inc.

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ANALYTICAL REPORT

Lawler, Matusky & Skelly Engineers

Date: 4 November 1988
Project No: 88400
ETR No: 14944
Sample(s) Received On: 9 September 1988
Page 1 of 1

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Parameter	88885							
Results by Method 8015								
Diethyl ether	<2							
Methyl ethyl ketone	<1							
Methyl isobutyl ketone	<1							
Paraldehyde	<1							
Ethanol	<1							
Acrylamide	<2							

Lab No.	Sample Description
88885	Lawler, Matusky & Skelly Engineers, water sample labeled 4471, 4475, 4476 field blank.

Submitted By: Joseph Comee

Aquatec Inc.

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ANALYTICAL REPORT

Lawler, Matusky & Skelly Engineers

Date: 4 November 1988
Project No: 88400
ETR No: 14944
Sample(s) Received On: 9 September 1988

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Parameter	88892	88893	88894	88894R	88894MS	Spike Added	% Recovery
Results by Method 8015 (mg/Kg as Received)							
Diethyl ether	<10	<10	<10	<10	296.4	394.9	75%
Methyl ethyl ketone	<5	<5	<5	<5	128.3	179.9	71%
Methyl isobutyl ketone	<5	<5	<5	<5	160.4	183.2	88%
Paraldehyde	<5	<5	<5	<5	240.4	249.5	96%
Ethanol	<5	<5	<5	<5	205.6	283.2	73%
Acrylamide	<10	<10	<10	<10	65.1	91.6	71%

Lab No.	Sample Description
88892	Lawler, Matusky & Skelly Engineers, soil sample labeled 7332, 7347.
88893	Lawler, Matusky & Skelly Engineers, soil sample labeled 7342, 7252.
88894	Lawler, Matusky & Skelly Engineers, soil sample labeled 7423, 7344.
88894R	Replicate of Lawler, Matusky & Skelly Engineers, soil sample labeled 7423, 7344.
88894MS	Matrix spike of Lawler, Matusky & Skelly Engineers, soil sample labeled 7423, 7344.

% Recovery = % Matrix Spike Recovery.

Submitted By: Joseph Com

Aquatec Inc.
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ANALYTICAL REPORT

Lawler, Matusky & Skelly Engineers

Date: 4 November 1988
Project No: 88400
ETR No: 14944
Sample(s) Received On: 9 September 1988
Page 2 of 2

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater.
All results are in mg/l unless otherwise noted.

Parameter	88894MSD	Spike Added	% Recovery
Results by Method 8015 *			
Diethyl ether	296.4	418.3	71%
Methyl ethyl ketone	125.9	190.6	66%
Methyl isobutyl ketone	136.8	194.1	70%
Paraldehyde	194.8	264.4	74%
Ethanol	196.9	300.0	66%
Acrylamide	96.2	97.0	99%

* = Results in mg/Kg as received.

Lab No.	Sample Description
88894MSD	Matrix spike duplicate of Lawler, Matusky & Skelly Engineers, soil sample labeled 7423, 7344.

% Recovery = % Matrix Spike Recovery.

Submitted By: Joseph Comer

Aquatec Inc.

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ANALYTICAL REPORT

Aquatec Lab No.: B092088W6P
ETR No.: 14944
Sample Received On: 9 September 1988
Sample Identification: Method blank for Lawler, Matusky & Skelly Engineers, water sample labeled 4474, 4477, 7263 field blank.

PCB's in ug/l

PCB-1242	0.50 U
PCB-1254	1.00 U
PCB-1221	0.50 U
PCB-1232	0.50 U
PCB-1248	0.50 U
PCB-1260	1.00 U
PCB-1016	0.50 U

Percent Dibutyl Chlorendate Recovery = 82

Key to the letters used to qualify the results of the analysis:

U - The compound was analyzed for but not detected. The number is the detection limit for the compound.

LCB - Compound was found at low concentration, comparable to that in the blank. Quantitation is not possible.

C - The result has been corrected for the presence of the compound in the blank.

000007

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ANALYTICAL REPORT

Aquatec Lab No.: 88886
ETR No.: 14944
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky & Skelly Engineers, water sample labeled 4474, 4477, 7263 field blank.

PCB's in ug/l

PCB-1242	2.50 U
PCB-1254	5.00 U
PCB-1221	2.50 U
PCB-1232	2.50 U
PCB-1248	2.50 U
PCB-1260	5.00 U
PCB-1016	2.50 U

Percent Dibutyl Chlorendate Recovery = 129

Key to the letters used to qualify the results of the analysis:

U - The compound was analyzed for but not detected. The number is the detection limit for the compound.

LCB - Compound was found at low concentration, comparable to that in the blank. Quantitation is not possible.

C - The result has been corrected for the presence of the compound in the blank.

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ANALYTICAL REPORT

Aquatec Lab No.: B092188S1
ETR No.: 14944
Sample Received On: 9 September 1988
Sample Identification: Method blank for Lawler, Matusky & Skelly Engineers, soil sample labeled 7262 and matrix spike of soil sample labeled 7262.

PCB's in ug/Kg

PCB-1242	2000 U
PCB-1254	4000 U
PCB-1221	2000 U
PCB-1232	2000 U
PCB-1248	2000 U
PCB-1260	4000 U
PCB-1016	2000 U

Note: Sample was diluted 5 fold for analysis.

Percent Dibutyl Chlorendate Recovery = 91

Key to the letters used to qualify the results of the analysis:

U - The compound was analyzed for but not detected. The number is the detection limit for the compound.

LCB - Compound was found at low concentration, comparable to that in the blank. Quantitation is not possible.

C - The result has been corrected for the presence of the compound in the blank.

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ANALYTICAL REPORT

Aquatec Lab No.: 88891
ETR No.: 14944
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky & Skelly Engineers, soil sample labeled 7262.

PCB's in ug/Kg

PCB-1242	40000 U
PCB-1254	80000 U
PCB-1221	40000 U
PCB-1232	40000 U
PCB-1248	40000 U
PCB-1260	175000
PCB-1016	40000 U

Note: Sample was diluted 100 fold for analysis.

Percent Dibutyl Chlorendate Recovery = 84

Key to the letters used to qualify the results of the analysis:

U - The compound was analyzed for but not detected. The number is the detection limit for the compound.

LCB - Compound was found at low concentration, comparable to that in the blank. Quantitation is not possible.

C - The result has been corrected for the presence of the compound in the blank.

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ANALYTICAL REPORT

Aquatec Lab No.: M88891
ETR No.: 14944
Sample Received On: 9 September 1988
Sample Identification: Matrix spike of Lawler, Matusky & Skelly Engineers, soil sample labeled 7262.

PCB's in ug/Kg

PCB-1242	40000 U
PCB-1254	80000 U
PCB-1221	40000 U
PCB-1232	40000 U
PCB-1248	40000 U
PCB-1260	200000
PCB-1016	40000 U

Note: Sample was diluted 100 fold for analysis.

Percent Dibutyl Chlorendate Recovery = 80

Key to the letters used to qualify the results of the analysis:

U - The compound was analyzed for but not detected. The number is the detection limit for the compound.

LCB - Compound was found at low concentration, comparable to that in the blank. Quantitation is not possible.

C - The result has been corrected for the presence of the compound in the blank.

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ANALYTICAL REPORT

Aquatec Lab No.: AA092006
ETR No.: 14944, Project 88400
Sample Received On: N/A
Sample Identification: Method Blank for Lawler, Matusky & Skelly Engineers, water sample labeled 4471, 4475, 4476 field blank.

Volatile Organic Compounds (Method 8010/8020) in ug/l

benzene	<0.5
bromodichloromethane	<0.5
bromoform	<0.5
bromomethane	<0.5
carbon tetrachloride	<0.5
chlorobenzene	<0.5
chloroethane	<0.5
chloroform	<0.5
chloromethane	<0.5
dibromochloromethane	<0.5
1,2-dichlorobenzene	<0.5
1,3-dichlorobenzene	<0.5
1,4-dichlorobenzene	<0.5
1,1-dichloroethane	<0.5
1,2-dichloroethane	<0.5
1,1-dichloroethene	<0.5
cis-1,2-dichloroethene	<0.5
trans-1,2-dichloroethene	<0.5
1,2-dichloropropane	<0.5
cis-1,3-dichloropropene	<0.5
trans-1,3-dichloropropene	<0.5
ethylbenzene	<0.5
methylene chloride	0.9
1,1,2,2-tetrachloroethane	<0.5
tetrachloroethene	<0.5
toluene	<0.5
1,1,1-trichloroethane	<0.5
1,1,2-trichloroethane	<0.5
trichloroethene	<0.5
trichlorofluoromethane	<0.5
vinyl chloride	<0.5
xylenes	<0.5

Percent Surrogate Standard Recoveries

Method 8010 94%
Method 8020 99%

B = Analyte was found in blank.
L = Suspected laboratory contamination.
* = Result below method detection limit.
E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: AA092006
ETR No.: 14944, Project 88400
Sample Received On: N/A
Sample Identification: Method Blank for Lawler Matusky & Skelly Engineers, soil sample labeled 7332, 7347 and replicate of soil sample labeled 7332, 7347.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg

benzene	<2.0
bromodichloromethane	<2.0
bromoform	<2.0
bromomethane	<2.0
carbon tetrachloride	<2.0
chlorobenzene	<2.0
chloroethane	<2.0
chloroform	<2.0
chloromethane	<2.0
dibromochloromethane	<2.0
1,2-dichlorobenzene	<2.0
1,3-dichlorobenzene	<2.0
1,4-dichlorobenzene	<2.0
1,1-dichloroethane	<2.0
1,2-dichloroethane	<2.0
1,1-dichloroethene	<2.0
cis-1,2-dichloroethene	<2.0
trans-1,2-dichloroethene	<2.0
1,2-dichloropropane	<2.0
cis-1,3-dichloropropene	<2.0
trans-1,3-dichloropropene	<2.0
ethylbenzene	<2.0
methylene chloride	4.6
1,1,2,2-tetrachloroethane	<2.0
tetrachloroethene	<2.0
toluene	<2.0
1,1,1-trichloroethane	<2.0
1,1,2-trichloroethane	<2.0
trichloroethene	<2.0
trichlorofluoromethane	<2.0
vinyl chloride	<2.0
xylenes	<2.0

Percent Surrogate Standard Recoveries

Method 8010	94%
Method 8020	99%

B = Analyte was found in blank.
L = Suspected Laboratory contamination.
* = Result below method detection limit.
E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: AA092807
ETR No.: 14944, Project 88400
Sample Received On: N/A
Sample Identification: Method Blank for Lawler, Matusky & Skelly Engineers, soil sample labeled 7342, 7252, and soil sample labeled 7423, 7344.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg

benzene	<2.0
bromodichloromethane	<2.0
bromoform	<2.0
bromomethane	<2.0
carbon tetrachloride	<2.0
chlorobenzene	<2.0
chloroethane	<2.0
chloroform	<2.0
chloromethane	<2.0
dibromochloromethane	<2.0
1,2-dichlorobenzene	<2.0
1,3-dichlorobenzene	<2.0
1,4-dichlorobenzene	<2.0
1,1-dichloroethane	<2.0
1,2-dichloroethane	<2.0
1,1-dichloroethene	<2.0
cis-1,2-dichloroethene	<2.0
trans-1,2-dichloroethene	<2.0
1,2-dichloropropane	<2.0
cis-1,3-dichloropropene	<2.0
trans-1,3-dichloropropene	<2.0
ethylbenzene	<2.0
methylene chloride	<2.0
1,1,2,2-tetrachloroethane	<2.0
tetrachloroethene	<2.0
toluene	<2.0
1,1,1-trichloroethane	<2.0
1,1,2-trichloroethane	<2.0
trichloroethene	<2.0
trichlorofluoromethane	<2.0
vinyl chloride	<2.0
xylenes	<2.0

Percent Surrogate Standard Recoveries

Method 8010	97%
Method 8020	92%

B = Analyte was found in blank.
L = Suspected laboratory contamination.
* = Result below method detection limit.
E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: 88885
ETR No.: 14944, Project 88400
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky & Skelly Engineers, water sample labeled 4471, 4475, 4476 field blank.

Volatile Organic Compounds (Method 8010/8020) in ug/l

benzene	<0.5
bromodichloromethane	<0.5
bromoform	<0.5
bromomethane	<0.5
carbon tetrachloride	<0.5
chlorobenzene	<0.5
chloroethane	<0.5
chloroform	<0.5
chloromethane	<0.5
dibromochloromethane	<0.5
1,2-dichlorobenzene	<0.5
1,3-dichlorobenzene	<0.5
1,4-dichlorobenzene	<0.5
1,1-dichloroethane	<0.5
1,2-dichloroethane	<0.5
1,1-dichloroethene	<0.5
cis-1,2-dichloroethene	<0.5
trans-1,2-dichloroethene	<0.5
1,2-dichloropropane	<0.5
cis-1,3-dichloropropene	<0.5
trans-1,3-dichloropropene	<0.5
ethylbenzene	<0.5
methylene chloride	8.4B
1,1,2,2-tetrachloroethane	<0.5
tetrachloroethene	<0.5
toluene	<0.5
1,1,1-trichloroethane	0.8
1,1,2-trichloroethane	<0.5
trichloroethene	<0.5
trichlorofluoromethane	<0.5
vinyl chloride	<0.5
xylenes	<0.5

Percent Surrogate Standard Recoveries

Method 8010 81%
Method 8020 77%

B = Analyte was found in blank.
L = Suspected laboratory contamination.
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E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results

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ANALYTICAL REPORT

Aquatec Lab No.: 88892
ETR No.: 14944 Project 88400
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky, & Skelly Engineers soil sample labeled, 7332, 7347.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg as Received

benzene	<8.0
bromodichloromethane	<8.0
bromoform	<8.0
bromomethane	<8.0
carbon tetrachloride	<8.0
chlorobenzene	<8.0
chloroethane	<8.0
chloroform	<8.0
chloromethane	<8.0
dibromochloromethane	<8.0
1,2-dichlorobenzene	<8.0
1,3-dichlorobenzene	<8.0
1,4-dichlorobenzene	<8.0
1,1-dichloroethane	58
1,2-dichloroethane	<8.0
1,1-dichloroethene	17
cis-1,2-dichloroethene	<8.0
trans-1,2-dichloroethene	<8.0
1,2-dichloropropane	<8.0
cis-1,3-dichloropropene	<8.0
trans-1,3-dichloropropene	<8.0
ethylbenzene	<8.0
methylene chloride	100B
1,1,2,2-tetrachloroethane	<8.0
tetrachloroethene	<8.0
toluene	<8.0
1,1,1-trichloroethane	1300
1,1,2-trichloroethane	<8.0
trichloroethene	<8.0
trichlorofluoromethane	<8.0
vinyl chloride	<8.0
xylenes	<8.0

Percent Surrogate Standard Recoveries

Method 8010	65%
Method 8020	59%

B - Analyte was found in blank.
L - Suspected laboratory contamination.
* - Result below method detection limit.
E - Concentration exceeds calibration range. See appropriate dilution.
D - Secondary dilution. See primary dilution for more accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: 88892R
ETR No.: 14944 Project 88400
Sample Received On: 9 September 1988
Sample Identification: Replicate of Lawler, Matusky, & Skelly Engineers soil sample labeled, 7332, 7347.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg as Received

benzene	<19
bromodichloromethane	<19
bromoform	<19
bromomethane	<19
carbon tetrachloride	<19
chlorobenzene	<19
chloroethane	<19
chloroform	<19
chloromethane	<19
dibromochloromethane	<19
1,2-dichlorobenzene	<19
1,3-dichlorobenzene	<19
1,4-dichlorobenzene	<19
1,1-dichloroethane	46
1,2-dichloroethane	<19
1,1-dichloroethene	12*
cis-1,2-dichloroethene	<19
trans-1,2-dichloroethene	<19
1,2-dichloropropane	<19
cis-1,3-dichloropropene	<19
trans-1,3-dichloropropene	<19
ethylbenzene	<19
methylene chloride	290B
1,1,2,2-tetrachloroethane	<19
tetrachloroethene	<19
toluene	<19
1,1,1-trichloroethane	1000
1,1,2-trichloroethane	<19
trichloroethene	<19
trichlorofluoromethane	<19
vinyl chloride	<19
xylenes	<19

Percent Surrogate Standard Recoveries

Method 8010	83%
Method 8020	129%

B - Analyte was found in blank.
L - Suspected laboratory contamination.
* - Result below method detection limit.
E - Concentration exceeds calibration range. See appropriate dilution.
D - Secondary dilution. See primary dilution for more accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: 88893
ETR No.: 14944, Project 88400
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky & Skelly Engineers, soil sample labeled, 7342, 7252.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg as Received

benzene	<2.0
bromodichloromethane	<2.0
bromoform	<2.0
bromomethane	<2.0
carbon tetrachloride	<2.0
chlorobenzene	<2.0
chloroethane	<2.0
chloroform	<2.0
chloromethane	<2.0
dibromochloromethane	<2.0
1,2-dichlorobenzene	<2.0
1,3-dichlorobenzene	<2.0
1,4-dichlorobenzene	<2.0
1,1-dichloroethane	290
1,2-dichloroethane	29
1,1-dichloroethene	170
cis-1,2-dichloroethene	<2.0
trans-1,2-dichloroethene	<2.0
1,2-dichloropropane	<2.0
cis-1,3-dichloropropene	<2.0
trans-1,3-dichloropropene	<2.0
ethylbenzene	<2.0
methylene chloride	4L
1,1,2,2-tetrachloroethane	<2.0
tetrachloroethene	<2.0
toluene	18
1,1,1-trichloroethane	20000
1,1,2-trichloroethane	<2.0
trichloroethene	<2.0
trichlorofluoromethane	<2.0
vinyl chloride	<2.0
xylenes	<2.0

Percent Surrogate Standard Recoveries

Method 8010	87%
Method 8020	89%

B = Analyte was found in blank.
L = Suspected laboratory contamination
* = Result below method detection limit.
E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results.

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ANALYTICAL REPORT

Aquatec Lab No.: 88894
ETR No.: 14944, Project 88400
Sample Received On: 9 September 1988
Sample Identification: Lawler, Matusky & Skelly Engineers, soil sample labeled, 7423, 7344.

Volatile Organic Compounds (Method 8010/8020) in ug/Kg as Received

benzene	<2.0
bromodichloromethane	<2.0
bromoform	<2.0
bromomethane	<2.0
carbon tetrachloride	<2.0
chlorobenzene	<2.0
chloroethane	<2.0
chloroform	<2.0
chloromethane	<2.0
dibromochloromethane	<2.0
1,2-dichlorobenzene	<2.0
1,3-dichlorobenzene	<2.0
1,4-dichlorobenzene	<2.0
1,1-dichloroethane	48
1,2-dichloroethane	61
1,1-dichloroethene	120
cis-1,2-dichloroethene	<2.0
trans-1,2-dichloroethene	<2.0
1,2-dichloropropane	<2.0
cis-1,3-dichloropropene	<2.0
trans-1,3-dichloropropene	<2.0
ethylbenzene	<2.0
methylene chloride	3L
1,1,2,2-tetrachloroethane	<2.0
tetrachloroethene	<2.0
toluene	120
1,1,1-trichloroethane	20000
1,1,2-trichloroethane	<2.0
trichloroethene	<2.0
trichlorofluoromethane	<2.0
vinyl chloride	<2.0
xylenes	<2.0

Percent Surrogate Standard Recoveries

Method 8010	90%
Method 8020	88%

B = Analyte was found in blank.
L = Suspected laboratory contamination.
* = Result below method detection limit.
E = Concentration exceeds calibration range. See appropriate dilution.
D = Secondary dilution. See primary dilution for most accurate results.

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ANALYTICAL REPORT

Lawler, Matusky and Skelly Engineers

Date: 11/07/88
Project No: 88400
ETR No:14944
Sample(s) Received On: 9 September 1988
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Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Parameter	88892	88893	88894					
% Solids	84.16	85.50	87.50					

Lab No.	Sample Description
88892	Lawler, Matusky & Skelly Engineers soil sample labeled 7332,7347.
88893	Lawler, Matusky & Skelly Engineers soil sample labeled 7342,7252.
88894	Lawler, Matusky & Skelly Engineers soil sample labeled 7423,7344.

Submitted By: Joseph Com

Aquatec Inc.

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