REPORT OF
SUBSURFACE INVESTIGATION
AND
PHASE I ENVIRONMENTAL ANALYSIS

POLE-LITE INDUSTRIES, INC.
NYSDEC SITE NO. 510004

CHAMPLAIN, NY (Clinton County)

Consent Order Index No. T060386

PREPARED FOR: Mr. Antonio J. Gagliardi
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Champlain, NY 12919

And

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NYSDEC
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And

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And

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P.O. Box 29
Canton, NY 13617

Report No. CD648-4-8-87

September 9, 1987

REPORT OF SUBSURFACE INVESTIGATION AND PHASE I ENVIRONMENTAL ANALYSIS

POLE-LITE INDUSTRIES, INC.
NYSDEC SITE NO. 510004

CHAMPLAIN, NY (Clinton County)

INTRODUCTION

At the request and authorization of Mr. Antonio J. Gagliardi of Pole-Lite Industries, Inc., and in accordance with New York State Department of Environmental Conservation Consent Order No. T060386, a subsurface investigation and environmental analysis was performed during the period of July 1 through August 11, 1987.

The subsurface investigation consisted of advancing soil borings adjacent to the former sawdust stockpiles and barrel storage locations. The investigation took place subsequent to removal and excavation of soil suspected of being contaminated in these areas.

The environmental analysis consisted of the performance of EPA Method 624 with peak identification on soil samples which were representative of the in-situ soils located below the bottom of the sawdust stockpiles and the barrel storage area.

The purpose of this investigation was to determine the nature of the subsurface conditions and determine if there is significant evidence of contamination at each respective test location. The environmental analysis was performed to quantify the suspected contaminants at each boring location and assist in determining whether monitoring wells should be installed for a groundwater analysis.

The soil borings were advanced using 3-1/4" I.D. hollow stem augers in accordance with ASTM D-1452. Soil samples were obtained and standard penetration testing was performed utilizing a 2" O.D. split barrel sampler in accordance with ASTM D-1586.

The soil sampling tools were washed with acetone and hexane, and rinsed with potable water prior to and subsequent to the soil sampling.

The soil boring surface elevations were determined in the field using conventional survey techniques. The elevations are based on an assumed datum using the plant's finished floor as a referenced benchmark of elevation 100.0.

All the soil samples were visually classified in the laboratory by an Intern Geologist using the Burmister Soil Classification System in accordance with ASTM D-2488 (see "Classification of Material" on the boring logs). The soil classifications are based on visual and manual observations.

SITE HISTORY

Pole-Lite Industries, Inc. has been manufacturing tapered aluminum light poles at the referenced facility since 1973. The manufacturing process basically consists of spinning a straight aluminum stock on a lathe-type machine to taper the stock. In the machining process, a heavy weight machine oil is spread on the stock as a lubricant. Once the stock has been tapered, a cleaning solvent (mineral spirits) is used to wash the oil from the finished pole. The excess cleaning solvent and oil drips into a catch trough on the tapering machine. Occasionally, during movement of the finished piece, a small amount of oil and solvent drips onto the floor. Sawdust is spread on the floor to absorb the oil. From 1973 to 1985, the oil soaked sawdust was stored on the premises of Pole-Lite at the two locations shown on the boring location plan. As of March 1986, the sawdust is being stored in covered 55-gallon drums.

In other portions of the manufacturing process, such as welding of bases and arms to poles, another type of cleaning solvent is used. The solvent used for this process is 1, 1, 1 trichloroethane. The trichloroethane is applied to areas to be welded with sponges then spoiled into 5-gallon pails. The used trichloroethane is currently stored in 55-gallon drums along with the used lubricating oil and mineral spirits. From the period of 1973 to 1984, the majority of the used solvents and oils were taken off the site by employees and local farmers, and incinerated, the balance was stored on-site. Occasional spillage of this stored material is suspected.

In 1984, Pole-Lite began storing the used solvent in 55-gallon drums. In 1985, the supplier of the solvents suggested that Pole-Lite Industries register with the EPA and consult the EPA concerning proper handling and disposal of the waste products.

During the Spring of 1985, Pole-Lite obtained an EPA number (NYD062037726). The NYSDEC inspected the facility on May 30, 1985, and on June 21, 1985, an official report (Oil spill Report No. 850955) was made noting several deficiencies concerning the storage of waste products. The report also requested five primary clean-up measures.

Upon receipt of the report, Pole-Lite Industries contracted New England Marine Contractors, Inc. (NEMC) of Williston, Vermont, to perform the requested work. NEMC is a registered clean-up contractor, approved by the NYSDEC, and was recommended to Pole-Lite Industries by the local (Region 5) NYSDEC personnel.

After extensive and lengthy delays, NEMC reported the results of a preliminary sampling program to the NYSDEC office on September 30, 1985. This submission is contained in Attachment No. 3 of our formal Proposed Investigation Outline. These test results verified low level contamination of

the sawdust piles and surface soils. On October 21, 1985, the NYSDEC requested a groundwater investigation. Pole-Lite Industries engaged NEMC to perform the required investigation in early November 1985. Again, after length delays associated with NEMC, the NYSDEC requested Pole-Lite to proceed with the required investigation on February 14, 1986.

Upon receipt of this request, Pole-Lite contracted Atlantic Testing Laboratories, Limited (ATL) to proceed with the required investigation.

As the first step of the investigation, ATL sampled the two sawdust piles and the surface soils in the vicinity of the drum storage area on March 24, 1986. Duplicate samples were collected at each location and submitted to two separate laboratories (NYSDEC approved) for analysis. The report of this investigation was contained in Attachment No. 4 of our formal Proposed Investigation Outline, a copy of which is included in Appendix E.

Pole-lite has since been working with DEC and Atlantic Testing Laboratories, Limited, in order to conform with the regulatory requirements.

In March 1986, Pole-Lite contacted Safety Kleen, Inc. of Barrie, Vermont to properly dispose of the used solvents and oil. While investigating Safety Kleen's permits with the DEC in Raybrook, NY, Pole-Lite was informed by the DEC that a RCRA inspection would be performed.

The inspection was performed on March 14, 1986, with a report issued on March 27, 1986. The inspection was two-fold; one being an update on the previous year's oil spill (No. 850955), and the other a RCRA report.

The RCRA documented some deficiencies, namely, the storage of used solvents and oils (sixty 55-gallon drums). In compliance, the barrels were removed from the site within 60 days by Safety Kleen.

In June 1987, Pole-Lite contacted Clean Harbors, Inc., a hazardous waste contractor, for the removal of the sawdust piles.

During the period of June 22-26, 1987, the sawdust piles and surficial soils suspected of being contaminated were removed from the site by Clean Harbors, Inc.

During the period of July 1 through August 11, 1987, a soil sampling program and environmental analysis was performed by ATL as outlined in Phase I, Item No. 4 in the Scope of Services of ATL's formal Proposed Investigation Outline dated September 19, 1986. The results of this investigation are included herein.

SUBSURFACE CONDITIONS

Three soil borings were advanced adjacent to the sawdust stockpile locations and barrel storage area. These borings ranged from 6 ft to approximately 11.5 ft in depth. The sampling interval was continuous for each boring.

Boring B-7 was advanced near the northwest former sawdust stockpile. There was approximately six inches of surficial soil removed from this particular site, therefore, the soil sampling began six inches below the original surface. The soils generally consisted of silty clays and clayey silts in a stiff consistency. Auger refusal was encountered 5 ft below the surface, so the boring was relocated approximately 4 ft in a southerly direction. Auger refusal was encountered 6 ft below the surface at this location. Saturated soil was noted from 5 to 6 ft depth range directly overlying what is felt to be bedrock, but no water was noted in the bore hole.

Boring B-8 is representative of the soils in the vicinity of the barrel storage area. The boring was carried to 11.7 ft below grade. Soil sampling began at 5 ft below the surface which was at the same elevation as the bottom of the adjacent soil excavation.

The soils were found to be a relatively compact gravelly, silty sand typical of a glacial till. The soils were noted to be saturated approximately 7 ft below grade but no water was evident in the bore hole.

Boring B-9 was advanced adjacent to the northeast sawdust stockpile excavation. The excavation was approximately 5 ft in depth, therefore, soil sampling began 5 ft below the surface. The boring was carried to 11 ft where it was terminated. The soil encountered was representative of a brown glacial till and was noted to be saturated 7 ft below the surface.

There were no noted groundwater observations during this investigation but based on the saturated soil samples, the groundwater table is expected to exist at 7 to 10 ft below the surface.

CHEMICAL ANALYSIS

Soil samples were analyzed by Aquatec Environmental Services, using EPA Method 624 with peak identification. The laboratory analytical report is included in Appendix D.

The B-7 samples obtained in the vicinity of the former northwest sawdust stockpile, which are representative of 0.5-2.0 ft, 2.0-4.0 ft, and 5.0-6.0 ft depth ranges, did not contain any detectable, quantifiable amounts of volatile organic compounds. Similarly, the B-9 samples obtained in the vicinity of the northeast sawdust stockpile, which are representative of 5.0-7.0 ft, 7.0-9.0 ft, and 9.0-11.0 ft, did not contain any detectable, quantifiable amounts of volatile organic compounds.

The B-8 samples obtained in the vicinity of the barrel storage area are representative of 5.0-7.0 ft, 7.0-7.7 ft, 8.0-10.0 ft, and 10.0-11.7 ft depth ranges . The results are summarized on Table 1. 1,1,1-trichloroethane. 1,1-dichloroethane and xylene, acetone and methylene chloride were detected at the

sampling location B-8 in varying depths at low concentrations. All of the concentrations were below 0.5 parts per million. In general, the concentrations decreased with depth.

Other volatile compounds not on the hazardous substance list of Appendix 23 of 6 NYCRR Part 371 were identified by relative peak locations. These chemicals are suspected components of the machine oil previously used and stored in barrels near the vicinity of B-8 sampling location.

TABLE 1

Volatile Organic Compounds in ug/l

B-8	1,1,1,-trichlorethane	1,1-dichloroethane	xylenes	acetone	methylene chloride
5.0-7.0	77	5	5	390c[1]	LCB[4]
7.0-7.7	140	39	96	ND[3]	LCB[4]
8.0-10.0	14	ND[3]	3J[2]	58	15
10.0-11.7	29	ND[3]	ND[3]	10c[1]	11c[1]

1. "C" means the results have been corrected for the presence of the compound in the blank.

2. "J" means an estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

3. "ND" means not detected.

4. "LCB" means compound was found but at low concentrations, comparable to that in the blank. Quantitation is not possible.

Acetone was present in several of the soil samples, but its significance is questionable because acetone was one of two solvents used in the field to clean equipment in order to prevent cross-contamination during sampling. The use of acetone and hexane as solvents was recommended by Mr. Steenberge because these solvents were typically not used in Pole-Lite's manufacturing process.

CONCLUSION

This program quantifies the contaminant concentrations within the soil matrices at each suspected local contamination site within the premises of Pole-Lite Industries. The results of the analysis indicate that the contaminant concentrations were found to be low.

At the B-7 sampling location (i.e., the former northwest sawdust pile) and at the B-9 sampling location (i.e., the former northeast sawdust pile), no contaminants were detected at levels of concern. The sampling program has demonstrated that the initial phase of the remedial program was successful in eliminating the source of contaminants. We do not feel there is a need to conduct any additional investigation or remedial work at these locations.

At the B-8 sampling location (i.e., the drum storage area), the concentration of contaminants detected are felt to be at levels that are not likely to pose significant environmental concern. With the exception of acetone (which was used in the field to clean sampling equipment), the highest concentration of total volatile organics were noted between 5.0 to 7.0 ft and 7.0 to 7.7 ft, where the concentrations were found to be 0.087 and 0.275 parts per million, respectively. At the lower depths (i.e., 8.0 to 10.0 ft and 10.0 to 11.6 ft), the total volatile organic chemical concentrations decreased to 0.017 and 0.029 parts per million, respectively. Based on the results of the environmental analysis and the relative size of the drum storage area (approximately 30-40 ft in diameter), we feel that there is no need to pursue

the balance of the proposed investigation (i.e., monitoring well installation).

In lieu of the monitoring well installation, we recommend that Pole-Lite Industries sample its drilled well and other water supply wells in the vicinity of the site on a semi-annual or annual basis over an extended period of time and analyze the water samples using EPA method 624 (with peak identification) for aqueous solutions.

Included are a Site Location Map, Boring Location Plan, soil boring logs, Environmental Report and Sawdust Sampling Report.

Prepared by:

Thomas A. H. Pahler, I.E.
Geotechnical Engineer

Reviewed by:

Spencer F. Thew P.E./L.S.

Chemistry Consultation:

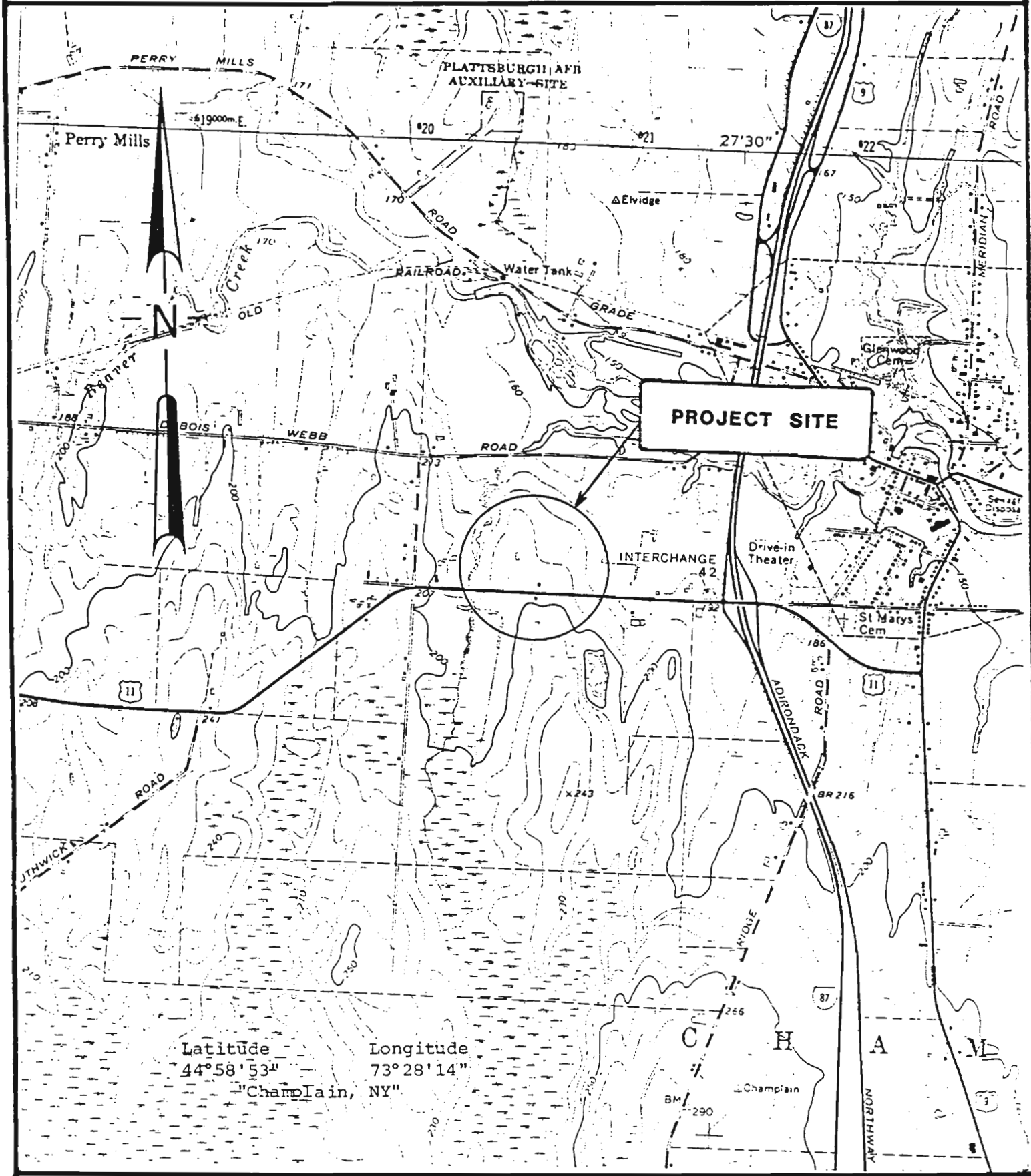
Marijean B. Remington

/dh

APPENDIX A

SITE LOCATION MAP

SITE LOCATION MAP



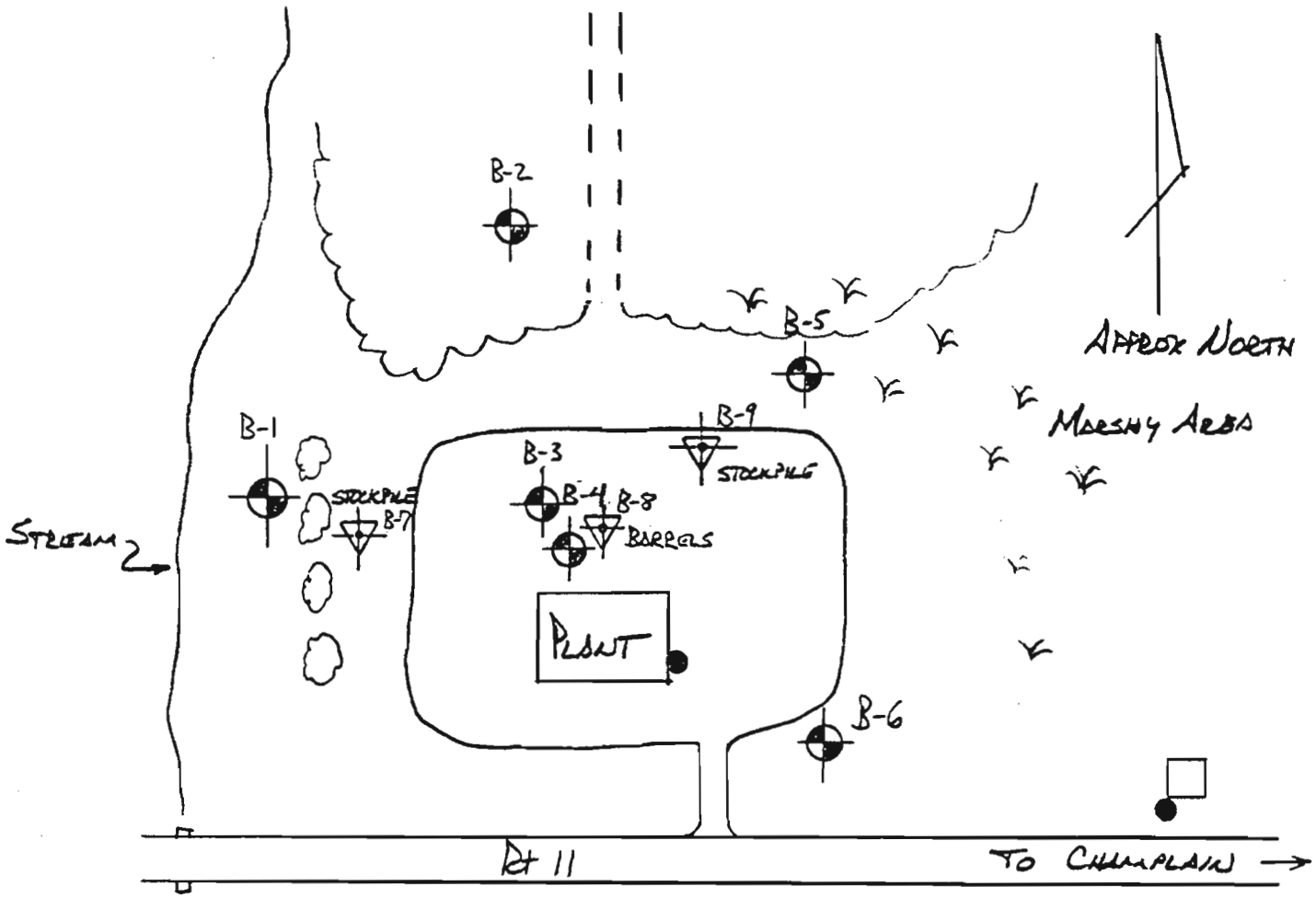
PROJECT No.	SCALE:	U.S.G.S. QUADRANT:
CD648-86	1" = 2000'	Champlain, NY

APPENDIX B

BORING LOCATION PLAN

ATLANTIC TESTING LABORATORIES, Limited	DATE 3-10-86	SHEET 1	OF 1

JOB NO. CO648-86	SUBJECT POLE-LITE INDUSTRIES, INC. PROPOSED BORING LOCATION PLAN	BY TAH	CHK'D JTC	APPROV'D SFT



- ● WATER WELL IN BEDROCK AQUIFER
- ▽ SUSPECTED AREA
- ⊕ SOIL BORING LOCATION (OBSERVATION WELL)
- ⊕ SOIL SAMPLING (6 FT IN DEPTH)

APPENDIX C

BORING LOGS

ATLANTIC TESTING LABORATORIES, Limited

SUBSURFACE INVESTIGATION

Report No. CD648-1-7-87

CLIENT Pole-Lite Industries, Inc.
Champlain, NY

Location of Boring See Plan

PROJECT Spill #85-0955
Champlain Manufacturing Facility

Date, start 7/1/87 Finish 7/1/87

Boring No. B-7 Sheet 1 of 1

Casing Hammer
Wt _____ lbs.
Fall _____ in.

Sampler Hammer
Wt 140 lbs.
Fall 30 in.
Casing _____

Ground Elev. 88.2

H.S. Auger 3-1/4" I.D.

Ground Water Observations

Date	Time	Depth	Casing at
None Observed			

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	DEPTH OF SAMPLE TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL (f-fine, m-medium, c-coarse; and — 35–50%, some — 20–35%, little — 10–20%, trace — 0–10%)	STANDARD PENETRATION NUMBER
			0.0	0.5	SHOVEL			Similar Soils as S-1	
		1	0.5	2.0	ss	4		Brown CLAY; and SILT; little f	
						6		SAND (wet, plastic)	
	AUGER					8			
		2	2.0	4.0	ss	8		Similar Soil	
						11			
						17			
						38			
		–	4.0	5.0	ss	64		No recovery, refusal due to	
						62		boulder or possible bedrock.	
								Auger refusal at 5 ft, moved	
								boring 4 ft south	
		–	0.0	5.0	AUGER				
		3	5.0	6.0	ss	12		Brown SILT; little mf SAND; little	
	AUGER					24		CLAY; trace f GRAVEL (saturated,	
								moderately plastic)	
								Auger refusal at 6 ft therefore	
								boring was terminated at 6 ft.	

SS — SPLIT SPOON SAMPLE
U — UNDIS. SHELBY TUBE
P — PISTON TYPE SAMPLE

DRILLERS Randy Todd, John Saarinen

ATLANTIC TESTING LABORATORIES, Limited

SUBSURFACE INVESTIGATION

Report No. CD648-1-7-87

CLIENT Pole-Lite Industries, Inc.
Champlain, NY

Location of Boring See Plan

PROJECT Spill #85-0955
Champlain Manufacturing Facility

Date, start 7/1/87 Finish 7/1/87

Boring No. B-8 Sheet 1 of 1

Casing Hammer
Wt _____ lbs.
Fall _____ in.

Sampler Hammer
Wt 140 lbs.
Fall 30 in.
Casing _____
H.S. Auger 3-1/4" I.D.

Ground Elev. 99.1

Ground Water Observations

Date	Time	Depth	Casing at
None Observed			

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	DEPTH OF SAMPLE TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL (f-fine, m-medium, c-coarse; and —35–50%, some—20–35%, little—10–20%, trace—0–10%)	STANDARD PENETRATION NUMBER
			0.0	4.0	AUGER			GRAVEL with Cobbles and Boulders	
		1	5.0	7.0	ss	10		Brown cmf SAND; little SILT; little	
						16		mf GRAVEL; trace CLAY (saturated,	
						16		very slightly plastic) Glacial Till	
						20			
	AUGER	2	7.0	7.7	ss	46		Similar Soils; and mf GRAVEL	
						100/2-1/2"		(saturated) Sampler refusal due to	
								cobbles	
			7.7	8.0	AUGER				
		3	8.0	10.0	ss	14		Soil similar to sample No. 1	
						25		(saturated)	
						34			
						40			
		4	10.0	11.7	ss	17		Similar Soils	
						25			
						45			
						50/2"			
								Boring Terminated at 11.7'	
								NOTE: Augered first 4 ft due to adjacent excavation depth of 4 ft.	

SS — SPLIT SPOON SAMPLE
U — UNDIS. SHELBY TUBE
P — PISTON TYPE SAMPLE

DRILLERS Randy Todd, John Saarinen

ATLANTIC TESTING LABORATORIES, Limited

SUBSURFACE INVESTIGATION

Report No. CD648-1-7-87

CLIENT Pole-Lite Industries, Inc. Location of Boring See Plan
Champlain, NY

PROJECT Spill #85-0955
Champlain Manufacturing Facility Date, start 7/1/87 Finish 7/1/87

Boring No. B-9 Sheet 1 of 1

Casing Hammer
Wt _____ lbs.
Fall _____ in.

Sampler Hammer
Wt 140 lbs.
Fall 30 in.
Casing _____

Ground Elev. 97.8

H.S. Auger 3-1/4" I.D.

Ground Water Observations

Date	Time	Depth	Casing at
None Observed			

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	DEPTH OF SAMPLE TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL (f-fine, m-medium, c-coarse; and —35—50%, some—20—35%, little—10—20%, trace— 0—10%)	STANDARD PENETRATION NUMBER
			0.0	5.0	AUGER			GRAVEL with Cobbles and Boulders	
	AUGER	1	5.0	7.0	ss	5		Brown cmf SAND; little SILT; trace CLAY; trace cmf GRAVEL (wet, very slightly plastic) Glacial Till	
						9			
						12			
						18			
		2	7.0	9.0	ss	18		Similar Soil; some mf GRAVEL (saturated)	
						26			
						26			
						21			
		3	9.0	11.0	ss	17		Brown cmf GRAVEL; little SAND; trace SILT; trace CLAY (saturated, very slightly plastic) 6" Recovery	
						22			
						23			
						27			
								Boring Terminated at 11'	
								NOTE: Augered first 5 ft due adjacent excavation depth of 5 ft.	

SS — SPLIT SPOON SAMPLE
U — UNDIS. SHELBY TUBE
P — PISTON TYPE SAMPLE

DRILLERS Randy Todd, John Saarinen

APPENDIX D

ENVIRONMENTAL REPORT

aquatec INC. ENVIRONMENTAL SERVICES

75 GREEN MOUNTAIN DRIVE, SOUTH BURLINGTON, VERMONT 05403, TELEPHONE (802) 658-1074

July 24, 1987

Mr. Tom Pahler
Atlantic Testing Laboratories, Ltd.
P.O.. Box 29
Canton, NY 13617

Project 87400, ETR 10861

The results of the analysis by gas chromatography/mass spectrometry of ten soil samples received by Aquatec on July 6, 1987 are enclosed.

R. Mason McNeer

R. Mason McNeer
Chemist

RMM/kjn

Enclosures

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05403
TEL. 802.658-1074

ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72257
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-7, S-1, elevation 0.5-2.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	10	U
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	LCB	
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05403
TEL. 802 658-1074

ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72258
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-7, S-2, elevation 2.0-4.0

Volatile Organic Compounds in ug/l

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	10	U
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05403
TEL. 802 658-1074

ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72266
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-9, S-3, elevation 9.0-11.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	LCB	
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72265
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-9, S-2, elevation 7.0-9.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	LCB	
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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.

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J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72264
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-9, S-1, elevation 5.0-7.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	8	C
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	LCB	
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72263
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-8, S-4, elevation 10.0-11.7

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	11	C
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	29		bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	LCB	
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	10	C
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72262
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-8, S-3, elevation 8.0-10.0

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg_{wet})
324	hexane	2
466	1,1,3-trimethylcyclohexane	6
471	octahydroindene	8
491	an ethyl-methylcyclohexane	7
531	a C_3 substituted cyclohexane	29
557	a C_4 substituted cyclohexane	24
581	a C_{11} unsaturated hydrocarbon	11
609	decahydronaphthalene	10

* Indicates relative location of chromatographic peak in a total of 700 scans in the chromatogram, at three seconds per scan.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72262
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-8, S-3, elevation 8.0-10.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	15	C
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	14		bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	LCB	
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	58	C
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	3	J

See enclosed report of other volatile organic compounds found.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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TEL. 802 658-1074

ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72261
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-8, S-2, elevation 7.0-7.7

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg_{wet})
323	hexane	12
376	cis-octahydropentalene	14
407	a dimethylcyclohexane	11
434	a C_8H_{16} hydrocarbon	73
466	1,1,3-trimethylcyclohexane	92
470	octahydroindene	140
491	an ethyl-methylcyclohexane	90
503	a C_3 substituted cyclohexane	63
530	a C_3 substituted cyclohexane	330
565	a hydrocarbon	36
606	a C_3 substituted benzene	79
621	nonane	230
645	a C_4 substituted benzene	85

* Indicates relative location of chromatographic peak in a total of 700 scans in the chromatogram, at three seconds per scan.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72261
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-8, S-2, elevation 7.0-7.7

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	140		bromodichloromethane	5	U
1,1-dichloroethane	39		dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	10	U
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	96	

See enclosed report of other volatile organic compounds found.

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

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Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72260
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-3, S-1, elevation 5.0-7.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	77		bromodichloromethane	5	U
1,1-dichloroethane	5		dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	390 C	
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	

See enclosed report of other volatile organic compounds found.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72260
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing, soil sample CD648, labeled B8, S-1, elevation 5.0-7.0

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg_{wet})
622	a C9 saturated hydrocarbon	4

* Indicates relative location of chromatographic peak in a total of 300 scans in the chromatogram, at three seconds per scan.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

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ANALYTICAL REPORT

Date: 24 July 1987
Aquatec Lab No.: 72259
ETR No.: 10861
Sample Received On: 6 July 1987
Sample Identification: Atlantic Testing Laboratories, Ltd., soil sample CD648, labeled B-7A, S-3, elevation 5.0-6.0

Volatile Organic Compounds in ug/kg_{wet}

benzene	5	U	methylene chloride	LCB	
carbon tetrachloride	5	U	chloromethane	10	U
chlorobenzene	5	U	bromomethane	10	U
1,2-dichloroethane	5	U	bromoform	5	U
1,1,1-trichloroethane	5	U	bromodichloromethane	5	U
1,1-dichloroethane	5	U	dibromochloromethane	5	U
1,1,2-trichloroethane	5	U	tetrachloroethene	5	U
1,1,2,2-tetrachloroethane	5	U	toluene	5	U
chloroethane	10	U	trichloroethene	5	U
2-chloroethyl vinyl ether	10	U	vinyl chloride	10	U
chloroform	5	U	acetone	10	U
1,1-dichloroethene	5	U	2-butanone	10	U
1,2-dichloroethene	5	U	carbon disulfide	5	U
1,2-dichloropropane	5	U	2-hexanone	10	U
trans-1,3-dichloropropene	5	U	4-methyl-2-pentanone	10	U
cis-1,3-dichloropropene	5	U	styrene	5	U
ethylbenzene	5	U	vinyl acetate	10	U
			total xylenes	5	U

No other volatile organic compounds were found in reportable concentrations.

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 but at low concentration, comparable to that in the blank. Quantitation is not possible.

J - An estimated value. The mass spectrum indicates the presence of the compound, but the calculated result is less than the reliable detection limit for this compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

APPENDIX E

SAWDUST SAMPLING REPORT

ATTACHMENT NO. 4

SECONDARY SOIL AND SAWDUST SAMPLING RESULTS

SAMPLING

On March 24, 1986, our Mr. Thomas A. Custeau, a Certified Enginering Technician, collected three samples at the Pole-Lite manufacturing facility. The samples are identified as follows:

SAMPLE NO. CD648-1: This sample was taken from the sawdust stockpile located in the northwestern corner of the site. The sample consisted of four separate quart jars.

SAMPLE NO. CD648-2: This sample was composed of soil excavated from several locations in the drum storage area. The soil was sampled to a depth of eight inches. The sample consisted of four separate quart jars.

SAMPLE NO. CD648-3: This sample was collected from the sawdust stockpile located in the northeastern corner of the site, and consisted of four separate quart jars.

ANALYSIS

Each sample consisting of four quart jars were randomly split into lots of two jars each. Two jars from each sample were submitted to separate laboratories for analysis (EPA Method No. 624 with peak identification). The test reports are attached.

CONCLUSION

SAMPLE NO. CD648-1:

The sawdust stockpile in the northwest corner of the site contains low levels of methylene chloride, 2-butanone, pentane, hexane and a hydrocarbon as well as slightly higher concentrations of acetone.

SAMPLE NO. CD648-2:

The soil in the vicinity of the drum storage area contains significant concentrations of the following hazardous substances:

1, 1, 1 trichloroethane
1,1 dichloroethane
tetrachloroethane
xylene

Other volatile compounds (non-hazardous) are also present (probably due to the use of heavy machine oil).

SAMPLE NO. CD648-3:

The sawdust stockpile located in the northeast corner of the site contains small amounts of 1, 1, 1 trichloroethane and tetrachloroethane, as well as several non-hazardous volatile compounds.

aquatec INC. ENVIRONMENTAL SERVICES

75 GREEN MOUNTAIN DRIVE, SOUTH BURLINGTON, VERMONT 05401, TELEPHONE (802) 658-1074

May 1, 1986

John Carr
Atlantic Testing Laboratories
Box 29
Canton, NY 13617

Project 86500, ETR 7230

The results of the analysis by gas chromatography/mass spectrometry of three samples received by Aquatec on April 2, 1986 are enclosed.

R. Mason McNeer

R. Mason McNeer
Chemist

Enclosures

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TEL. 802/658-1074

ANALYTICAL REPORT

Aquatec Lab No.: 57130
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample soil 0-8"
CD648-2, 3/24/86

Volatile Organic Compounds in ug/kg

benzene	25000	U	methylene chloride	NDB	
carbon tetrachloride	25000	U	chloromethane	50000	U
chlorobenzene	25000	U	bromomethane	50000	U
1,2-dichloroethane	25000	U	bromoform	25000	U
1,1,1-trichloroethane	1,300,000		bromodichloromethane	25000	U
1,1-dichloroethane	25000	U	dibromochloromethane	25000	U
1,1,2-trichloroethane	25000	U	tetrachloroethene	26,000C	
1,1,2,2-tetrachloroethane	25000	U	toluene	25,000K	
chloroethane	50000	U	trichloroethene	25000	U
2-chloroethyl vinyl ether	50000	U	vinyl chloride	50000	U
chloroform	25000	U	acetone	NDB	
1,1-dichloroethene	130,000		2-butanone	50000	U
1,2-dichloroethene	25000	U	carbon disulfide	25000	U
1,2-dichloropropane	25000	U	2-hexanone	50000	U
trans-1,3-dichloropropene	25000	U	4-methyl-2-pentanone	50000	U
cis-1,3-dichloropropene	25000	U	styrene	25000	U
ethylbenzene	25000	U	vinyl acetate	50000	U
			total xylenes	91,000	

Sample was extracted into methanol and diluted 5000 fold for analysis.

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.

NDB - Quantitation is not possible due to the relative concentration of the compound in the blank.

K - The compound was analyzed for and detected, but at a concentration not reliably quantifiable. The number is the detection limit for the compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

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ANALYTICAL REPORT

Aquatec Lab No.: 57130
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample soil 0-8" CD648-2, 3/24/86

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg)
510	a C_9 hydrocarbon	130,000
534	unknown	84,000
548	a C_3 substituted cyclohexane	58,000
569	unknown	55,000
587	a C_3 substituted cyclohexane	290,000
623	an unsaturated hydrocarbon	190,000
660	unknown	76,000
698	a C_3 substituted benzene	59,000
724	nonane	140,000

* Indicates relative location of chromatographic peak in a total of 750 scans in the chromatogram, at three seconds per peak.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

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ANALYTICAL REPORT

Aquatec Lab No.: 57129
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample labeled N.W. site sawdust CD648-1, 3/24/86

Volatile Organic Compounds in ug/kg

benzene	50	U	methylene chloride	75C	
carbon tetrachloride	50	U	chloromethane	100	U
chlorobenzene	50	U	bromomethane	100	U
1,2-dichloroethane	50	U	bromoform	50	U
1,1,1-trichloroethane	50	U	bromodichloromethane	50	U
1,1-dichloroethane	50	U	dibromochloromethane	50	U
1,1,2-trichloroethane	50	U	tetrachloroethene	50	U
1,1,2,2-tetrachloroethane	50	U	toluene	50	U
chloroethane	100	U	trichloroethene	50	U
2-chloroethyl vinyl ether	100	U	vinyl chloride	100	U
chloroform	50	U	acetone	1700C	
1,1-dichloroethene	50	U	2-butanone	110	
1,2-dichloroethene	50	U	carbon disulfide	50	U
1,2-dichloropropane	50	U	2-hexanone	100	U
trans-1,3-dichloropropene	50	U	4-methyl-2-pentanone	100	U
cis-1,3-dichloropropene	50	U	styrene	50	U
ethylbenzene	50	U	vinyl acetate	100	U
			total xylenes	50	U

Sample was diluted 10 fold for analysis.

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.

NDB - Quantitation is not possible due to the relative concentration of the compound in the blank.

K - The compound was analyzed for and detected, but at a concentration not reliably quantifiable. The number is the detection limit for the compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05401
TEL. 802/658-1074

ANALYTICAL REPORT

Aquatec Lab No.: 57129
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample labeled N.W. site sawdust CD648-1, 3/24/86

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg)
247	pentane	30
358	hexane	19
702	a hydrocarbon	70

* Indicates relative location of chromatographic peak in a total of 750 scans in the chromatogram, at three seconds per peak.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05401
TEL. 802/658-1074

ANALYTICAL REPORT

Aquatec Lab No.: 57128
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample labeled N.E. site sawdust CD648-3, 3/24/86

Volatile Organic Compounds in ug/kg

benzene	500	U	methylene chloride	NDB	
carbon tetrachloride	500	U	chloromethane	1000	U
chlorobenzene	500	U	bromomethane	1000	U
1,2-dichloroethane	500	U	bromoform	500	U
1,1,1-trichloroethane	1100		bromodichloromethane	500	U
1,1-dichloroethane	500	U	dibromochloromethane	500	U
1,1,2-trichloroethane	500	U	tetrachloroethene	500K	
1,1,2,2-tetrachloroethane	500	U	toluene	500	U
chloroethane	1000	U	trichloroethene	500	U
2-chloroethyl vinyl ether	1000	U	vinyl chloride	1000	U
chloroform	500	U	acetone	NDB	
1,1-dichloroethene	500	U	2-butanone	NDB	
1,2-dichloroethene	500	U	carbon disulfide	500	U
1,2-dichloropropane	500	U	2-hexanone	1000	U
trans-1,3-dichloropropene	500	U	4-methyl-2-pentanone	1000	U
cis-1,3-dichloropropene	500	U	styrene	500	U
ethylbenzene	500	U	vinyl acetate	1000	U
			total xylenes	500	U

Sample was extracted into methanol and diluted 100 fold for analysis.

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.

NDB - Quantitation is not possible due to the relative concentration of the compound in the blank.

K - The compound was analyzed for and detected, but at a concentration not reliably quantifiable. The number is the detection limit for the compound.

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

Quality controls were analyzed with the sample as part of Aquatec's standard analytical procedures. The results of these are maintained on file at Aquatec.

aquatec
ENVIRONMENTAL SERVICES
75 Green Mountain Drive, So. Burlington, VT 05401
TEL. 802/658-1074

ANALYTICAL REPORT

Aquatec Lab No.: 57128
ETR No.: 7230
Sample Received On: 2 April 1986
Sample Identification: Atlantic Testing Laboratories, sample labeled N.E. site sawdust CD648-3, 3/24/86

Volatile Compounds not on the Hazardous Substances List

Scan No.*	Name	Estimated Conc.** (ug/kg)
514	a hydrocarbon	1500
536	a C_3 substituted cyclohexane	580
550	a substituted cyclohexane	410
591	a substituted cyclohexane	2700
610	unknown	790
629	an unsaturated hydrocarbon	1800
640	unknown	1200
667	unknown	710
705	a C_3 substituted benzene	2000
729	a C_3 substituted benzene	2300

* Indicates relative location of chromatographic peak in a total of 800 scans in the chromatogram, at three seconds per peak.

** Concentration estimated from ratio of Enhanced Reconstructed Ion Chromatogram (ERIC) of compound to ERIC of nearest internal standard, assuming a response factor of 1.

Environmental LABORATORY, INC.
5854 Butternut Drive, East Syracuse, NY 13057

New York State
Approved Laboratory
(315) 446-8795

To: ATLANTIC TESTING LABS-LIMITED
BOX 28
CANTON, NY 13617

Date: Jul 15 1986

Attention: JOHN CARR

****

SAMPLE #2101

LABORATORY ANALYSIS REPORT

****

SAMPLE SUMMARY

CLIENT	: ATLANTIC TESTING LABS-LIMITED	DATE RECEIVED	: 03/27/86
JOB #	: 405.146.01	DATE COLLECTED	: NA
LOCATION	: SOILS 0-8 CD64882	TIME COLLECTED	: NA
METHOD	:NA		

PARAMETER	RESULTS	UNITS
METHYCYOLOHEXANE	PENDING	
OCTAHYDROPENTALENE	PENDING	
ACETONE	PENDING	
2-BUTANONE	PENDING	
TOTAL XYLENES	150.	ug/g
METHYLENE CHLORIDE	<0.4	ug/g
1,1-DICHLOROETHYLENE	PENDING	
1,1-DICHLOROETHANE	5.6	ug/g
ETHYLBENZENE	<10.	ug/g
1,1,1-TRICHLOROETHANE	1800.	ug/g
TETRACHLOROETHYLENE	<0.4	ug/g
a - C_3Cyclohexane	Pending	
a - C_3Benzene	Pending	
a - Nonane	Pending	

Note:
Analysis performed by outside laboratory.

APPROVED BY: Conrad Friedl Jr. DATE: JUL 15 1986

CS Environment LABORATORY, INC.
5854 Butternut Drive, East Syracuse, NY 13057

New York State
Approved Laboratory
(315) 446-8795

To: ATLANTIC TESTING LABS-LIMITED
BOX 28
CANTON, NY 13617

Date: Jul 15 1986

Attention: JOHN CARR

****

SAMPLE #2102

LABORATORY ANALYSIS REPORT

****

SAMPLE SUMMARY

CLIENT	: ATLANTIC TESTING LABS-LIMITED	DATE RECEIVED	: 03/27/86
JOB #	: 405.146.01	DATE COLLECTED	: NA
LOCATION	: NORTHWEST SAWDUST	TIME COLLECTED	: NA
METHOD	:NA		

PARAMETER	RESULTS	UNITS
METHYCYOLOHEXANE	PENDING	
OCTAHYDROPENTALENE	PENDING	
ACETONE	PENDING	
2-BUTANONE	PENDING	
TOTAL XYLENES	<0.6	ug/g
METHYLENE CHLORIDE	<0.2	ug/g
1,1-DICHLOROETHYLENE	PENDING	
1,1-DICHLOROETHANE	<0.2	ug/g
ETHYLBENZENE	<0.2	ug/g
1,1,1-TRICHLOROETHANE	PENDING	
TETRACHLOROETHYLENE	<0.2	ug/g
a - C_3Cyclohexane	Pending	
a - C_3Benzene	Pending	
a - Nonane	Pending	

Note:
Analysis performed by outside laboratory.

CS Environmental LABORATORY, INC.
5854 Butternut Drive, East Syracuse, NY 13057

New York State
Approved Laboratory
(315) 446-8795

To: ATLANTIC TESTING LABS-LIMITED
BOX 28
CANTON, NY 13617

Date: Jul 15 1986

Attention: JOHN CARR

****

SAMPLE #2103

LABORATORY ANALYSIS REPORT

****

SAMPLE SUMMARY

CLIENT	: ATLANTIC TESTING LABS-LIMITED	DATE RECEIVED	: 03/27/86
JOB #	: 405.146.01	DATE COLLECTED	: NA
LOCATION	: N.E. SITE SAND	TIME COLLECTED	: NA
METHOD	:NA		

PARAMETER	RESULTS	UNITS
METHYCYOLOHEXANE	PENDING	
OCTAHYDROPENTALENE	PENDING	
ACETONE	PENDING	
2-BUTANONE	PENDING	
TOTAL XYLENES	2.3	ug/g
METHYLENE CHLORIDE	<0.2	ug/g
1,1-DICHLOROETHYLENE	PENDING	
1,1-DICHLOROETHANE	<0.2	ug/g
ETHYLBENZENE	<0.4	ug/g
1,1,1-TRICHLOROETHANE	1.5	ug/g
TETRACHLOROETHYLENE	<0.2	ug/g
a - C_3Cyclohexane	Pending	
a - C_3Benzene	Pending	
a - Nonane	Pending	

Note:
Analysis performed by outside laboratory.

Environmental
LABORATORY, INC.
5854 Butternut Drive, East Syracuse, NY 13057

New York State
Approved Laboratory
(315) 446-8795

Polelite

August 4, 1986

Mr. John Carr
Atlantic Testing Labs - Limited
Box 28
Canton, New York 13617

Re: CS sample #'s 2101-2103

File: 405.146.01

Dear Mr. Carr:

Enclosed please find laboratory analysis report for your samples: 1) Soils 0-8 CD64882/CS sample #2101, 2) Northwest Sawdust/CS sample #2102, 3) Northeast Site Sand/CS sample #2103.

As we discussed, these samples were subcontracted to Syracuse Research Corporation for analysis since our GC/MS did not have the library capabilities needed to analyze some of the organic compounds. If you have any technical questions concerning the analysis please contact our organic chemist, Tim Brown. I hope these results will satisfy your needs.

Very truly yours,

CS ENVIRONMENTAL LABORATORY, INC.

Conrad Teufel Jr.

Conrad Teufel, Jr.
Laboratory Manager

CT:plh
Enclosure

CS Environmental LABORATORY, INC.
5854 Butternut Drive, East Syracuse, NY 13057

New York State
Approved Laboratory
(315) 446-8795

TO: Atlantic Testing Labs, Limited
P.O. Box 28
Canton, New York 13617

RE: Organic Analysis CS Sample # 2101-2103

FILE: 405.146.01

ATTENTION: Mr. John Carr

DATE: September 11, 1986

WE ARE SENDING YOU X HEREWITH ____ UNDER SEPARATE COVER VIA

Copies of request for analysis, and cover sheet for SRC analysis report, of soil samples.

THE ABOVE ARE FOR X INFORMATION ____ SAMPLING ____ ANALYSIS

____ RETURN ____ REVISION ____ APPROVAL ____ OTHER

REMARKS: As requested. If you have any questions, do not hesitate to call.

IF ENCLOSED ARE NOT AS NOTED, PLEASE NOTIFY US AT ONCE.

CS ENVIRONMENTAL LABORATORY, INC.

Conrad Teufel Jr.

Conrad Teufel, Jr.
Laboratory Manager

CT:plh
Enclosure

TRANSMITTAL

COMPREHENSIVE

ANALYSIS REPORT

Prepared for: CS Environmental Laboratory
5854 Butternut Drive
East Syracuse, NY 13057
Attn: Mr. Conrad Teufel

Prepared by: Life and Environmental Sciences Laboratories
Dr. Alison Carter, Manager
Syracuse Research Corporation
Merrill Lane
Syracuse, New York 13210-4080
SRC Project Number L1371-50
Customer Purchase Order Number - B5-45015

Date of Report: July 11, 1986

Analysis Performed by:

Craig R. Turner — Research Associate

Catherine M. Plumb — Chemist

Report Approved by:

Ronald Rossi
Quality Assurance Unit

Work Performed: Three samples submitted for partial volatile scan. (SRC ID Nos. 86-0868 to 86-0870).

SRC ID No.	86-0868*	86-0869*	86-0870*
CS ID No.	2101 (µg/g)	2102 (µg/g)	2103 (µg/g)
Methylene Chloride	<0.4	<0.2	<0.2
1,1-Dichloroethene	0.4	<0.2	<0.2
1,1-Dichloroethane	5.6	<0.2	<0.2
1,1,1-Trichloroethane	1800	<0.2	1.5
Tetrachloroethylene	<0.4	<0.2	<0.2
Toluene	15	<0.2	<0.4
Ethylbenzene	<10	<0.2	<0.4
Total Xylenes	150	<0.6	2.3

*As received

Tentative identification of five major peaks in each run through GC/MS library searches. Approximation of concentration assuming a response factor of 1.0.

Identification	Compound	Result
SRC ID No. 86-0868	Octahydro-2-methylpentalene	300 µg/g
CS ID No. 2101	Propylcyclohexane	430 µg/g
	Trimethylbenzene	450 µg/g
	Methylpropylbenzene	450 µg/g
	Ethyldimethylbenzene	450 µg/g
SRC ID No. 86-0869	Nonane	56 µg/g
CS ID No. 2102	Propylcyclohexane	45 µg/g
	Decane	160 µg/g
	Decahydronaphthalene	17 µg/g
	Methylpropyl pentanol	88 µg/g
SRC ID No. 86-0870	1-Methylethylbenzene	89 µg/g
CS ID No. 2103	Methylethylbenzene	87 µg/g
	Methylethylbenzene	270 µg/g
	Methylethylbenzene	80 µg/g
	Ethyldimethylbenzene	41 µg/g