



Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 673-9219

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities Ravenna Arsenal, Ravenna, Ohio

Page 1

December 16, 1997

Mr. David Golde

National Industrial Services Incorporated

415 DeBaliviere Ave., Suite 12

St. Louis, Missouri 63112

**RE: Transformer Spill Remediation Activities
Ravenna Arsenal, Ravenna, Ohio**

Background

On November 3, 1997, a large transformer was tipped over during decommissioning activities resulting in an approximately 1500 gallon oil spill. Laboratory analysis confirmed that the oil did not contain polychlorinated biphenyls (PCBs). Diamond Environmental, Stow, Ohio was contracted to coordinate and oversee remediation activities for the oil spill.

Description of Work

On December 4 and 5, 1997, excavation activities were conducted at the above referenced site. During the course of excavation, all free product and water was pumped from the excavation as well as the recovery trench, which was previously installed, to temporary storage tanks. All liquids were then pumped into a tanker truck for proper disposal. All excavation activities were conducted by employees of Subsurface Technologies, Inc. and all oversight and sampling activities were performed by Donald Obermeier and Keith Bickel of Diamond Environmental. All work was completed in accordance with standard environmental remediation methods and all workers were 40-hour trained in accordance with 29 CFR 1910.120.

All excavated soils were stockpiled in close proximity of the excavation area pending analytical results. The stockpile was placed on 6 mil visqueen which overlapped the edges of straw bales. The visqueen was slowly rolled out to ensure that the bottom layer was not punctured.

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities/Ravenna Arsenal, Ravenna, Ohio

Page 2

Soil Excavation and Sampling Activities

All visibly contaminated soils were excavated until clean, native soil was encountered. The native soil in the vicinity of the spill was noted as brown and grey mottled silty clay. The upper 6"-12" in the former transformer pad area and around Building 28-28 consisted of slag and fine crushed gravel. Based on observations during excavation activities, the oil did not penetrate deeply into the native soil. Stained soil was limited to the upper 12" in the excavation area as well as the soil surrounding the concrete pads that the transformers rested on. Also, based on visual observations, the oil appears to have traveled throughout the excavation area in the slag just below the surface. The native clay soil prevented the oil from penetrating the subsurface.

After the recovery trenches were completely pumped out, remnant oil staining was observed along the bottom of the trench and on the side walls. The entire trench was over-excavated until all visibly stained soil was removed. A minimum of one foot of soil was initially removed from the floor of the trench and along the side walls.

Soil Screening Activities

Soil screening was conducted using a HnU DL-101 Photo-Ionization Detector (PID), which is used to scan air for volatile compounds. The instrument has a photoionization potential of 10.6 electron volts (eV) and a sensitivity of 1 part per million (ppm).

Prior to use, the instrument was calibrated using a two point calibration method in accordance with the manufacturer's instructions. Background, outdoor ambient air was used for zero gas calibration, and a 100 parts per million (ppm) isobutylene standard was utilized for span gas calibration.

Closed bag soil screening was performed by placing soil into resealable polyethylene bags (1/3 full) as soon as practical. Each bag was sealed and allowed to equilibrate for several minutes in a warm atmosphere. The sampling tip from the PID was then inserted through the side of each bag to screen the headspace. Instrument readings were observed until the headspace was depleted. The direct readout capability of this instrument allows evaluation of the concentration of ionizable gases present while on site.

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities/Ravenna Arsenal, Ravenna, Ohio

Page 3

Prior to the start of excavation activities, one soil sample, which was saturated with oil, was screened in order to evaluate the screening response to the oil. This soil sample was determined to have a response of 40.6 ppm for volatile compounds. Once all visibly excavated ^{contaminated} soils were excavated, soil samples were collected for PID volatile screening. Please see Appendix A for a site diagram with soil screening and sampling locations. Field screening results are summarized below:

<u>Recovery Trench</u>	<u>Depth</u>	<u>PID Screening Readings (ppm)</u>	
Sample 1 (bottom)	5'	1.0	Sample 2
(bottom)	5' 1.4*		
Sample 3 (bottom)	5'	1.2	
Sample 4 (side wall)	2.5'	1.1	
Sample 5 (bottom)	5'	1.3*	
Sample 6 (bottom)	5'	0.8	
Sample 7 (bottom)	5'	1.3	
<u>Excavation Area</u>	<u>Depth</u>	<u>PID Screening Readings (ppm)</u>	
Sample 8 (bottom)	3'	1.1	Sample 9
(bottom)	3' 1.5*		
Sample 10 (bottom)	5'	2.1*	
Sample 11 (bottom)	3'	1.4	
Sample 12 (bottom)	2'	1.2	
Sample 13 (bottom)	5'	0.7	
Sample 14 (bottom)	4'	0.8	
Sample 15 (bottom)	2'	0.8	
Sample 16 (bottom)	1'	0.7	
Sample 17 (bottom)	1'	0.7	
Sample 18 (bottom)	1'	0.6	
Sample 19 (bottom)	1'	0.7*	
Sample 20 (bottom)	1'	0.6	
Sample 21 (bottom)	1'	0.5	
Sample 22 (bottom)	1'	0.6*	
Sample 23 (bottom)	1'	0.4	
Sample 24 (bottom)	1'	0.4	
Sample 25 (bottom)	1'	0.3	

* Indicates locations where samples were collected for laboratory analysis

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities/Ravenna Arsenal, Ravenna, Ohio

Page 4

Representative verification samples were secured for analysis based on PID screening levels, soil appearance, location, and soil odor, if any. Two samples were collected from the recovery trench and four samples were collected from the excavation area. Soil samples were placed in an EPA Level B cleaned glass bottle fitted with a Teflon lined lid and stored at a temperature of approximately 4 °C until the time of analysis. The samples were secured in accordance with sound industry practice and standard operating procedures. Proper Chain of Custody documentation was followed for the transport to the laboratory. All samples were maintained at approximately 4 °C prior to analysis.

Table 1. Soil Sample Results (December 4 and 5, 1997)

Sample ID	Sample Depth	Analytes	Concentrations	BUSTR Comparison Level
Trench location 2 (bottom)	5'	TPH 418.1	3267 mg/kg	904 mg/kg
Trench location 5 (bottom)	5'	TPH 418.1	466 mg/kg	904 mg/kg
Excavation location 9 (bottom)	3'	TPH 418.1	<10.0 mg/kg	904 mg/kg
Excavation location 10 (bottom)	5'	TPH 418.1	<10.0 mg/kg	904 mg/kg
Excavation location 19 (bottom)	1'	TPH 418.1	<10.0 mg/kg	904 mg/kg
Excavation location 22 (bottom)	1'	TPH 418.1	<10.0 mg/kg	904 mg/kg

mg/kg = milligrams per kilogram

Please see the attached analytical data sheets in Appendix B for additional information regarding laboratory analyses.

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities: Ravenna Arsenal, Ravenna, Ohio

Page 5

Analytical data from the soil samples was compared to Action Levels set forth in current Ohio BUSTR regulations. As noted above, both of the soil samples from the trench were above the detection limit for the method, one of which was also above the BUSTR Action Level. All other samples were below the detection limit for the method, and therefore, below the BUSTR Action Level.

Additional Soil Excavation and Sampling Activities

Due to the elevated total petroleum hydrocarbon concentrations in the samples from the trench collected on December 5, 1997, additional excavation activities were conducted on December 10, 1997. The excavation activities consisted of excavating one additional foot of soil from the bottom of the trench. Following additional excavation activities, one verification soil sample was collected from the bottom of the trench for laboratory analysis

Table 2. Soil Sample Results (December 10, 1997)

Sample ID	Sample Depth	Analytes	Concentrations	BUSTR Comparison Level
Trench location 2 (2A) (bottom)	6'	TPH 418.1	<10.0 mg/kg	904 mg/kg

mg/kg = milligrams per kilogram

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities/Ravenna Arsenal, Ravenna, Ohio

Page 6

Conclusions

As noted above, for comparison purposes, the analytical data from the soil samples was compared to Action Levels set forth in current Ohio BUSTR regulations. Current Ohio BUSTR regulations at OAC 1301:7-9-13 present categorical Action Levels for remnant soil contaminants, above which additional remedial or corrective action may be required. Action Levels vary from site to site, based on individual physical conditions. The State Fire Marshal Site Feature Scoring System (SFSS) Chart was used to evaluate the Action Level category for the subject site. The site was evaluated solely with information and observations obtained during this project. Site scoring is based on information such as proximity to potable-water supplies, depth to groundwater, predominant soil, type of substratum, and natural and/or manmade conduits or receptors. A total site score of 70 was established for the site. According to the SFSS Action Levels stated at OAC 1301:7-9-13(E)(4), the property is classified as a Category 3 site. Contaminated soil Action Levels for a Category 3 site are defined as 904 mg/kg for total petroleum hydrocarbons.

The samples secured on December 5, 1997 from the excavation area and the trench sample labeled as "Trench location 5" were determined to be below the BUSTR Action Level, while the trench sample labeled "Trench location 2" was determined to be above the BUSTR Action Level. However, after additional excavation activities in the trench, the verification sample secured on December 10, 1997 labeled as "Trench location 2 (2A)" was below the BUSTR Action Level indicating that all contamination has been removed from the property and further remediation activities do not appear warranted.

December 16, 1997

National Industrial Services, Inc.

Soil Remediation Activities/Ravenna Arsenal, Ravenna, Ohio

Page 7

Soil Disposal

Upon completion of all excavation activities, the excavation was backfilled to grade with clean fill. A total of 449.41 tons of excavated soil (see Appendix C for scale tickets) was transported by Harbour Environmental Group to a Thermotech soil remediation plant located in Lowellville, Ohio. The treatment plant utilizes a countercurrent rotary drum desorber which heats the soil to 600° F while limiting dust and vapor temperatures. Dust is further treated in a unique augering system baghouse, and the volatilized contaminants are heated and destroyed in a 1500° F afterburner. Fugitive dust is controlled as the treated soil is cooled in a water spray chamber.

Upon completion of thermal treatment, the soil is used as clean fill dirt and a certificate of destruction is issued to the generator. All waste manifests and the certificate of destruction will be forwarded upon receipt. Please see Appendix B for waste characterization analytical results. Waste characterization was approved based on initial analytical results of soil samples collected from the surface in the vicinity of the spill soon after the incident. Since no samples were collected for TPH at that time, a sample was composited from the stockpile at the conclusion of excavation activities.

Please contact the undersigned if any additional information is required. Thank you for consulting Diamond Environmental.

Sincerely,

Diamond Environmental

Donald J. Obermeier

Donald J. Obermeier,
Environmental Geologist

Keith R. Bickel

Keith Bickel, CHMM, REP
President

APPENDIX A

Site Diagram

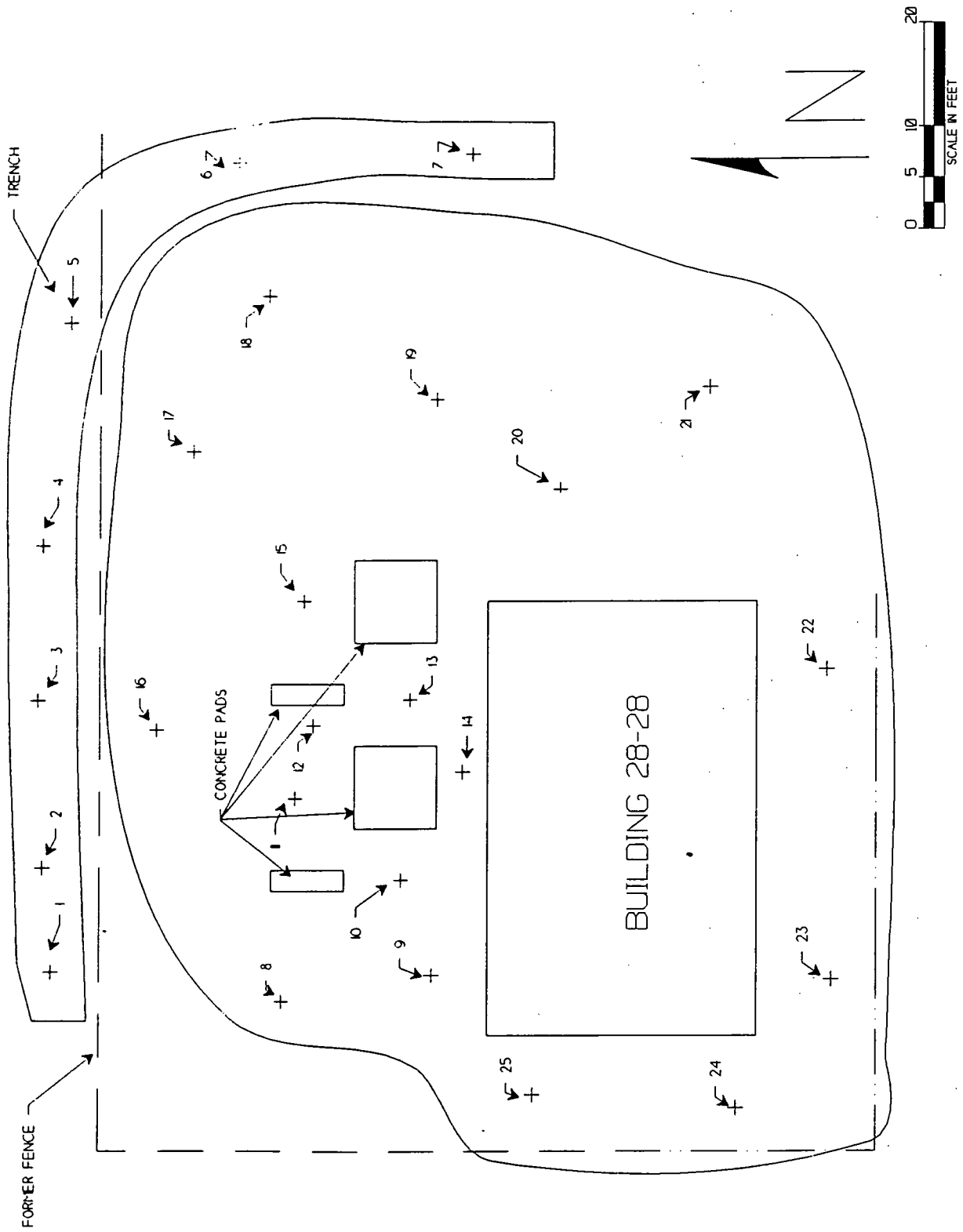


FIGURE 1: SITE DIAGRAM SHOWING SCREENING AND SAMPLING LOCATIONS

APPENDIX B

Analytical Results

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
 595 EAST TALLMADGE AVENUE
 AKRON, OHIO 44310
 TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY

A2LA CERTIFICATION #: 0724-01



S.E.T.

PROJECT NAME: RYBAR PROJECT LOCATION: _____ PO#: _____
 CLIENT NAME: DIAMOND ENVIRONMENTAL CLIENT ADDRESS: PO Box 2543 Stone, Ohio 44124
 CONTACT PERSON: KEITH BICKEL PHONE: (230) 686-5926 FAX #: SAME SAMPLED BY: RAY PEGHER
613-9219 CALL FIRST

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8013M	TPH +181	TCLP METALS	TCLP VOCS	TCLP BNAS	TCLP PEST/HERB	OTHERS
1		OIL		11/4									PCB
2		OIL		11/4									PCB
971502-01-02													

SPECIAL INSTRUCTIONS:

RELINQUISHED BY: Ray Pegher (LB) DATE: 11/4/97 RECEIVED BY: K. B. Luke DATE: 11/4/97

RECEIVED AT THE LAB BY: _____ DATE: 11-4-97

Summit Environmental Technologies, Inc.
your connection to a cleaner environment

A2LA CERTIFICATION NO. 724.01

Offices in Major U.S. Cities



November 11, 1997

1/1

Diamond Environmental
P.O. Box 2543
Stow, OH 44224

Date Collected: 11/4/97
Date Received: 11/4/97
Project #: RVAAP
Client ID #: See Below
Laboratory ID #: See Below
Analysis: PCBs (8080)
Detection Limit: 2.0 mg/kg
Matrix: Oil
Date of Analysis: 11/8/97

<u>Laboratory ID #</u>	<u>Client ID #</u>	<u>PCBs (mg/kg)</u>
971502-01	1	< 2.0
971502-02	2	< 2.0

West Sub-Station
Oil Spill
Samples Collected by
Mark Patterson

Quality Manager: Bassar Hussar

(Keith)

CHAIN-OF-CUSTODY



QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945
 7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 216-447-1550 • 1-800-497-6752 • FAX 216-447-0716

COLLECTOR(S) NAME(S) Scott Washberg
 COLLECTOR(S) SIGNATURE(S) [Signature]
 TURN-AROUND (days) 72-74 One Week Regular TOLP

PROJECT NUMBER	PROJECT LOCATION	VERBAL RESULTS		CUSTOMER SAMPLE IDENTIFICATION	NO. OF CONT. SAMPLES	ANALYSIS REQUIRED - SEE REVERSE	ADDITIONAL REMARKS
		PREPARED BY (S)	RECEIVED BY (S)				
970007	Eveready Army Munitions Plant						
970007-1	Sample 1	11/12/97	11/12/97 1532	PCB	1	X X X	11/12/97 1532
970007-2	Sample 2	11/12/97	11/12/97 1532	PCB	1	X X X	11/12/97 1532
970007-3	Sample 3	11/12/97	11/12/97 1532	PCB	1	X X X	11/12/97 1532

COMPANY NAME: Eveready Environmental Lab, Inc
 MAILING ADDRESS: P.O. Box 1953
 CITY: Went
 STATE: OH
 CONTACT NAME: Scott Washberg
 PHONE: 330 777-0785
 FAX: (330) 677-1507
 PURCHASE ORDER NUMBER: 4420



REMARKS
 (SEE FILE TYPE, LABORATORY COMMENTS, ETC.)

REMOVED BY (S) [Signature] DATE/TIME 11/12/97 1532
 RECEIVED BY (S) [Signature] DATE/TIME 11/12/97 1532
 RELINQUISHED BY (S) [Signature] DATE/TIME 11/12/97 1532
 RECEIVED BY (S) [Signature] DATE/TIME 11/12/97 1532

NSL ANALYTICAL SERVICES, INC.



FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES
 QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

7650 HUE PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0718
 (800) 457-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-1 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8061 PCBs

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23005
 POS:
 Page 2 of 7
 Preliminary Report

Analyte	Results mg/Kg	Estimated Quantitation Limit mg/Kg
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	<1	1

Substrate:	% Recovery	Acceptance Range
2,4,5,6-Tetrachloro-m-xylene	120	Not Established
Decachlorobiphenyl	41	Not Established

We certify the above analysis to be the true results based on the designated sample

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.



FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-1 Grab Soil

TCLP Metals Analysis 40CFR 261.24 SW846 Method 1311

Date: 18 November, 1997
 Report#: 11028EF
 Lab#: 23005
 PO#:
 Page 3 of 7
 Final Report

Analyte	Results (mg/L)	Estimated Quantitation Limit (mg/L)	RCRA Regulatory Limit (mg/L)	EPA HW#	Date Analyzed
Arsenic	<0.05	0.05	5.0	D004	11-18-97
Barium	1.4	0.05	100.0	D005	11-18-97
Cadmium	<0.05	0.05	1.0	D006	11-18-97
Chromium	<0.05	0.05	5.0	D007	11-18-97
Lead	<0.05	0.05	5.0	D008	11-18-97
Mercury	<0.002	0.002	0.2	D009	11-17-97
Selenium	<0.05	0.05	1.0	D010	11-18-97
Silver	<0.05	0.05	5.0	D011	11-18-97

QA/QC Data

Metal	ICV % Recovery	Acceptable Recovery Range	Methods Used
Arsenic	100	90-110%	Metals by ICP
Barium	101	90-110%	Method# 6020
Cadmium	101	90-110%	
Chromium	104	90-110%	Mercury by cold vapor
Lead	102	90-110%	Method# 7471
Mercury	95	90-110%	
Selenium	97	90-110%	
Silver	103	90-110%	

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.



FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES
QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1560 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1963
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067 Ravenna Army Munitions Plant

Client Sample ID: 11-12-97 970067-1 Grab Soil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
Report#: 11028EP
Lab#: 23005
PO#:
Page 1 of 7
Preliminary Report

<u>BTEX 8020</u>	<u>Results</u> <u>ug/kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>ug/kg</u>
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	<2	2
Xylenes (total)	17	2

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
m,p,o-Trifluorotoluene	98	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.



FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1948

7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0718
 (800) 497-8752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1853
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23006
 PO#: Page 5 of 7
 Preliminary Report

<u>Analyte</u>	<u>Results</u> mg/Kg	<u>Estimated Quantitation</u>
		<u>Limit</u> mg/Kg
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	*	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	122	Not Established
Decachlorobiphenyl	51	Not Established

* To Follow

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.

FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES



7530 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23006
 PO#: Page 4 of 7
 Preliminary Report

	Results	Estimated Quantitation Limit
<u>BTEX 8020</u>	<u>µg/kg</u>	<u>µg/kg</u>
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	4	2
Xylenes (total)	47	2

<u>BTEX Substrates</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
s.e.s-Trifluorotoluene	74	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.

FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES



7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0718
(800) 497-6752
HTTP://www.nslanalytical.com

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-3 Grab Oil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
Report#: 11028EP
Lab#: 23007
PO#:
Page 8 of 7
Preliminary Report

	Results	Estimated Quantitation Limit
<u>STEX 9020</u>	<u>ug/kg</u>	<u>ug/kg</u>
Benzene	<20	20
Toluene	70	20
Ethylbenzene	230	20
Xylenes (total)	2,300	20

<u>RIEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
m,p,a-Trifluorotoluene	92	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

KC/dy



SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
 595 EAST TALLMADGE AVENUE
 AKRON, OHIO 44310
 TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY
 A2LA CERTIFICATION #: 0724-01



PROJECT NAME: RVAAP - SPILL PROJECT LOCATION: RVAAP PO#
 CLIENT NAME: Diamond Env. CLIENT ADDRESS: PO BOX 2543, S.W. Ohio 44334
 CONTACT PERSON: K. Bickel PHONE # 330-673-9219 FAX # 673-9219 SAMPLED BY: D Obermeier

#	SAMPLE ID#	MEDIA	TIME	DATE	RTEX 8020	GRO 801SM	DRO 801SM	TPH 1181	ICLP METALS	ICLP VOCs	ICLP BNAS	TCLP PEST/HERB	OTHERS
1	2	Soil		12/5				X					
2	5	Soil		12/5				X					
3	9	Soil		12/5				X					
4	10	Soil		12/5				X					
5	19	Soil		12/5				X					
6	22	Soil		12/5				X					
7	STOCK PILE	Soil		12/5				X					

971710-01-907

SPECIAL INSTRUCTIONS: RUSH - NEED BY TUESDAY EVENING

RELINQUISHED BY: Keith R Bickel DATE: _____ RECEIVED BY: _____ DATE: _____

RECEIVED AT THE LAB BY: Christie Johnson DATE: 12/8/97

Summit Environmental Technologies, Inc.
your connection to a cleaner environment

A2LA CERTIFICATION NO. 724.01

Offices In Major U.S. Cities



December 9, 1997

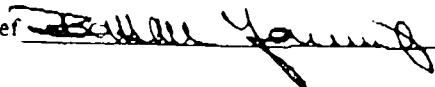
1/1

Diamond Environmental
 P.O. Box 2543
 Stow, OH 44224

Date Collected: 12/5/97
 Date Received: 12/8/97
 Project #: RVAAP - Spill
 Client ID # See Below
 Laboratory ID # See Below
 Analysis: TPH-418.1
 Detection Limit: 10.0 mg/kg
 Matrix: Solid
 Initial Calibration Date: 6/17/97
 Analyst: BY
 Date of Analysis: 12/9/97

<u>Laboratory ID #</u>	<u>Client ID #</u>	<u>TPH-418.1</u> <u>(mg/kg)</u>
971710-01	2	3,267.0
971710-02	5	466.0
971710-03	9	< 10.0
971710-04	10	< 10.0
971710-05	19	< 10.0
971710-06	22	< 10.0
971710-07	Stockpile	710.0

• Results are calculated on an as received weight basis

Laboratory Manager Bassam Youssef 

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
595 EAST TALLMADGE AVENUE
AKRON, OHIO 44310
TEL: 330/253-8211; FAX: 330/253-4489

CHAIN OF CUSTODY
AZLA CERTIFICATION #: 0724-01



s.e.t.

PROJECT NAME: Asentia Aisena-1 PROJECT LOCATION: _____ PO# _____
 CLIENT NAME: Diamond Environmental CLIENT ADDRESS: PO Box 2543
 CONTACT PERSON: K. Bickel PHONE #: 686-5996 FAX #: _____ SAMPLED BY: K. Bickel

#	SAMPLE ID#	MEDIA	TIME	DATE	BTEX 8020	GRO 8015M	DRO 8015M	TPH 4181	TCLP METALS	TCLP VOCS	TCLP BNAS	TCLP PEST/HERB	OTHERS
1	2A	Soil		12/10				X					

971742-01

SPECIAL INSTRUCTIONS: RUSH

RELINQUISHED BY: Rush R Bickel DATE: 12/11/97 1347 RECEIVED BY: _____ DATE: _____

RECEIVED AT THE LAB BY: DAV DATE: 12-11-97



December 12, 1997

1/1

Diamond Environmental
P O Box 2543
Stow, OH 44224

Date Collected 12/10/97
Date Received: 12/11/97
Project #: Ravenna Arsenal
Client ID #: 2A
Laboratory ID #: 971742-01
Matrix Solid
Initial Calibration Date: 6/17/97
Analyst: BY

<u>Parameter</u>	<u>Detection Limit</u>	<u>Results</u>	<u>Method</u>	<u>Date of Analysis</u>
TPH-418 I	10.0 mg/kg	< 10.0 mg/kg	418.1	12/12/97

Laboratory Manager Bassam Youssef

APPENDIX C

Scale Tickets

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE

TIME

00-61 28:08AM

646.00

lb GROSS

244.00

lb TARE - DRIVER

ON _____

OFF _____

lb NET @ _____

PER lb PRICE _____

40260

SHIPPER _____

REMARKS _____

WEIGHER _____

20.13

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 12/10/97

CUSTOMER'S NAME

TQR CRAIG SERV

ADDRESS

RAVENNA, O

COMMODITY

Wool - H&R DIRT

CARRIER

R & J #1907

DATE

TIME

00-61 28:08AM

613.00

lb GROSS

244.00

lb TARE - DRIVER

ON _____

OFF _____

lb NET @ _____

PER lb PRICE _____

36940

SHIPPER

TQR CRAIG

REMARKS _____

WEIGHER _____

18.47

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE	TIME		lb GROSS	ON	OFF
10-10-97	9:28AM	79640			
		26400	lb TARE - DRIVER		
		53240	lb NET @	PER lb PRICE	26.62

SHIPPER _____

REMARKS _____

WEIGHER _____

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 12-10-97

CUSTOMER'S NAME REVENNA Army Ammunition Plant

ADDRESS SR 5 AVENUE, ON

COMMODITY DIRT

CARRIER ED Ambrosia TX # 232

DAN DUKHAM / 203

DATE TIME

12-10-97 11:05AM 54450 lb GROSS

26000 lb TARE - DRIVER ON

OFF

68465 lb NET @ PER lb PRICE

SHIPPER

REMARKS

WEIGHER

3423

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME REVENNA ARMY AMMUNITION PLANT

ADDRESS STATE RT. 5

COMMODITY Soil REMEDIATION INC.

CARRIER AMBROSIA TRG.

DATE TIME

12-10-97 11:14AM 85630 lb GROSS

26500 lb TARE - DRIVER ON

OFF

59180 lb NET @ PER lb PRICE

SHIPPER

REMARKS

WEIGHER

29.59

REMARKS 203/20

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE _____ TIME _____

12-10-97 11:39AM 72700 lb GROSS

lb TARE - DRIVER ON _____ OFF _____

24400 lb NET @ _____

PER lb PRICE _____

48300

SHIPPER _____

WEIGHER _____

REMARKS

24.15

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME T & R CRANE SERVICE

ADDRESS RAVENNA, OH

COMMODITY LOW-HAZ PIRT

CARRIER R & J #1907

DATE TIME

12-10-97 11:41AM

67240 lb GROSS

24400 lb TARE - DRIVER ON

OFF

lb NET @

PER lb PRICE

42840

SHIPPER T & R CRANE

REMARKS

WEIGHER

21.42

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME T & R CRANE SERVICE

ADDRESS RAVENNA, OH.

COMMODITY LOWT AM. WATER SOIL

CARRIER R. J. #1905

DATE TIME

12-10-97 11:22AM

65100 lb GROSS

24400 lb TARE - DRIVER ON

OFF ✓

lb NET @

PER lb PRICE

40700

SHIPPER

REMARKS

WEIGHER

20.35

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE

TIME

12-10-97

11:54AM

84740

lb GROSS

25780

lb TARE - DRIVER

ON _____

OFF _____

lb NET @

PER lb PRICE _____

58960

29.48

SHIPPER _____

REMARKS _____

WEIGHER _____

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME _____

ADDRESS _____

COMMODITY _____

CARRIER _____

DATE

TIME

12-10-97

12:01PM

79200

lb GROSS

27600

lb TARE - DRIVER

ON _____

OFF _____

lb NET @

PER lb PRICE _____

51600

25.8

SHIPPER _____

REMARKS _____

WEIGHER _____

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME T & S Crane Service

Load 14

ADDRESS Ravenna OH

COMMODITY Dirt

CARRIER Ambrosia Truck 201

DATE

TIME

12-10-97

1:48PM

87000

lb GROSS

26400

lb TARE - DRIVER

ON

OFF

lb NET @

PER lb PRICE

61200

SHIPPER

REMARKS

WEIGHER

30.6

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 11/12/97

CUSTOMER'S NAME

ADDRESS

COMMODITY

CARRIER

DATE

TIME

12-10-97

1:10PM

75820

lb GROSS

23500

lb TARE - DRIVER

ON

OFF

lb NET @

PER lb PRICE

52320

SHIPPER

REMARKS

WEIGHER

26.16

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97
CUSTOMER'S NAME _____
ADDRESS _____
COMMODITY _____
CARRIER _____
DATE 12-10-97 TIME 3:25PM lb GROSS _____ OFF _____
lb TARE - DRIVER ON _____ PER lb PRICE _____
lb NET @ 27800
SHIPPER _____ WEIGHER _____
REMARKS 49900 24.95

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 12/10/97

CUSTOMER'S NAME REVENNA ARMY AMMUNITION PLANT

ADDRESS STATE RT. 5

COMMODITY SOIL REMEDIATION INC.

CARRIER AMBROSIA TRG.

DATE TIME

12-10-97 4:08AM 74140

lb GROSS

26500

lb TARE - DRIVER ON _____ OFF _____

47640

lb NET @ _____ PER lb PRICE _____

SHIPPER _____

WEIGHER _____

23.82

REMARKS L. McConnell T230/22

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 10/12/97

CUSTOMER'S NAME REVENNA ARMY AMMUNITION PLANT

ADDRESS RT 5 REVENNA AR

COMMODITY DIRT

CARRIER CID Ambrosia TRG #232 - Dr Donham /202

DATE TIME

12-10-97 4:19AM 73340

lb GROSS

26000

lb TARE - DRIVER ON _____ OFF _____

47340

lb NET @ _____ PER lb PRICE _____

SHIPPER _____

WEIGHER _____

23.67

REMARKS _____

FAIRBANKS CAT. 083600

WEIGHED ON A FAIRBANKS SCALE

DATE 12/10/97

CUSTOMER'S NAME T&R CHASE SERVICE

ADDRESS AVENUE 24th

COMMODITY EASTMAN KODAK SAFETY FILM

CARRIER REIT # 1905

DATE _____ TIME _____

NO. OF CARDS 1 GROSS WT. 57.3471 LB GROSS

24.900 LB TARE - DRIVER ON _____

PER LB PRICE _____

OFF

16.47

REMARKS _____

SHIPPER _____

WEIGHER _____

FAIRBANKS CAT. 093600



State of Ohio Environmental Protection Agency

Northeast District Office

2110 E. Aurora Road
Twinsburg, Ohio 44037-1969
(216) 425-9171
FAX (216) 487-0769

December 5, 1997

Certified Mail

Mr. Thomas Rolston, Sr.
TR Crane and Towing Company
434 Beecher St.
Ravenna, OH 44266

Dear Mr. Rolston:

The purpose of this letter is to serve as a written follow-up and subsequent Notice of Violation (NOV) to inspections conducted on 11/03/97, 11/04/97, and 11/20/97 by Bruce C. Miller, State On-Scene-Coordinator (SOSC), Ohio Environmental Protection Agency (Ohio EPA), in response to Ohio EPA Incident 9711-67-4371. This inspection revealed a petroleum transformer fluid ("oil") discharge as a result of crane operations on 11/03/97 involving a Westinghouse 24KVA power transformer located at the Ravenna Army Ammunition Plant in Portage County, Ohio. The discharge spilled oil onto the gravel-over-soil substation site where it was being removed.

Periodic inspections by both Ohio EPA and Department of the Army has not detected any visual evidence of oil contamination in area surface waters. However, since the approximately 2,000 gallons of oil soaked into the ground and has subsequently been detected in an interception trench constructed around the perimeter of the substation. Standing water in this interception trench may represent shallow groundwater, rain water or a combination of both. If groundwater has been impacted by the oil spill, this represents a violation of Ohio Revised Code (ORC) Chapter 6111.04.

Violation of the ORC section referred to above may subject TR Crane and Towing to civil penalties of up to \$10,000 per day, per violation, as well as criminal penalties of up to \$25,000 or up to one year imprisonment, or both per violation.

In accordance with ORC Chapter 6111, you are required to abate the violations which were outlined above. In order to return to compliance, the following actions should be taken:

- ✓ 1. Petroleum Contaminated Soil (PCS) that could reasonably be expected to contribute to a violation or on going violation of ORC 6111 must be excavated.
- ✓ 2. A hydro geological investigation and evaluation should be performed in an effort to determine if the oil spill has produced or could be expected to produce pollution of groundwater which would represent an ORC 6111 violation. If a water pollution (ORC 6111) violation has occurred, impacted waters-of-the-state must be remediated to abate the violation(s).
- ✓ 3. Characterize and dispose of all petroleum contaminated soil, water, vegetation, debris, sorbent materials, personal protection equipment (PPE), etc. in a manner consistent with state and federal solid and hazardous waste laws and regulations.

22 Dec 97
Whelove called and
suggests coordinating
final clean up approval
through legal.

Tim



Mr. Thomas Rolston, Sr.
December 5, 1997
Page - 2 -

The State of Ohio is not liable for the success or failure or consequences of any abatement actions taken. Ohio EPA reserves its right, pursuant to Chapters 3704, 3714, 3734, 3745, 3750, 6109, and 6111 of the ORC, and any other applicable state or federal laws or regulations, to require further site investigation and abatement to address releases or discharges into the environment at the above designated site, and to seek civil penalties, reimbursement of oversight costs, and any other appropriate legal or equitable relief for any violation of law.

This letter is not a final action of the Director of the Ohio EPA and is intended as a notification of a violation of the Ohio environmental laws and regulations. Failure to cite specific violations and deficiencies in this letter does not release TR Crane and Towing from the responsibility of complying with all applicable regulations.

Thank you for your cooperation. If you have any questions please contact me at the Northeast District Office.

Sincerely,



Bruce C. Miller
State On-Scene-Coordinator
Division of Emergency and Remedial Response

BCM.wmk

cc: Robert Princic, DERR, NEDO
Eileen Mohr, DERR, NEDO
Mark Paterson, Ravenna Army Ammunition Plant
Robert Whelove, Dept. of Army, HQ Army Industrial Operations Command
Stewart Milner, N.I.S.I.
Ray Pegher, P.D.G., Inc.

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 1

GENERATOR

Generator Name: T & R Crane Service Generating Location: Revenna Army Ammunition Plant
Address: 434 Beecher Avenue Address: 8451 State Route 5
Ravenna, OH 44266 Ravenna, OH 44266
Phone: _____ Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH RBICKEL DIAMOND ENV Keith R Bickel 12-10-77
Generator Authorized Agent Name and Title (print) PRESIDENT Signature Shipment Date

TRANSPORTER

Transporters Name: RAT Trucking EPAID#: N/A
Mailing Address: Bowling Green, OH
Driver Name: John Robert Truck No. 1905 Vehicle Lic. No. 71-3590

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

John Robert 12-10-77 John Robert 12-10-77
Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050835 P902
Mailing Address: 6065 Arrel-Smith Road Lovellville OH 44436 (330) 536-6825
 Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____ 12/10/97
Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 2

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Keith R. Pichler Diamond Service
President
Generator Authorized Agent Name and Title (print)

Keith R. Pichler
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: R + J Trucking
Mailing Address: Boardman, OH

EPAID#: N/A

Driver Name: _____ Truck No. 1907 Vehicle Lic. No. T157292

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

[Signature]
Driver Signature

12-10-97
Shipment Date

[Signature]
Driver Signature

12-10-97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902

Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 3

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Karl D. Bicke Diamond ENV.
Director
Generator Authorized Agent Name and Title (print)

Karl D. Bicke
Signature

12-9-97
Shipment Date

TRANSPORTER

Transporters Name: R & T Trucking EPAID #: NIAMailing Address: Ravenna, OHDriver Name: FRANCIS ROBERTS Truck No. 1908 Vehicle Lic. No. T 15 3293

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Francis Roberts
Driver Signature

12/9/97
Shipment Date

Francis Roberts
Driver Signature

12/9/97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lovellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 4

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Reverna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Mark R. Becker Diamond Ewu
President
Generator Authorized Agent Name and Title (print)

Mark R. Becker
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: Probusa Trucking EPAID#: N/AMailing Address: New Castle Pa.Driver Name: Tom Bowler Truck No. 3410 Vehicle Lic. No. P6A764 OH

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Tom Bowler
Driver Signature

12/10/97
Shipment Date

Tom Bowler
Driver Signature

12/10/97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 5

GENERATOR

Generator Name: T & R Crane Service Generating Location: Revenna Army Ammunition Plant
Address: 434 Beecher Avenue Address: 8451 State Route 5
Ravenna, OH 44266 Ravenna, OH 44266
Phone: _____ Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Keith R. Puchel, Director ENV Keith R. Puchel 12-10-97
Generator Authorized Agent Name and Title (print) Signature Shipment Date

TRANSPORTER

Transporters Name: 1-414-R EPAID#: N/A

Mailing Address: W...

Driver Name: MR O'DONNELL Truck No. 5104 Vehicle Lic. No. HO A77777

I certify that the above named material was picked up at the generating location listed above. I certify that the above named material was delivered without incident to the disposal facility listed below.

[Signature] 12-10-97 _____ _____
Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID#: OHIO EPA #0250050885 P902

Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____ 12/10/97
Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY YELLOW copy to TRANSPORTER PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 6

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Ken R. Bickel Diamond Saw
President
Generator Authorized Agent Name and Title (print)Ken R. Bickel
Signature12/10/97
Shipment Date

TRANSPORTER

Transporters Name: Amherst Trucking EPAID#: NIAMailing Address: New Castle PaDriver Name: Don G. Keen Truck No. 201 Vehicle Lic. No. P4164911

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Don G. Keen
Driver Signature12/10/97
Shipment DateDon G. Keen
Driver Signature12/10/97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 7

GENERATOR

General or Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revena Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH BUCKEL Diamond Env
PROSIDENT
Generator Authorized Agent Name and Title (print)

Keith R Buckel
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: Anderson Transport EPAID#: N/A

Mailing Address: New Castle Pa

Driver Name: Daw Durham Truck No. 232 Vehicle Lic. No. P4256N

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Daw Durham 12-10-97
Driver Signature Shipment Date

Daw Durham 12-10-97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902

Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 8

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Reverna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH Bickel Diamond Saw
President
Generator Authorized Agent Name and Title (print)

Keith R Bickel
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: Robinson Trucking EPAID#: N/AMailing Address: New Castle, Pa.Driver Name: L. McConnell Truck No. 230 Vehicle Lic. No. P4K55N

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

L. McConnell
Driver Signature

12-10-97
Shipment Date

L. McConnell
Driver Signature

12-10-97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 9

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Reverna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Kevin Pickett Diamond S.W.
Generator Authorized Agent Name and Title (print) President Kevin R. Pickett Signature 12-10-97 Shipment Date

TRANSPORTER

Transporters Name: R & T Transporting EPAID#: N/AMailing Address: Ravenna, OHDriver Name: John Holland Truck No. 1905 Vehicle Lic. No. T15 2290

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

John Holland 12-10-97
Driver Signature Shipment Date John Holland 12-10-97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____
Authorized Agent Name and Title (print) Signature 12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 10

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Walter P. Kubit Diamond Env.
President
Generator Authorized Agent Name and Title (print)

Walter P. Kubit
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: RJT Trucking EPAID #: N/AMailing Address: Franklin OHDriver Name: Francis Roberts Truck No. 1908 Vehicle Lic. No. T15 3293

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Francis Roberts
Driver Signature

12/10/97
Shipment Date

Francis Roberts
Driver Signature

12/15/97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY**YELLOW copy to TRANSPORTER****PINK copy to GENERATOR**

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 11

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH BICKEL Diamond Env.
President
Generator Authorized Agent Name and Title (print) Keith R Bickel Signature 12-10-97 Shipment Date

TRANSPORTER

Transporters Name: R+J Tanking EPAID#: N/A
Mailing Address: Paradise, OH
Driver Name: _____ Truck No. 1907 Vehicle Lic. No. TJ 3792

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Keith Bickel 12-10-97
Driver Signature Shipment Date Arnold C. [Signature] 12-10-97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902
Mailing Address: 6065 Arrel-Smith Road Lovellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____ 12/10/97
Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 12

GENERATOR

Generator Name: T & R Crane Service Generating Location: Revanna Army Ammunition Plant
 Address: 434 Beecher Avenue Address: 8451 State Route 5
Ravenna, OH 44266 Ravenna, OH 44266
 Phone: _____ Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

DIAMOND ENV
KATHI BICKEL President Keith P. Bickel 12-10-97
 Generator Authorized Agent Name and Title (print) Signature Shipment Date

TRANSPORTER

Transporters Name: L. Hla-Dawn Trucking EPAID#: NIA
 Mailing Address: Wagon, OH
 Driver Name: Mike O'Donnell Truck No. 5106 Vehicle Lic. No. PUA7999 OH

I certify that the above named material was picked up at the generating location listed above. I certify that the above named material was delivered without incident to the disposal facility listed below.
Mike O'Donnell 12-10-97 _____
 Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902
 Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
 Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____ 12/10/97
 Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY **YELLOW copy to TRANSPORTER** **PINK copy to GENERATOR**

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 13

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 6451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH BUCKEL DIAMOND ENV
PRESIDENT
Generator Authorized Agent Name and Title (print) Keith R Buckel Signature 12-10-97 Shipment Date

TRANSPORTER

Transporters Name: Ambergris Trucking EPAID#: N/A
Mailing Address: New Castle, Pa.
Driver Name: Tom Bruner Truck No. 240 Vehicle Lic. No. PLA764

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

J. Bruner Driver Signature 12/10/97 Shipment Date J. Bruner Driver Signature 12/10/97 Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050865 P902
Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. Authorized Agent Name and Title (print) _____ Signature 12/10/97 Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 14

GENERATOR

Generator Name: T & R Crane ServiceGenerating Location: Reverna Army Ammunition PlantAddress: 434 Beecher AvenueAddress: 8451 State Route 5Ravenna, OH 44266Ravenna, OH 44266

Phone: _____

Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Keith P. Black
Generator Authorized Agent Name and Title (print)DIAMOND ENV
PRESIDENTKeith P. Black
Signature12-10-97
Shipment Date

TRANSPORTER

Transporters Name: Ambrose TruckingEPAID#: N/AMailing Address: 11111 Castle RdDriver Name: Rick GilmanTruck No. 211Vehicle Lic. No. P461711

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Keith P. Black
Driver Signature12-10-97
Shipment DateKeith P. Black
Driver Signature12-10-97
Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 15

GENERATOR

Generator Name: T & R Crane Service Generating Location: Ravenna Army Ammunition Plant
Address: 434 Beecher Avenue Address: 8451 State Route 5
Ravenna, OH 44266 Ravenna, OH 44266
Phone: _____ Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH RICHIE Keith R. Buckel 12-10-97
Generator Authorized Agent Name and Title (print) Signature Shipment Date

TRANSPORTER

Transporters Name: J & S Trucking EPAID#: NIA
Mailing Address: Youngstown Pa
Driver Name: Paul M. Houshauer Truck No. 11-42 Vehicle Lic. No. T.S 4284

I certify that the above named material was picked up at the generating location listed above. I certify that the above named material was delivered without incident to the disposal facility listed below.
Paul M. Houshauer 12-10-97 _____ _____
Driver Signature Shipment Date Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID#: OHIO EPA #0250050895 P902
Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. _____ 12/10/97
Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY YELLOW copy to TRANSPORTER PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 116

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

KEITH BICKEL DIAMOND ENV
President
Generator Authorized Agent Name and Title (print)

Keith R Bickel
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: J & S Trucking

EPAID#: NIA

Mailing Address: Vanderburg, OH

Driver Name: EARL RILIER Truck No. M37 Vehicle Lic. No. P44665

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

[Signature] 12/10/97
Driver Signature Shipment Date

[Signature] 12/10/97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902

Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature

12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 17

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Revenna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil
Volume: _____ Cubic Yards: _____ Tons: _____
Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Michael R. Pickett Director ENV
Generator Authorized Agent Name and Title (print) Michael R. Pickett Signature 12-10-97 Shipment Date

TRANSPORTER

Transporters Name: Amherst Trucking EPAID#: N/A
Mailing Address: New Castle Pa
Driver Name: R. M. Cornwall Truck No. 230 Vehicle Lic. No. P4K55N

I certify that the above named material was picked up at the generating location listed above. I certify that the above named material was delivered without incident to the disposal facility listed below.

R. M. Cornwall 12-10-97
Driver Signature Shipment Date R. M. Cornwall 12-10-97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902
Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr. 12/10/97
Authorized Agent Name and Title (print) Signature Delivery Date

WHITE copy to DISPOSAL FACILITY **YELLOW copy to TRANSPORTER** **PINK copy to GENERATOR**

NON-HAZARDOUS RESIDUAL WASTE MANIFEST

Document No. 18

GENERATOR

Generator Name: T & R Crane Service
Address: 434 Beecher Avenue
Ravenna, OH 44266
Phone: _____

Generating Location: Reverna Army Ammunition Plant
Address: 8451 State Route 5
Ravenna, OH 44266
Phone: _____

Waste Stream Identification: Petroleum Hydrocarbon Contaminated Soil

Volume: _____ Cubic Yards: _____ Tons: _____

Special Handling Instructions: Soil must be covered until delivery to disposal facility

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR § 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Keith Bicker Diamond Env.
President
Generator Authorized Agent Name and Title (print)

Keith R Bicker
Signature

12-10-97
Shipment Date

TRANSPORTER

Transporters Name: Archana Trucking EPAID#: N/AMailing Address: New Castle PaDriver Name: Don Duham Truck No. 232 Vehicle Lic. No. PKK 56W

I certify that the above named material was picked up at the generating location listed above.

I certify that the above named material was delivered without incident to the disposal facility listed below.

Don Duham 12-10-97
Driver Signature Shipment Date

Don Duham 12-10-97
Driver Signature Delivery Date

DISPOSAL FACILITY

Disposal Facility Name: Soil Remediation, Inc. EPAID #: OHIO EPA #0250050885 P902Mailing Address: 6065 Arrel-Smith Road Lowellville OH 44436 (330) 536-6825
Street City State Zip Phone Number

I hereby certify that the above named material was delivered by the above transporter and accepted to this facility for proper disposal in accordance with all applicable federal and state regulations.

Frank Naples, General Mgr.
Authorized Agent Name and Title (print)

Signature 12/10/97
Delivery Date

WHITE copy to DISPOSAL FACILITY

YELLOW copy to TRANSPORTER

PINK copy to GENERATOR

Diamond Environmental, LLC
P.O. Box 2543
Stow, OH 44224
(330) 686-5996

To: Pete/NISI Fax: 330-358-9904

From: Keith Bickel Date: 2/23/98

Re: Certificate of Destruction Pages: 2

CC:

Urgent For Review Please Comment Please Reply Please Recycle

Pete, attached is a fax of the certificate of destruction. This was just faxed to me by

Harbour. The original will be mailed to us today or tomorrow. We should receive by end of week

Monday next week.

Debbi/ Diamond Environmental



Soil Remediation, Inc
 6065 Arrol-Smith Road
 Lowellville, Ohio 44436

SRI Site Address
 Lowellville, Ohio
 (330) 536-6825
 Fax (330) 536-6838

OFFICIAL CERTIFICATE OF DESTRUCTION

S.R.I. DOES HEREBY CERTIFY THAT 449.41 TONS OF NON-HAZARDOUS
 PETROLEUM CONTAMINATED SOIL HAS BEEN RECEIVED FROM:

GENERATOR: T & R CRANE SERVICE

434 BEECHER AVENUE

RAVENNA, OH 44266

JOB SITE: RAVENNA ARMY AMMUNITION PLANT

8451 STATE ROUTE 5

RAVENNA, OH 44266

JOB NO.: 7085

HAS BEEN THERMO REMEDIATED TO BE NON-REGULATED MATERIAL AS REQUIRED BY THE
 E.P.A. STATE OF OHIO UNDER OUR AIR CONTROL PERMIT NO. 02-5568
 AS OF THIS 24th DAY OF DECEMBER 19 97

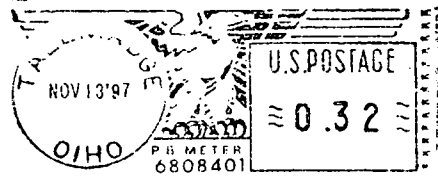
SIGNED AND ATTESTED TO BY

Frank A. Naples
 Frank A. Naples S.R.I. QMO

ACTS 412
SPMYERS
THE TRANSFORMER CONSULTANTS

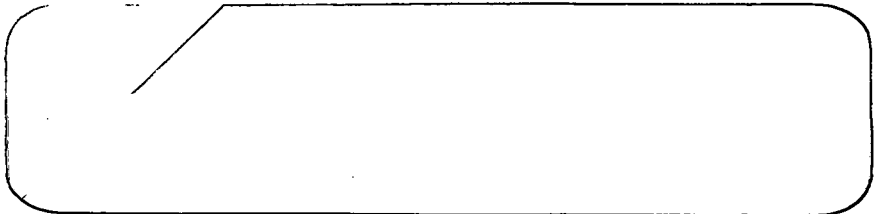
180 South Ave., Tallmadge, OH 44278

2
2



AKRON OHIO 44309 11/13/97 DCR1

Mark
HW
manifests
from Spill
44266



44266/3297



24 HOUR EMERGENCY RESPONSE NUMBER
1-800-320-6507 ERG #171

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.
4. O. C. F. R. P. A. R. T. 7. 6. 1

Manifest Document No.
13124

2. Page 1 of

3. Generator's Name and Mailing Address
RAVENNA ARSENAL
MAIN GATE
RAVENNA, OH
4. Generator's Phone (330) 773-2162
ATTN. TOM AUTHER

5. Transporter 1 Company Name
S. D. MYERS, INC.
6. US EPA ID Number
O H D O 5 3 5 7 6 2 9 4

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
S. D. MYERS, INC.
180 SOUTH AVENUE
TALLMADGE, OH 44278
10. US EPA ID Number
O H D O 5 3 5 7 6 2 9 4

A. Transporter's Phone (330)630-7000
B. Transporter's Phone
C. Facility's Phone (330)630-7000

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit W/Vol
	No.	Type		
a. NON-REGULATED ELECTRICAL EQUIPMENT	001	C.M	ESTIMATED 11973	K
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11A. DRAINED XFMR(S) UNDER 50 PPM.
SEE ATTACHED MANIFEST CONTINUATION SHEET(S) FOR ADDITIONAL INFORMATION.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
CD AND OTHER DOC. TO: TOM AUTHER
1588 HIGHVIEW AVE.
AKRON, OH 44301

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name _____ Signature _____ Month Day Year _____

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Ernest Belnap Signature Ernest Belnap Month Day Year 11 04 97

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Tom Arthur Signature Tom Arthur Month Day Year 11 14 97

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name KEN LONGSDORF Signature Ken Longsdorf Month Day Year 11 04 97

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

24 HOUR EMERGENCY RESPONSE NUMBER
1-800-320-6507 ERG #171

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.
4. O. C. F. R. P. A. R. T. 7. 6. 1

Manifest Document No.
13121

2. Page 1 of

3. Generator's Name and Mailing Address
RAVENNA ARSENAL
MAIN GATE
RAVENNA, OH
4. Generator's Phone (330) 773-2162 ATTN. TOM AUTHER

5. Transporter 1 Company Name
S. D. MYERS, INC.
6. US EPA ID Number
O. H. D. O. 5. 3. 5. 7. 6. 2. 9. 4

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
S. D. MYERS, INC.
180 SOUTH AVENUE
TALLMADGE, OH 44278
10. US EPA ID Number
O. H. D. O. 5. 3. 5. 7. 6. 2. 9. 4

A. Transporter's Phone (330)630-7000
B. Transporter's Phone
C. Facility's Phone (330)630-7000

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
a. NON-REGULATED ELECTRICAL EQUIPMENT	001	C.M.	ESTIMATED 119.73	K
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11A. DRAINED XFMR(S) UNDER 50 PPM.
SEE ATTACHED MANIFEST CONTINUATION SHEET(S) FOR ADDITIONAL INFORMATION.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
CD AND OTHER DOC. TO: TOM AUTHER
1588 HIGHVIEW AVE.
AKRON, OH 44301

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: Tom Arthur
Signature: Tom Arthur
Month: 11 Day: 4 Year: 97

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Ernest Belnap
Signature: Ernest Belnap
Month: 11 Day: 07 Year: 97

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: _____
Signature: _____
Month: _____ Day: _____ Year: _____

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Ken Longsdorf
Signature: Ken Longsdorf
Month: 11 Day: 04 Year: 97

GENERATOR

TRANSPORTER

FACILITY

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

24 HOUR EMERGENCY RESPONSE NUMBER
1-800-320-6507 ERG #171

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

4 0 C F R P A R T 7 6 1

Manifest Document No.

1 3 1 2 2

2. Page 1 of

3. Generator's Name and Mailing Address

RAVENNA ARSENAL
MAIN GATE RAVENNA, OH

4. Generator's Phone (330) 773-2162 ATTN. TOM AUTHER

5. Transporter 1 Company Name
S. D. MYERS, INC.

6. US EPA ID Number
O H D 0 5 3 5 7 6 2 9 4

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

S. D. MYERS, INC.
180 SOUTH AVENUE
TALLMADGE, OH 44278

10. US EPA ID Number

O H D 0 5 3 5 7 6 2 9 4

A. Transporter's Phone (330)630-7000

B. Transporter's Phone

C. Facility's Phone (330)630-7000

11. Waste Shipping Name and Description

a. NON-REGULATED ELECTRICAL EQUIPMENT

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol

00 W C.M 07.500 K

D. Additional Descriptions for Materials Listed Above

11A. DRAINED XFMR(S) UNDER 50 PPM.

E. Handling Codes for Wastes Listed Above

SEE ATTACHED MANIFEST CONTINUATION SHEET(S) FOR ADDITIONAL INFORMATION.

15. Special Handling Instructions and Additional Information

CD AND OTHER DOC. TO: TOM AUTHER
1588 HIGHVIEW AVE.
AKRON, OH 44301

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Tom Arthur

Signature

Tom Arthur

Month Day Year
11 4 97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Ernest Belap

Signature

Ernest Belap

Month Day Year
11 10 97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

KEN LONGSOORF

Signature

Ken Longsoorf

Month Day Year
11 10 97

GENERATOR

TRANSPORTER

FACILITY

24 HOUR EMERGENCY RESPONSE NUMBER
1-800-320-6507 ERG #171

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.
4 0 C F R P A R T 7 6 1

Manifest Document No.
1 3 1 2 3

2. Page 1
of 2

3. Generator's Name and Mailing Address
RAVENNA ARSENAL
MAIN GATE
RAVENNA, OH
4. Generator's Phone (330) 773-2162
ATTN. TOM AUTHER

5. Transporter 1 Company Name
S. D. MYERS, INC.
6. US EPA ID Number
O H D 0 5 3 5 7 6 2 9 4

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
S. D. MYERS, INC.
180 SOUTH AVENUE
TALLMADGE, OH 44278
10. US EPA ID Number
O H D 0 5 3 5 7 6 2 9 4

A. Transporter's Phone (330)630-7000
B. Transporter's Phone
C. Facility's Phone
(330)630-7000

11. Waste Shipping Name and Description	12. Containers		13. Total Quantity	14. Unit Wt/Vol
	No.	Type		
a. NON-REGULATED ELECTRICAL EQUIPMENT	001	C M	ESTIMATED 15465	K
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above
11A. DRAINED XFMR(S) UNDER 50 PPM.
SEE ATTACHED MANIFEST CONTINUATION SHEET(S) FOR ADDITIONAL INFORMATION.

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
CD AND OTHER DOC. TO: TOM AUTHER
1588 HIGHVIEW AVE.
AKRON, OH 44301

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: TOM AUTHER
Signature: [Signature]
Month Day Year: 11 05 97

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ERNEST BELONG
Signature: [Signature]
Month Day Year: 11 10 97

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: [Blank]
Signature: [Blank]
Month Day Year: [Blank]

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: KEN LONGSDORF
Signature: [Signature]
Month Day Year: 11 10 97

ORIGINAL - RETURN TO GENERATOR

GENERATOR
TRANSPORTER
FACILITY

CONFIRMATION OF RECEIPT OF MANIFESTED WASTE

Generator's Name/Address: RAVENNA ARSENAL
MAIN GATE
RAVENNA OH 44266

Manifest Document No. 13124, 13121, 13122 13123
Date of Receipt at Facility 11-4-97 11-7-97

This letter certifies receipt of your material at S.D. Myers, Inc. Enclosed is the signed original copy of the Hazardous Waste Manifest which indicates acceptance of material (with discrepancies as indicated, if any) by S.D. Myers, Inc. (40 CFR 761.208 (a) (4)).

You will receive a copy of the Certificate(s) of Disposal after this material has been processed. Together, these documents establish a complete tracking and disposal record for your material.

If you have any questions, please feel free to call me at (330) 630-7000 ext 3354.

Ken Longsdorf
Ken Longsdorf
Manifest Control

Date: 11-12-97





SHIPPING AND BILLING INFORMATION

SHIPPING FACILITY (GENERATOR)
 Facility Name U.S. Army Corps of Engineers -
 Contact Kathy Vincent SIC Code 100000
 Address C/O SATC 4031 COLUMBIA GLENN HWY
 City BENNINGTON State OH Zip 45431
 Phone # (937) 431-2239 FAX (937) 431-0496
 24 Hr. Contact SAME Phone # _____
 USEPA ID# N/A

CUSTOMER (BILLING)
 Customer Name SUNARO
 Contact BRAO VINCENT
 Address 7392 WHIPPLE AVE
 City H. CENTER State OH Zip 44720
 Phone # (330) 966-0910 FAX (330) 966-1954
 24 Hr. Contact SAME Phone # _____
 USEPA ID# OH000033336

WASTE DESCRIPTION
 NAME OF WASTE SOIL
 PROCESS GENERATING WASTE SOIL CUTTINGS FROM
WELL DRILLING

Is a representative sample provided? Yes No
 Sample Purchase order No. _____
 Sample will not be processed without P.O. Number.

GENERAL CHARACTERISTICS (at 70° F unless otherwise specified)
 COLOR Brown LIQUID _____ %
 ODOR _____ SOLID 100 %
 NONE STRONG SLUDGE _____ %
 MILD POWDER _____ %

VISCOSITY AT 70° F
 PUMPABLE YES NO
 POURABLE YES NO
PHASES
 SINGLE LAYER
 DOUBLE LAYER
 MULTI-LAYER

RCRA INFORMATION
 Please give USEPA hazardous waste codes and state codes:
NONE

SHIPPING INFORMATION
 PROPER SHIPPING NAME NON-HAZARDOUS NON-REACTIVE
SOIL CUTTINGS
 HAZARD CLASS N/A ID# _____ PG _____ R/Q _____
 ANTICIPATED SHIPPING VOLUME 55 GAL. _____ YDS. _____ LBS.
 ONE TIME WK MO YR OTHER _____
 Type and size of container: 55 GAL DRUM

1 SPECIFIC GRAVITY
 <0.8 1.4-1.7
 0.8-1.0 >1.7
 1.0-1.2 _____ actual
 1.2-1.4 _____ actual

2 COD (1000 PPM)
 <50
 51-100
 101-200
 201-300
 301-400
 >400

3 TOTAL SUSPENDED SOLIDS (%WT)
 <0.5 >20
 0.5-2.0 _____ actual
 2.0-5.0 _____ actual
 5.0-20 _____ actual

4 pH
 <2 >12.5
 2-8 _____ actual
 6-8 _____ actual
 8-10 _____ constituent
 10-12.5 _____ constituent

5 BTU's 1000/lb.
 <1 12-16
 1-4 >16
 4-6 _____ actual
 6-8 _____ actual
 8-12 _____ actual

6 FLASHPOINT (closed cup)
 <100° F >200° F
 100-140° F _____ actual
 141-200° F _____ actual

7 CHEMICAL COMPOSITION

	Actual	Range
<u>SOIL CUTTINGS</u>	%	_____ - <u>100</u> %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
_____	%	_____ %
Total must equal: 100%		

7 HALOGENS (%)
 Chlorine N/A Fluorine N/A
 Bromine N/A Iodine N/A
 Total Halogens _____

9 HAZARDOUS CHARACTERISTICS AND OTHER COMPONENTS
 Reactivity:
 None
 Explosive
 Pyrophoric
 Shock Sensitive
 Fuming/Smoking Waste
 Water Reactive
 Air Reactive
 Radioactive
 Biological
 Asbestos
 Cyanides _____ (ppm)
 Sulfides _____ (ppm)
 PCB's _____ (ppm)
 Phenolics _____ (ppm)
 Acutely Hazardous Waste
 Dioxins & Furans

8 METAL TOTAL (PPM) TCPL

HW #	Reg Level (mg/L)
D004 Arsenic (As)	5.0
D005 Barium (Ba)	100.0
D006 Cadmium (Cd)	1.0
D007 Chromium (Cr)	5.0
D008 Lead (Pb)	5.0
D009 Mercury (Hg)	0.2
D010 Selenium (Se)	1.0
D011 Silver (Ag)	5.0
Copper (Cu)	
Nickel (Ni)	
Zinc (Zn)	
Phosphates (PO ₄)	
Other (Specify) _____	

10 ORGANIC (LTOTAL (PPM) TCPL

HW #	Reg Level (mg/L)	HW #	Reg Level (mg/L)
D012 Endrin	0.02	D029 1, 1-Dichloroethylene	0.7
D013 Lindane	0.4	D030 2, 4-Dinitrofluene	0.13
D014 Methoxychlor	10.0	D031 Heptachlor	0.008
D015 Toxaphene	0.5	D032 Hexachlorobenzene	0.13
D016 2, 4-Dichlorophenoxyacetic Acid	10.0	D033 Hexachlorobutadiene	0.5
D017 2, 4, 5-TP (Silvex)	1.0	D034 Hexachlorocyclopentadiene	3.0
D018 Benzene	.5	D035 Methyl Ethyl Ketone	200.0
D019 Carbon Tetrachloride	0.5	D036 Nitrobenzene	2.0
D020 Chlordane	0.03	D037 Pentachlorophenol	100.0
D021 Chlorobenzene	100.0	D038 Pyridine	5.0
D022 Chloroform	6.0	D039 Tetrachloroethylene	0.7
D023 o-Cresol	200.0	D040 Trichloroethylene	0.5
D024 m-Cresol	200.0	D041 2, 4, 5-Trichlorophenol	400.0
D025 p-Cresol	200.0	D042 2, 4, 6-Trichlorophenol	2.0
D026 Cresol	200.0	D043 Vinyl Chloride	0.2
D027 1, 4-Dichlorobenzene	7.5	Beryllium	
D028 1, 2-Dichloroethane	0.5	Aluminum (metallic)	
		Magnesium (metallic)	

NEVER STATE THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS COMPLETE AND ACCURATE AND THAT ALL PHASES OF SURVEYED HAZARDOUS WASTE HAVE BEEN DISCOVERED.
 Kathy Vincent & Dec 99

RE-CERTIFICATION DATE _____ FACILITY USE ONLY

WASTE CHARACTERIZATION



SHIPPING AND BILLING INFORMATION

SHIPPING FACILITY (GENERATOR)
 Facility Name US Army Corp of Engineers - Columbus District
 Contact Kathy Conner SIC Code _____
 Address c/o S.A.I.C. 4031 Colver Glenn Hwy.
 City Beverly State OH Zip 45431
 Phone # (937) 431-2239 FAX (937) 431-4496
 24 Hr. Contact 5pm Phone # _____
 USEPA ID# N/A

CUSTOMER (BILLING)
 Customer Name SUNPRO
 Contact Brian Venkat
 Address 1392 Whipple Ave
 City N. Canton State OH Zip 44720
 Phone # (330) 966-0910 FAX (330) 966-1959
 24 Hr. Contact 5pm Phone # _____
 USEPA ID# OH000033336

WASTE DESCRIPTION
 NAME OF WASTE DECON WATER
 PROCESS GENERATING WASTE DECON OF DRILLING EQUIP

Is a representative sample provided? Yes No
 Sample Purchase order No. _____
 Sample will not be processed without P.O. Number.

GENERAL CHARACTERISTICS (at 70° F unless otherwise specified)
 COLOR Clear LIQUID 100 %
 ODOR _____ SOLID _____ %
 NONE STRONG SLUDGE _____ %
 MILD POWDER _____ %

VISCOSITY AT 70° F
 PUMPABLE YES NO
 POURABLE YES NO
 PHASES
 SINGLE LAYER
 DOUBLE LAYER
 MULTI-LAYER
 SOURCE CODE A _____ FORM CODE B _____

RCRA INFORMATION
 Please give USEPA hazardous waste codes and state codes:
NONE
 TCLP _____ Generators Knowledge

SHIPPING INFORMATION
 PROPER SHIPPING NAME Non-Hazardous, Non-Regulated WATER
 HAZARD CLASS N/A ID# _____ PG _____ RQ _____
 ANTICIPATED SHIPPING VOLUME 80 GAL. _____ YDS. _____ LBS.
 ONE TIME WK MO YR OTHER _____
 Type and size of container: 55 GAL Drum

1 SPECIFIC GRAVITY
 < 0.8 1.4-1.7
 0.8-1.0 > 1.7
 1.0-1.2 _____ actual
 1.2-1.4 _____ actual

2 COD (1000 PPM)
 < 50
 51-100
 101-200
 201-300
 301-400
 > 400

3 TOTAL SUSPENDED SOLIDS (%WT)
 < 0.5 > 20
 0.5-2.0 _____ actual
 2.0-5.0
 5.0-20

4 pH
 < 2 > 12.5
 2-6 _____ actual
 6-8
 8-10
 10-12.5 constituent

5 BTU's 1000/lb.
 < 1 12-16
 1-4 > 16
 4-6 _____ actual
 6-8
 8-12

6 FLASHPOINT (closed cup)
 < 100° F > 200° F
 100-140° F _____ actual
 141-200° F

7 HALOGENS (%)
 Chlorine N/A Fluorine N/A
 Bromine N/A Iodine N/A
 Total Halogens _____

8 METAL (TOTAL (PPM) (TCLP)

HW #	Reg Level (mg/L)
D004 Arsenic (As)	5.0
D005 Barium (Ba)	100.0
D006 Cadmium (Cd)	1.0
D007 Chromium (Cr)	5.0
D008 Lead (Pb)	5.0
D009 Mercury (Hg)	0.2
D010 Selenium (Se)	1.0
D011 Silver (Ag)	5.0
Copper (Cu)	
Nickel (Ni)	
Zinc (Zn)	
Phosphates (PO ₄)	
Other (Specify)	

9 HAZARDOUS CHARACTERISTICS AND OTHER COMPONENTS
 Reactivity:
 None
 Explosive
 Pyrophoric
 Shock Sensitive
 Fuming/Smoking Waste
 Water Reactive
 Air Reactive
 Radioactive
 Biological
 Asbestos
 Cyanides _____ (ppm)
 Sulfides _____ (ppm)
 PCB's _____ (ppm)
 Phenolics _____ (ppm)
 Acutely Hazardous Waste
 Dioxins & Furans

10 ORGANIC (TOTAL (PPM) (TCLP)

HW #	Reg Level (mg/L)	HW #	Reg Level (mg/L)
D012 Endrin	0.02	D029 1, 1-Dichloroethylene	0.7
D013 Lindane	0.4	D030 2, 4-Dinitrotoluene	0.13
D014 Methoxychlor	10.0	D031 Heptachlor	0.008
D015 Toxaphene	0.5	D032 Hexachlorobenzene	0.13
D016 2, 4-Dichlorophenoxyacetic Acid	10.0	D033 Hexachlorobutadiene	0.5
D017 2, 4 5-TP (Silvex)	1.0	D034 Hexachloroethane	3.0
D018 Benzene	.5	D035 Methyl Ethyl Ketone	200.0
D019 Carbon Tetrachloride	0.5	D036 Nitrobenzene	2.0
D020 Chlordane	0.03	D037 Pentachlorophenol	100.0
D021 Chlorobenzene	100.0	D038 Pyridine	5.0
D022 Chloroform	6.0	D039 Tetrachloroethylene	0.7
D023 o-Cresol	200.0	D040 Trichloroethylene	0.5
D024 m-Cresol	200.0	D041 2, 4, 5-Trichlorophenol	400.0
D025 p-Cresol	200.0	D042 2, 4, 6-Trichlorophenol	2.0
D026 Cresol	200.0	D043 Vinyl Chloride	0.2
D027 1, 4-Dichlorobenzene	7.5	Beryllium	
D028 1, 2-Dichloroethane	0.5	Aluminum (metallic)	
		Magnesium (metallic)	



SHIPPING AND BILLING INFORMATION

SHIPPING FACILITY (GENERATOR)

Facility Name US Army Corp of Engineers - Louisville District
 Contact Kathy Rimmer SIC Code _____
 Address c/o S.A.I.C. 4031 Colover Grown Hwy.
 City BEVERLYHURK State OH Zip 45431
 Phone # (937) 431-2234 FAX (937) 431-4496
 24 Hr. Contact SAMS Phone # _____
 USEPA ID# N/A

CUSTOMER (BILLING)

Customer Name SUNPRO
 Contact BRAD V. VINT
 Address 7372 WINDYVALE AVE
 City N. CANTON State OH Zip 44720
 Phone # (336) 966-0910 FAX (336) 966-1954
 24 Hr. Contact SAMS Phone # _____
 USEPA ID# OH0000333336

Is a representative sample provided? Yes No

WASTE DESCRIPTION

NAME OF WASTE Acetone
 PROCESS GENERATING WASTE R/W of Shimano Equipment

Sample Purchase order No. _____
 Sample will not be processed without P.O. Number.

GENERAL CHARACTERISTICS (at 70° F unless otherwise specified)

COLOR Clear LIQUID _____ %
 ODOR Acetone SOLID _____ %
 NONE STRONG SLUDGE _____ %
 MILD POWDER _____ %

VISCOSITY AT 70° F
 PUMPABLE YES NO SINGLE-LAYER
 POURABLE YES NO DOUBLE LAYER
 MULTI-LAYER

SOURCE CODE A _____ FORM CODE B _____

RCRA INFORMATION

Please give USEPA hazardous waste codes and state codes:

D001

TCLP _____ Generators Knowledge

SHIPPING INFORMATION

PROPER SHIPPING NAME WASTE ACETONE
 HAZARD CLASS 3 ID# 1090 PG II R/Q _____
 ANTICIPATED SHIPPING VOLUME 5 GAL. _____ YDS. _____ LBS.
 ONE TIME WK MO YR OTHER _____
 Type and size of container: DRUM

1 SPECIFIC GRAVITY

< 0.8 1.4-1.7
 0.8-1.0 > 1.7
 1.0-1.2 actual
 1.2-1.4

2 COD (1000 PPM)

< 50
 51-100
 101-200
 201-300
 301-400
 > 400

3 TOTAL SUSPENDED SOLIDS (%WT)

< 0.5 > 20
 0.5-2.0 actual
 2.0-5.0
 5.0-20

G

CHEMICAL COMPOSITION

	Actual	Range
<u>ACETONE</u>	____%	<u>95 - 100</u> %
<u>WATER</u>	____%	<u>0 - 5</u> %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
_____	____%	_____ %
Total must equal 100%		

4 pH

< 2 > 12.5
 2-6 actual
 6-8
 8-10
 10-12.5 constituent

5 BTU's 1000/lb.

< 1 12-16
 1-4 > 16
 4-6 actual
 6-8
 8-12

6 FLASHPOINT (closed cup)

< 100° F > 200° F
 100-140° F actual
 141-200° F

7 HALOGENS (%)

Chlorine N/A Fluorine N/A
 Bromine N/A Iodine N/A
 Total Halogens _____

9 HAZARDOUS CHARACTERISTICS AND OTHER COMPONENTS

Reactivity:
 None
 Explosive
 Pyrophoric
 Shock Sensitive
 Fuming/Smoking Waste
 Water Reactive
 Air Reactive
 Radioactive
 Biological
 Asbestos
 Cyanides _____ (ppm)
 Sulfides _____ (ppm)
 PCB's _____ (ppm)
 Phenolics _____ (ppm)
 Acutely Hazardous Waste
 Dioxins & Furans

10 ORGANIC (TOTAL (PPM) & TCLP

HW #	Reg Level (mg/L)	HW #	Reg Level (mg/L)
D012 Endrin	0.02	D029 1, 1-Dichloroethylene	0.7
D013 Lindane	0.4	D030 2, 4-Dinitrotoluene	0.13
D014 Methoxychlor	10.0	D031 Heptachlor	0.008
D015 Toxaphene	0.5	D032 Hexachlorobenzene	0.13
D016 2, 4-Dichlorophenoxyacetic Acid	10.0	D033 Hexachlorobutadiene	0.5
D017 2, 4, 5-TP (Silvex)	1.0	D034 Hexachlorocyclohexane	3.0
D018 Benzene	.5	D035 Methyl Ethyl Ketone	200.0
D019 Carbon Tetrachloride	0.5	D036 Nitrobenzene	2.0
D020 Chlordane	0.03	D037 Pentachlorophenol	100.0
D021 Chlorobenzene	100.0	D038 Pyridine	5.0
D022 Chloroform	6.0	D039 Tetrachloroethylene	0.7
D023 o-Cresol	200.0	D040 Trichloroethylene	0.5
D024 m-Cresol	200.0	D041 2, 4, 6-Trichlorophenol	200.0
D025 p-Cresol	200.0	D042 2, 4, 6-Trichlorophenol	2.0
D026 Cresol	200.0	D043 Vinyl Chloride	0.2
D027 1, 4-Dichlorobenzene	7.5	Beryllium	_____
D028 1, 2-Dichloroethane	0.5	Aluminum (metallic)	_____
		Magnesium (metallic)	_____

[Signature] 8 Dec 92



OHIO EPA

Bruce

December 23, 1997

Mr. David Golde
National Industrial Services, Inc.
415 Debaliviere, Suite 12
St. Louis, Missouri 63112

Project Description: PCB Swab and Soil Sampling
Ravenna Army Munitions Plant
8451 State Route 5
Ravenna, Ohio
Emerald Project # 970067

Scope of Services

Emerald Environmental, Inc. (EEI) was contracted by National Industrial Services, Inc. (NIS) to perform PCB swab and soil sampling in conjunction with transformer oil remediation project at the Ravenna Army Munitions Plant at 8451 State Route 5, Ravenna, Ohio. All work was performed by Emerald Environmental, Inc. for National Industrial Services, Inc. EEI was on site to conduct sampling on November 12 and December 8, 1997.

Background

NIS is conducting remediation of a transformer oil spill at the site. The spill occurred at the west substation while a transformer was being removed and prepared for shipping. Approximately 1500 gallons of transformer oil were released on the site in early November, 1997. The transformer oil was released when a cooling fin from the transformer was damaged while being lifted by a crane.

The oil within the transformer had been previously tested and detected <10 ppm PCB. The transformer was one of two located at the site, and was installed at the site several years earlier. There were no record of previous spills or releases from the transformers on record. The transformer was mounted on a small concrete pad and the surrounding area was surfaced with gravel.

Subsequent to the release EPA officials requested that NIS excavate a trench along two sides of the spill area to intercept any product that may migrate laterally away from the spill site. A storm drain located in the vicinity was sealed to prevent product migration. Upon EEI's arrival on site, there was several inches of product and water in the trench.

ENVIRONMENTAL INDUSTRIAL HYGIENE OCCUPATIONAL SAFETY

P.O. Box 1953 Kent, Ohio 44240 (330)677-0785
Fax: (330)677-1567 <http://www.emerald-environmental.com>



Soil Sampling and Screening Procedures

Two soil samples and one oil sample were secured from the site on November 12, 1997. The two soil samples were secured from the vicinity of each of the two concrete transformer pads. The oil was secured from accumulated oil in the trench. Additional soil samples were field screened to assess additional contaminant sources during the course of excavation. Please refer to the enclosed analytical results for specific sample information.

Soil screening was conducted using a Photovac 2020 Photo-Ionization Detector (PID), which is used to scan areas for volatile compounds. The instrument has an ionization potential of 10.6 electron volts (eV) and a sensitivity of 0.1 part per million (ppm). Closed bag soil screening was performed on the site by filling a one quart re-sealable polyethylene bag approximately one-third full of soil from selected locations around the excavation. The bags were sealed and allowed to sit in a warm area for approximately ten minutes. The headspace in each bag was then screened by inserting the PID sampling probe through the side of the bag and screening the headspace. Instrument readings were observed until headspace was depleted from the bag.

PCB Swab Sampling

Five PCB swab samples were secured from the site on December 8, 1997. Swab samples were secured from equipment prior to demobilization. Swab samples were secured by wiping a sterile gauze pad soaked with reagent grade iso-octane across a 10 cm² area on the selected object. Refer to enclosed analytical reports for details. Sample locations are summarized below:

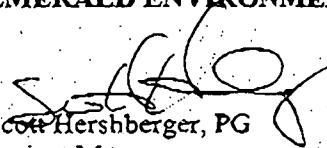
Table 2. PCB Swab Sampling Locations

<i>Sample ID</i>	<i>Sample Location</i>
970067-SW1	D & M Frac Tank
970067-SW-2	D & M Backhoe Bucket
970067-SW-3	D & M Gasoline Powered Pump
970067-SW-4	D & M Pump Discharge Hose
970067-SW-5	Field Blank

Please contact the undersigned if you require any additional information. Thank you for consulting Emerald Environmental, Inc.

Sincerely,

EMERALD ENVIRONMENTAL, INC.


Scott Hershberger, PG
Project Manager



7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067 Ravenna Army Munitions Plant

Client Sample ID: 11-12-97 970067-1 Grab Soil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8020

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23005
PO#:
Page 1 of 7
Final Report

<u>BTEX 8020</u>	<u>Results</u> <u>µg/kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/kg</u>
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	<2	2
Xylenes (total)	17	2

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
a,a,a-Trifluorotoluene	96	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-1 Grab Soil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23005
PO#:
Page 2 of 7
Final Report

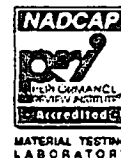
<u>Analyte</u>	<u>Results</u> <u>mg/Kg</u>	<u>Estimated Quantitation</u>
		<u>Limit</u> <u>mg/Kg</u>
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	<1	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	120	Not Established
Decachlorobiphenyl	41	Not Established

We certify the above analysis to be the true results based on the designated sample.


Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-1 Grab Soil

Date: 18 November, 1997

Report#: 11028EF

Lab#: 23005

PO#:

Page 3 of 7

Final Report

TCLP Metals Analysis 40CFR 261.24 SW846 Method 1311

<u>Analyte</u>	<u>Results (mg/L)</u>	<u>Estimated Quantitation Limit (mg/L)</u>	<u>RCRA Regulatory Limit (mg/L)</u>	<u>EPA HW#</u>	<u>Date Analyzed</u>
Arsenic	<0.05	0.05	5.0	D004	11-18-97
Barium	1.4	0.05	100.0	D005	11-18-97
Cadmium	<0.05	0.05	1.0	D006	11-18-97
Chromium	<0.05	0.05	5.0	D007	11-18-97
Lead	<0.05	0.05	5.0	D008	11-18-97
Mercury	<0.002	0.002	0.2	D009	11-17-97
Selenium	<0.05	0.05	1.0	D010	11-18-97
Silver	<0.05	0.05	5.0	D011	11-18-97

QA/QC Data

<u>Metal</u>	<u>ICV % Recovery</u>	<u>Acceptable Recovery Range</u>	<u>Methods Used</u>
Arsenic	100	90-110%	Metals by ICP
Barium	101	90-110%	Method# 6020
Cadmium	101	90-110%	
Chromium	104	90-110%	Mercury by cold
Lead	102	90-110%	vapor
Mercury	95	90-110%	Method# 7471
Selenium	97	90-110%	
Silver	103	90-110%	

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8020

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23006
PO#:
Page 4 of 7
Final Report

<u>BTEX 8020</u>	<u>Results</u> <u>µg/kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/kg</u>
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	4	2
Xylenes (total)	47	2

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
a,a,a-Trifluorotoluene	74	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23006
PO#:
Page 5 of 7
Final Report

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>mg/Kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>mg/Kg</u>
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	<1*	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	122	Not Established
Decachlorobiphenyl	51	Not Established

* Present but below EQL.

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-3 Grab Oil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97


EPA Method: 8020

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23007
PO#:
Page 6 of 7
Final Report

<u>BTEX 8020</u>	<u>Results</u> <u>µg/kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/kg</u>
Benzene	<20	20
Toluene	70	20
Ethylbenzene	230	20
Xylenes (total)	2,300	20

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
a,a,a-Trifluorotoluene	92	50-134%

We certify the above analysis to be the true results based on the designated sample.


Henry Collins, General Manager

HC/dy





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Date: 18 November, 1997
Report#: 11028EF
Lab#: 23007
PO#:
Page 7 of 7
Final Report

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-3 Grab Oil

Date Sampled: 11-12-97
Date Received: 11-12-97
Date Prepared: 11-13-97
Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>mg/Kg</u>	<u>Estimated Quantitation</u>
		<u>Limit</u> <u>mg/Kg</u>
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	3.8	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	118	Not Established
Decachlorobiphenyl	78	Not Established

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





CHAIN-OF-CUSTODY

MSL ANALYTICAL SERVICES, INC.
 FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES
 QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945
 7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 216-447-1550 • 1-800-497-6752 • FAX 216-447-0716

COLLECTOR(S) NAME(S) *print* Scott Hershberg
 COLLECTOR(S) SIGNATURE(S) *[Signature]*
 TURN-AROUND (circle): 24-hr 72-hr One Week
 TUP (circle): Regular TCLP

PROJECT LOCATION: Ravenwood Army Munitions Plant
 PROJECT NUMBER: 970067
 VERBAL RESULTS: N

Sample # PROJECT NUMBER	DATE COLLECTED	TIME COLLECTED	CUSTOMER SAMPLE IDENTIFICATION	COMP	No. of CON-TAINERS	ANALYSIS REQUIRED - SEE REVERSE		
						PCB	PCB	PCB
970067-1	11/12/97		PCB		1	X	X	X
970067-2	11/12/97		PCB		1	X	X	X
970067-3	11/12/97		PCB		1	X	X	X

RELINQUISHED BY (SIGN)	DATE/TIME	RECEIVED BY (SIGN)	DATE/TIME	ADDITIONAL REMARKS
<i>[Signature]</i>	11/12/97 15:32	<i>[Signature]</i>	11/12/97 15:32	
<i>[Signature]</i>	11/12/97 15:32	<i>[Signature]</i>	11/12/97 15:32	
<i>[Signature]</i>	11/12/97 15:32	<i>[Signature]</i>	11/12/97 15:32	

CUSTOMER INFORMATION

COMPANY NAME: Environald Environmental, Inc.
 BILLING ADDRESS: P.O. Box 1953
 CITY: Went STATE: OH ZIP: 43140
 CONTACT NAME: Scott Hershberg
 PHONE: (330) 677-0785
 FAX: (330) 677-1567
 PURCHASE ORDER NUMBER: _____

ANALYSIS REQUIRED - SEE REVERSE									REMARKS (BOTTLE TYPE, SAMPLING CONDITIONS, ETC.)
PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	PCB	
X	X	X	X	X	X	X	X	X	

WHITE - LAB YELLOW - REPORT PINK - CUSTOMER



7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Date: 11 December 1997
Report#: 12155E
Lab#: 25088
PO#:
Page 1 of 5

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-1 Grab Soil

Date Sampled: 12/8/97
Date Received: 12/9/97
Date Prepared: 12/10/97
Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	86	Not Established
Decachlorobiphenyl	88	Not Established

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/aks





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-2 Grab Soil

Date Sampled: 12/8/97
Date Received: 12/9/97
Date Prepared: 12/10/97
Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

Date: 11 December 1997
Report#: 12155E
Lab#: 25069
PO#:
Page 2 of 5

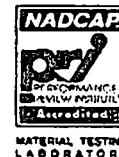
<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	82	Not Established
Decachlorobiphenyl	46	Not Established

We certify the above analysis to be the true results based on the designated sample.


Henry Collins, General Manager

HC/aks





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
PHONE: (216) 447-1550 FAX: (216) 447-0716
(800) 497-6752
HTTP://www.nslanalytical.com

Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-3 Grab Soil

Date Sampled: 12/8/97
Date Received: 12/9/97
Date Prepared: 12/10/97
Date Analyzed: 12/11/97


Date: 11 December 1997
Report#: 12155E
Lab#: 25070
PO#:
Page 3 of 5

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u>
		<u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	94	Not Established
Decachlorobiphenyl	49	Not Established

We certify the above analysis to be the true results based on the designated sample.


Henry Collins, General Manager

HC/aks





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752

HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-4 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	87	Not Established
Decachlorobiphenyl	80	Not Established

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/aks





7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-5 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

Date: 11 December 1997
 Report#: 12155E
 Lab#: 25072
 PO#:
 Page 5 of 5

<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u>
		<u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	73	Not Established
Decachlorobiphenyl	66	Not Established

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/aks



CHAIN-OF-CUSTODY



NSL ANALYTICAL SERVICES, INC.
 FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES
 QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945
 7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 216-447-1550 • 1-800-497-6752 • FAX 216-447-0716

COLLECTOR(S) NAME(S) *print Scott Ferguson*
 COLLECTOR(S) SIGNATURE(S) *[Signature]*
 TURN-AROUND (circle): 24-hr 48-hr 72-hr One Week Regular TCLP

PROJECT LOCATION:
 PROJECT NUMBER: **970067** VERBAL RESULTS: **CD N**

DATE COLLECTED	TIME COLLECTED	CUSTOMER SAMPLE IDENTIFICATION	COMP	GRAB	No. of CON-TAINERS
12/11/97	1500	970067-SW1		X	1
		970067-SW2		X	1
		970067-SW3		X	1
		970067-SW4		X	1
		970067-SW5		X	1

RECEIVED BY (Sign)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME	RECEIVED FOR LABORATORY BY (Sign)	DATE/TIME
<i>[Signature]</i>	12/11/97 09:05	<i>[Signature]</i>	12/11/97 09:05	<i>[Signature]</i>	12/19/97 12:10
<i>[Signature]</i>	12/11/97 12:10				

COMPANY NAME: *General Electric*
 BILLING ADDRESS: *P.O. Box 1953*
 CITY: *Kenosha*
 STATE: *OH* ZIP: *44240*
 CONTACT NAME: *Scott*
 PHONE: *330-677-0785*
 FAX: *330-677-1567*
 PURCHASE ORDER NUMBER:

ANALYSIS REQUIRED - SEE REVERSE

--	--	--	--	--	--	--	--	--	--

REMARKS (BOTTLE TYPE, SAMPLING CONDITIONS, ETC.)
Swab (10min)
BLANK

ADDITIONAL REMARKS:
Done 12/11 OK SM J



VEEVA LUBRICANTS INTERNATIONAL



18419 EUCLID AVENUE, CLEVELAND, OHIO 44112-1016 (800) 726-5400, FAX (216) 383-9633

DESCRIPTION: HYDRAULIC PRESS

CUSTOMER NO.: 13039

UNIT NO.: 59030

OIL BRAND:

Condition: ABNORMAL

MAKE:

MODEL:

OIL TYPE:

UNIT SERIAL NO.: UNTM S/M R59030

FUEL TYPE:

NO. COPIES: 3

SAMPLE DATA

LAB#	DATE TAKEN/TESTED	HRSMI OIL UNIT
282139	10/15/97	
	10/29/97	

SPECTROCHEMICAL ANALYSIS	
IRON	
CHROMIUM	
LEAD	
COPPER	
TIN	
ALUMINUM	
NICKEL	
SILVER	
MANGANESE	
SILICON	
BORON	
SODIUM	
MAGNESIUM	
CALCIUM	
BARIUM	
PHOSPHORUS	
ZINC	
MOLYBDENUM	
TITANIUM	
VANADIUM	
POTASSIUM	

PHYSICAL PROPERTY DATA	
FLASH	
% FUEL	
VIS 40° C cSt	
VIS 100° C cSt	
% WATER	
% SOLIDS	
GLYCOL	

LAB#	ADDITIONAL CUSTOMER TESTS	PARTICLE COUNT RESULTS
282139	PCB	

282139	0 ppm	
--------	-------	--

LAB# ANALYSIS RECOMMENDATIONS

282139	TEST RESULTS INDICATE EXCESSIVE WATER PRESENT. RECOMMEND LOCATE AND REPAIR SOURCE OF ENTRY. RECOMMEND CHANGE OIL. ENCLOSED IS THE ADDITIONAL PCB TEST YOU REQUESTED 11/20/97. ***RESULTS REPORTED BY FAX***
--------	---

By 10/31

S A B SERVICE INC
14905 GASKILL DRIVE
ALLIANCE, OH 44601

BILL FLEMING
RICE OIL COMPANY
AKRON, OH 44309

WHEN CORRECTIVE ACTION IS INDICATED, PLEASE ADVISE RESULTS OF YOUR FINDINGS AND CORRECTIVE ACTION TAKEN ON ENCLOSED FORM

Since Spectra-Check services are based on samples and information supplied by others, and since corrective action, if any, is necessarily taken by others, these services are rendered without any warranty of liability of any kind beyond the actual amount paid in Cleveland Technical Center for the services.

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Date: 11 December 1997
 Report#: 12155E
 Lab#: 25088
 PO#:
 Page 1 of 5

Attn: Scott Hershberger

Client Description: 970087

Client Sample ID: 12-8-97 1500 970087-SW-1 Grab Soil

EPA Method: 8081 PCBs

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

Analyte	Results ug/Wipe	Estimated Quantitation Limit ug/Wipe
Aroclor-1018	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

Surrogate:	% Recovery	Acceptance Range
2,4,5,6-Tetrachloro-m-xylene	88	Not Established
Decachlorobiphenyl	88	Not Established

We certify the above analysis to be the true results based on the designated sample.


 Henry Collins, General Manager

HC/aks



NSL ANALYTICAL SERVICES, INC.

FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945



7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Date: 11 December 1997
 Report#: 12155E
 Lab#: 25089
 PO#:
 Page 2 of 5

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-2 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

Analyte	Results	Estimated Quantitation
	<u>µg/Wipe</u>	Limit <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Substrate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	82	Not Established
Decachlorobiphenyl	46	Not Established

We certify the above analysis to be the true results based on the designated sample

Henry Collins, General Manager

HC/aks



Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Date: 11 December 1997
 Report#: 12155E
 Lab#: 26070
 PO#:
 Page 3 of 5

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-3 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>ug/Wipe</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>ug/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	94	Not Established
Decachlorobiphenyl	49	Not Established

We certify the above analysis to be the true results based on the designated sample.



Henry Collins, General Manager

HC/sks



Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Date: 11 December 1997
 Report#: 12155E
 Lab#: 25071
 PO#:
 Page 4 of 5

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-4 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

<u>Analyte</u>	<u>Results</u> <u>µg/Wipe</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>µg/Wipe</u>
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<5	5

<u>Succinate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	87	Not Established
Decachlorobiphenyl	80	Not Established

We certify the above analysis to be the true results based on the designated sample.



Henry Collins, General Manager

HC/aks



NSL ANALYTICAL SERVICES, INC.



FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Date: 11 December 1997
 Report#: 12155E
 Lab#: 25072
 POW:
 Page 5 of 5

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 12-8-97 1500 970067-SW-5 Grab Soil

Date Sampled: 12/8/97
 Date Received: 12/9/97
 Date Prepared: 12/10/97
 Date Analyzed: 12/11/97

EPA Method: 8081 PCBs

Analysis	Results	Estimated Quantitation
	$\mu\text{g/Wipe}$	Limit $\mu\text{g/Wipe}$
Aroclor-1016	<5	5
Aroclor-1221	<5	5
Aroclor-1232	<5	5
Aroclor-1242	<5	5
Aroclor-1248	<5	5
Aroclor-1254	<5	5
Aroclor-1260	<6	5

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	73	Not Established
Decachlorobiphenyl	68	Not Established

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/aks



NSSL ANALYTICAL SERVICES, INC.

ARMY NATIONAL SPECTROSCOPIC LABORATORIES



CHAIN-OF-CUSTODY

ALTY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945
 7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 5-447-1550 • 1-800-497-6752 • FAX 216-447-0716

LECTOR(S) NAME(S) Supplek, R
 LECTOR(S) SIGNATURE(S) [Signature]

IN-AROUND (Grade): 24-in 48-in 72-in One Week Regular Regular TCP

JECT NUMBER: 920067 VERBAL RESULTS: LN

CUSTOMER INFORMATION		CONTACT NAME	
COMPANY NAME	<u>Emald Env.</u>	NAME	<u>Supplek</u>
BILLING ADDRESS	<u>P.O. Box 1953</u>	PHONE	<u>330-677-0785</u>
CITY	<u>Hub</u>	FAX	<u>330-677-1567</u>
STATE	<u>OH</u>	PURCHASE ORDER NUMBER	<u>44240</u>

LOCATION	DATE/TIME	RECEIVED BY (SIGN)	RECEIVED FOR LABORATORY OF (SIGN)
11/11/97	11/11/97	[Signature]	[Signature]
12/1/97	12/1/97	[Signature]	[Signature]

DATE/TIME	RECEIVED BY (SIGN)	RECEIVED FOR LABORATORY OF (SIGN)	DATE/TIME	ADDITIONAL REMARKS
12/1/97	[Signature]	[Signature]	12/1/97	Blank
12/1/97	[Signature]	[Signature]	12/1/97	SWAB (Dirt)

DATE/TIME	RECEIVED BY (SIGN)	RECEIVED FOR LABORATORY OF (SIGN)	DATE/TIME	ADDITIONAL REMARKS
11/11/97	[Signature]	[Signature]	11/11/97	920067 - SW1
11/11/97	[Signature]	[Signature]	11/11/97	920067 - SW2
11/11/97	[Signature]	[Signature]	11/11/97	920067 - SW3
11/11/97	[Signature]	[Signature]	11/11/97	920067 - SW4
11/11/97	[Signature]	[Signature]	11/11/97	920067 - SW5

REMARKS:
 GENERAL TYPE, SPECIEN CONDITION, ETC.
SWAB (Dirt)
BLANK

DATE 12/1/97 OK SM Q



State of Ohio Environmental Protection Agency

Northeast District Office

2110 E. Aurora Road
Twinsburg, Ohio 44087-1969
(216) 425-9171
FAX (216) 487-0769

TO	12/10/97	gn
DATE		
PROGRAM		
LAND USE		
ENV		
CONTACTOR		
RETURN FOR FILE		

George V. Voinovich
Governor

December 5, 1997

Certified Mail

Mr. Thomas Rolston, Sr.
TR Crane and Towing Company
434 Beecher St.
Ravenna, OH 44266

Dear Mr. Rolston:

The purpose of this letter is to serve as a written follow-up and subsequent Notice of Violation (NOV) to inspections conducted on 11/03/97, 11/04/97, and 11/20/97 by Bruce C. Miller, State On-Scene-Coordinator (SOSC), Ohio Environmental Protection Agency (Ohio EPA), in response to Ohio EPA Incident 9711-67-4371. This inspection revealed a petroleum transformer fluid ("oil") discharge as a result of crane operations on 11/03/97 involving a Westinghouse 24KVA power transformer located at the Ravenna Army Ammunition Plant in Portage County, Ohio. The discharge spilled oil onto the gravel-over-soil substation site where it was being removed.

Periodic inspections by both Ohio EPA and Department of the Army has not detected any visual evidence of oil contamination in area surface waters. However, since the approximately 2,000 gallons of oil soaked into the ground and has subsequently been detected in an interception trench constructed around the perimeter of the substation. Standing water in this interception trench may represent shallow groundwater, rain water or a combination of both. If groundwater has been impacted by the oil spill, this represents a violation of Ohio Revised Code (ORC) Chapter 6111.04.

Violation of the ORC section referred to above may subject TR Crane and Towing to civil penalties of up to \$10,000 per day, per violation, as well as criminal penalties of up to \$25,000 or up to one year imprisonment, or both per violation.

In accordance with ORC Chapter 6111, you are required to abate the violations which were outlined above. In order to return to compliance, the following actions should be taken:

1. Petroleum Contaminated Soil (PCS) that could reasonably be expected to contribute to a violation or on going violation of ORC 6111 must be excavated.
2. A hydro geological investigation and evaluation should be performed in an effort to determine if the oil spill has produced or could be expected to produce pollution of groundwater which would represent an ORC 6111 violation. If a water pollution (ORC 6111) violation has occurred, impacted waters-of-the-state must be remediated to abate the violation(s).
3. Characterize and dispose of all petroleum contaminated soil, water, vegetation, debris, sorbent materials, personal protection equipment (PPE), etc. in a manner consistent with state and federal solid and hazardous waste laws and regulations.

11/11/1997 17:14 2162534489

PAGE 03

Summit Environmental Technologies, Inc.
your connection to a cleaner environment

A2LA CERTIFICATION NO. 724.01

Offices in Major U.S. Cities



November 11, 1997

1/1

Diamond Environmental
P.O. Box 2543
Stow, OH 44224

Date Collected: 11/4/97
Date Received: 11/4/97
Project #: RVAAP
Client ID #: See Below
Laboratory ID #: See Below
Analysis: PCBs (8080)
Detection Limit: 2.0 mg/kg
Matrix: Oil
Date of Analysis: 11/8/97

<u>Laboratory ID #</u>	<u>Client ID #</u>	<u>PCBs (mg/kg)</u>
971502-01	1	< 2.0
971502-02	2	< 2.0

West Sub-Station
Oil spill
Samples Collected by
Mark Patterson

Laboratory Manager: Bassar Mousse



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY INDUSTRIAL OPERATIONS COMMAND
ROCK ISLAND, ILLINOIS 61299-6000

11/06/97	
CE-COR	
PROP ADMS	
LAB. ADMS	
CONF. ADMS	
RETURN FOR...	

REPLY TO
ATTENTION OF
Directorate of Acquisition
Installation Contracting (AMSIO-ACI-A)

NOVEMBER 3, 1997

Mr. Larry Horvat
Project Development Group, Incorporated
102 Technology Drive
Export, Pennsylvania 15632
fax: (412) 327-3717

Dear Mr. Horvat:

This letter is just to confirm the phone conversations on November 3rd and 4th with you, Carl King and Glenda Nelson about the oil spill from a transformer at Ravenna Army Ammunition Plant. We request that you act quickly and respond to any EPA guidance. We also would appreciate you keeping us informed as to the remedies and the progress made in the cleanup efforts.

The point of contact is Ms. Margie Ridder, AMSIO-ACI-A.

Glenda M. Nelson

GLEND A. M. NELSON
Contracting Officer

Copy Furnished:
AMSIO-IRI (Carl King)
Ravenna AAP (John Cicero)

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages **1**

To <i>John Cicero</i>	From <i>Margie Ridder - RIA</i>
Dept./Agency <i>R AAP</i>	Phone # <i>(309) 782-8692</i>
Fax # <i>(330) 358-7314</i>	Fax # <i>(309) 782-6727</i>

NSN 7540-01-317-7308 5099-101 GENERAL SERVICES ADMINISTRATION

SITE FEATURE WORK SHEET

SITE FEATURES	COLUMN A		COLUMN B		COLUMN C	
	Score 15 Points	Enter Score	Score 10 Points	Enter Score	Score 5 Points	Enter Score
1. Proximity of perimeter of spill to a public or private well or water intake	> 1000 ft	15	300 - 1000 ft		< 300 ft or inside of a designated sole source aquifer, sensitive area, well head protected area, or unknown	
2. Depth to ground water	>75 ft		25 - 75 ft		<25 ft or unknown	5
3. Predominant type of substratum	Unfractured clay, shale, claystone, mudstone, clay, silty clay, low permeable tills	15	Clayey silt, moderate permeable till, silty shale, unfractured siltstone-sandstone-limestone, sandy clay loam, loam, silt loam, silt, cemented sandstone, sandy clay, clay loam, silty clay loam, sandy silt, silty sand, clayey sand, coal, peat		Sand, gravel, loamy sand, sandy loam, poorly lithified sandstone, karst limestone, highly fractured rock, fill material, or unknown	
4. Proximity to structures or preferential migration pathways (see below)	< 8 points		8 -12 points	10	> 12 points	
5. Proximity to surface Water and/or proximity to sensitive areas	> 120 ft		50 - 120 ft	10	< 50 ft or unknown	
6. Land use	Commercial/Industrial	15			Residential/Recreational/agricultural	
Add Subtotals	+	45	+	20	+	5

TOTAL SCORE

70

SITE FEATURE 4 WORK SHEET:

- Structures with basements or subsurface foundations (i.e. crawl space, footer drains, basements) within 50 ft.
- Water line within 50 ft.
- Curtain drains, french drains or field tiles within 100 ft.
- Shallow injection wells, if within 50 ft, score 3 pts, if within 100 ft, score 1 pt.
- Septic systems (tank & associated leaching systems) within 50 ft.
- Building type structure without subsurface conditions listed above within 50 ft.
- Sanitary sewer line within 50 ft.
- Natural gas lines within 50 ft.
- Pipelines or other conduits within 50 ft.
- Buried telephone/television cable lines within 50 ft.
- Buried electrical cable & lines within 50 ft.

4 pts.	4
4 pts.	4
4 pts.	4
3 pts. or 1 pt.	_____
2 pts.	_____
1 pt.	1
1 pt.	1
1 pt.	_____
1 pt.	_____
1 pt.	_____
1 pt.	_____
TOTAL POINTS	10

If Total points from Site Feature 4 Work Sheet are:

- <8, enter score of 15 in Column A for Site Feature 4 in the above chart
- 8-12, enter score of 10 in Column B for Site Feature 4 in the above chart
- >12, enter score of 5 in Column C for Site Feature 4 in the above chart

PETROLEUM ACTION LEVELS (PPM)

CONSTITUENTS	CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4
Total Score	< 46 Points	46-60 Points	61-75 Points	>75 Points
Soil BTEX	0.006 ppm Benzene 4 ppm Toluene 6 ppm Ethylbenzene 28 ppm Total Xylenes	0.17 ppm Benzene 7 ppm Toluene 10 ppm Ethylbenzene 47 ppm Total Xylenes	0.335 ppm Benzene 9 ppm Toluene 14 ppm Ethylbenzene 67 ppm Total Xylenes	0.5 ppm Benzene 12 ppm Toluene 18 ppm Ethylbenzene 85 ppm Total Xylenes
Ground Water BTEX	0.005 ppm Benzene 1 ppm Toluene 0.7 ppm Ethylbenzene 10 ppm Total Xylenes	0.005 ppm Benzene 1 ppm Toluene 0.7 ppm Ethylbenzene 10 ppm Total Xylenes	0.005 ppm Benzene 1 ppm Toluene 0.7 ppm Ethylbenzene 10 ppm Total Xylenes	0.005 ppm Benzene 1 ppm Toluene 0.7 ppm Ethylbenzene 10 ppm Total Xylenes
Soil TPH (Gasoline)	105 ppm TPH	300 ppm TPH	450 ppm TPH	600 ppm TPH
Soil TPH (Others)	380 ppm TPH	642 ppm TPH	904 ppm TPH	1156 ppm TPH

CONVERSATION RECORD

TIME
8:50

DATE
11/26/97

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING
 OUTGOING

ROUTING

NAME/SYMBOL INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO.

Dave Goldy

NISI

SUBJECT

Transformer oil spill

SUMMARY

Discussed status of transformer oil spill cleanup.

I had spoken w/ Bruce Miller OETA about 830. He said D&M Construction was not going to continue w/ cleanup due to disagreement w/ NISI over protection level needed for cleanup.

Goldy said NISI felt D&M did not have to use hazardous waste cleanup protocol (protective clothing, containment, HAZWOPER trained crew, etc.) while D&M felt they should meet stds.

D&M will finish pumping sumps today. Akron Canton Waste Oil

ACTION REQUIRED

will pump out holding tank this morning and balance next week if necessary → over

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

ACTION TAKEN

SIGNATURE

TITLE

DATE

Goldy will be getting contractor estimates to finish remainder of clean-up. Should have estimates by 12/4/97. D&M's involvement will end today.



State of Ohio Environmental Protection Agency

Northeast District Office

2110 E. Aurora Road
Twinsburg, Ohio 44087-1969
(216) 425-9171
FAX (216) 487-0769

TO	12/0/97
RECEIVED	
PROGRAM	
DATE	
BY	EVJ
CONTACTOR	
RETURN FOR FILE	

George V. Voinovich
Governor

December 5, 1997

Certified Mail

Mr. Thomas Rolston, Sr.
TR Crane and Towing Company
434 Beecher St.
Ravenna, OH 44266

Dear Mr. Rolston:

The purpose of this letter is to serve as a written follow-up and subsequent Notice of Violation (NOV) to inspections conducted on 11/03/97, 11/04/97, and 11/20/97 by Bruce C. Miller, State On-Scene-Coordinator (SOSC), Ohio Environmental Protection Agency (Ohio EPA), in response to Ohio EPA Incident 9711-67-4371. This inspection revealed a petroleum transformer fluid ("oil") discharge as a result of crane operations on 11/03/97 involving a Westinghouse 24KVA power transformer located at the Ravenna Army Ammunition Plant in Portage County, Ohio. The discharge spilled oil onto the gravel-over-soil substation site where it was being removed.

Periodic inspections by both Ohio EPA and Department of the Army has not detected any visual evidence of oil contamination in area surface waters. However, since the approximately 2,000 gallons of oil soaked into the ground and has subsequently been detected in an interception trench constructed around the perimeter of the substation. Standing water in this interception trench may represent shallow groundwater, rain water or a combination of both. If groundwater has been impacted by the oil spill, this represents a violation of Ohio Revised Code (ORC) Chapter 6111.04.

Violation of the ORC section referred to above may subject TR Crane and Towing to civil penalties of up to \$10,000 per day, per violation, as well as criminal penalties of up to \$25,000 or up to one year imprisonment, or both per violation.

In accordance with ORC Chapter 6111, you are required to abate the violations which were outlined above. In order to return to compliance, the following actions should be taken:

1. Petroleum Contaminated Soil (PCS) that could reasonably be expected to contribute to a violation or on going violation of ORC 6111 must be excavated.
2. A hydro geological investigation and evaluation should be performed in an effort to determine if the oil spill has produced or could be expected to produce pollution of groundwater which would represent an ORC 6111 violation. If a water pollution (ORC 6111) violation has occurred, impacted waters-of-the-state must be remediated to abate the violation(s).
3. Characterize and dispose of all petroleum contaminated soil, water, vegetation, debris, sorbent materials, personal protection equipment (PPE), etc. in a manner consistent with state and federal solid and hazardous waste laws and regulations.

Mr. Thomas Rolston, Sr.
December 5, 1997
Page - 2 -

The State of Ohio is not liable for the success or failure or consequences of any abatement actions taken. Ohio EPA reserves its right, pursuant to Chapters 3704, 3714, 3734, 3745, 3750, 6109, and 6111 of the ORC, and any other applicable state or federal laws or regulations, to require further site investigation and abatement to address releases or discharges into the environment at the above designated site, and to seek civil penalties, reimbursement of oversight costs, and any other appropriate legal or equitable relief for any violation of law.

This letter is not a final action of the Director of the Ohio EPA and is intended as a notification of a violation of the Ohio environmental laws and regulations. Failure to cite specific violations and deficiencies in this letter does not release TR Crane and Towing from the responsibility of complying with all applicable regulations.

Thank you for your cooperation. If you have any questions please contact me at the Northeast District Office.

Sincerely,



Bruce C. Miller
State On-Scene-Coordinator
Division of Emergency and Remedial Response

BCM,wmk

cc: Robert Prinic, DERR, NEDO
Eileen Mohr, DERR, NEDO
~~Mark Paterson, Ravenna Army Ammunition Plant~~
Robert Whelove, Dept. of Army, HQ Army Industrial Operations Command
Stewart Milner, N.I.S.I.
Ray Pegher, P.D.G., Inc.

NISI INCIDENT REPORT

Date of Incident: 11/3/97

Time of Incident: 12:15 pm

Location of Incident: West Substation

Name/Buyer/Number: Tom Arthur, Buyer # 5

Address: 1588 Highview Ave.

Akron, Ohio 44301

Phone: (330)773-1430

Description of Incident: Crane operator picked up the first transformer and loaded it on his truck. (T & R Crane Service, Matt & Tom Ralson 434 Beecher Ave., Ravenna, Ohio 44266, (330) 296-7967) The crane reached over for the 2,000 KVA Westinghouse transformer and it was too heavy to lift (full of oil) the back of the crane rocked off the ground. The operator began dragging and bouncing the transformer to get it out. The transformer hit the corner of the building and knocked off a fin and approximately 1,500 gallons of oil spurted out on the ground. The slag absorbed all of the oil and was contained within the fence line.

Insurance Company: _____

Address: _____

Phone: _____

EPA/Base Notification: Ray Pegher notified the EPA and Mark Patterson at the RVAAP 11/3/97. S. D. Myers was notified and said it would probably cost \$30,000 to do a cleanup.

Plan of action: Tuesday, 11/4/97, crane is still in area. S.D. Myers arriving on 11/4/97 to pump balance of oil from transformer. We are working with Tom Arthur and the crane operator to get insurance company involved.

TAP CHANGER

TRANSFORMER RECORDS

LOCATION WEST SUB TAG NUMBER 18931

POLE NUMBER KVA CAPACITY 2000 SERIAL NUMBER

SERVICE TO: MANUFACTURER WESTINGHOUSE STYLE

TYPE FORM PHASE CYCLE % IMP. PRIV.

SEC. V KIND OF SERVICE OUTDOOR INDOOR SUBWAY

ACCESSORIES: SEMAPHORE OIL GAGE THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 <i>y. J.</i>					
MAY	5/14/93 <i>EC</i>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
		12/5/81	PCB CONTENT, 7.29 PPM @ 1260. INTERSTATE TRANSFORMER INC., FILE NO. ITI-00-121-143, DATED 12/15/81. <i>J.F.</i>
	OUT OF SERVICE		IN SERVICE

Author: mpatters at ccremote
Date: 11/4/97 12:06 PM
Priority: Normal
TO: pwoodhol at RIAMASTR
TO: rvermost at RIAMASTR
TO: ckingl at RIAMASTR
CC: jcicero at RIAMASTR
CC: rwhelove at RIAMASTR
Subject: Tranformer Oil Spill

----- Message Contents -----

Author: mpatters at ccremote
Date: 11/3/97 6:01 PM
Priority: Normal
TO: pwoodhol at RIAMASTR
TO: rvermost at RIAMASTR
TO: ckingl at RIAMASTR
CC: rwhelove at RIAMASTR
Subject: Transformer Oil Spill

----- Message Contents -----

Disregard first transmission of memo, sent before complete.

At about 12:30 P.M. yesterday (11/3/97), a radiator tube was broken on a transformer (Westinghouse Ser. No. 2981475) at the west substation resulting in an estimated 1500 gallon oil spill.

This transformer and others were purchased by Tom Arthur of Tom's Salvage as part of RVAAP property liquidation. Mr. Arthur had hired TR Crane Co. to move them from the substations to waiting trucks owned by S.D. Myers. S.D. Myers has made arrangements to ultimately purchase all the transformers from Mr. Arthur.

John C., Tim M. and I went to the site as soon as we knew of the incident. We got there at 12:40 P.M. The transformer was still leaking at a high rate and only one bag of absorbent had been placed on the spill to contain it. The transformer was believed to be nearly full, having a capacity of 2160 gallons. The contractors did not have anymore absorbent on hand, lacked a Spill Prevention Plan, and the crane operator had gone to lunch. I recommended they tilt the transformer on it's side away from the rupture to at least prevent some (approximately 300 gallons) of the oil from spilling when the crane operator returned. Most of the oil immediately entered the stone pad around the transformer, with little collecting/puddling on the surface.

We inspected the area around spill site for any evidence of surface water contamination. There was no visible evidence of oil contamination within artificial or natural drainage ditches around the site. The pad around the spill site was most likely backfilled with large amounts of ballast/stone when constructed. Fortunately, we believe this may be acting as a reservoir minimizing the oil migrating from the area. We could not find any tiles or underground drains leading from the pad which would accelerate migration of the oil. I will research records further today to see if we have any blue prints/schematics of the drain system. Any available information will help us with containment and remediation.

According to everyone I spoke with, the crane was having difficulty lifting the transformer since the boom was partially extended and the weight of the oil added an additional 7 tons. To gain more leverage, the operator began dragging it toward the crane. The result was that the cable was at an angle to the boom when the transformer finally lifted from the ground. It swung to the side and hit the adjacent brick building, causing the cooling radiator to break at the top and bottom of the main transformer body. It immediately began leaking at a high rate.

I have placed the only bag of absorbent we had at the plant onto the small amount of oil pooled on the surface. I also placed several oil absorbent booms on potential receiving drainage ways and headwater streams. I inspected several points along the watershed this morning and found no evidence of surface water contamination. I will continue daily inspections until threat of migration has stopped.

I reported the spill to OEPA Emergency Response (ER) regional office in Twinsburg and Columbus by 1:30 P.M. The spill has been assigned spill I.D. Number 9711-67-4371. Mr. Bruce Miller of the regional ER inspected the site about 2:00 P.M. OEPA's primary concern is the contamination of surface water. Mr. Miller said his office has very little authority to enforce cleanup of groundwater contamination due to oil spills unless there is direct evidence (contaminated wells, laboratory tests, downstream surface water Contamination, etc.) Therefore, we will not be receiving a letter (NOV) from OEPA and the remediation is viewed as voluntary/cooperative at this point.

The spill will not be regulated as PCB contamination as laboratory analysis on the oil taken on 12/5/81 was 8.56 ppm. The level would have to be 50 ppm or higher for it to be regulated as PCB contamination.

Mr. Miller will be available to assist us with the all phases of cleanup. As an interim measure, he recommended digging a backhoe trench downslope of the spill site ASAP to help contain any migrating oil. The trench should be as wide as the backhoe bucket and deep enough to intercept any drains that might accelerate migration of oil from the site. He also instructed us to place absorbent booms along any drainage ways that may potentially be contaminated. This has been done.

I just spoke with Ray Pegher of PDG. He has been instructed by his supervisor to begin coordinating cleanup. PDG is currently trying to resolve liability among contractors involved. If this can not be done by this afternoon, PDG will install trench and begin cleanup, and liability issue will be resolved among contractors at a later date. I will forward a copy of NISI's (liquidator for PDG) one page Incident Report. NISI's estimated cleanup cost is \$30,000.00. S.D. Myers will be removing oil remaining in transformer later today. I recommended that PDG test oil samples I collected from spill site to confirm PCB levels. (UPDATE: 10:20 A.M PDG IS BEGINNING INSTALLATION OF TRENCH. WILL INSPECT.)

I have spoken with Dave Anderson of U.S. EPA Emergency Response for the state of Ohio. He agreed with course of action recommended by OEPA and felt there was no need to get involved at this point. U.S. EPA would only get involved with cleanup on post if we so

requested. They would only take independent action if the contamination was to go beyond post property. I told him we will be coordinating remediation with OEPA and will not need their help at this time.



11/3/97

Approx. X

12:40

P.M.



≈ 12:15 spill occurred 1:03 pm
per witness 5
crane operator tilted



11/3/99 Approx 12:40 P.M.



11/3/97 Approx. 12:40 P.M.



11/3/97

Approx. 12:40 P.M.





11/6/97

8:00 A.M.



11/3/97 Approx 12:40 P.M.



FACSIMILE TRANSMITTAL SHEET

TO:

NAME: Mark Patterson DEPARTMENT: _____

PHONE NUMBER: _____ EXTENSION: _____

FAX NUMBER: 330 358-7314

LOCATION: _____

SUBJECT/COMMENTS: These are from Jim Whitten. Any questions
can be directed to him at 1-800-444-9580 ext 3261

FROM:

DATE: _____ TIME: _____

NAME: MIKE BOHON DEPARTMENT: TRANSPORTATION

PHONE NUMBER: (330) 630-7000 EXTENSION: 3271

FAX NUMBER: (330) 633-6846

LOCATION: TALLMADGE, OHIO 44278

ORIGINALS WILL:

NOT FOLLOW
FOLLOW BY MAIL

REPLY REQUESTED:

BY TELEPHONE
BY MAIL
BY FAX
NO REPLY NEEDED

TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: 10

RUSH

IN HOUSE SAMPLE

Division 46 TRANSPORTATION
 Customer RAVENNA ARSENOL
 City TOM AUTHEN
 State _____ Zip _____
 Number of Samples 1

Chain-of-Custody			
	Time	Date	Initials
Sent	<u>3:20 P</u>	<u>11-4-97</u>	<u>JPW</u>
Rec'd	_____	<u>11/4</u>	<u>DR</u>
Called	_____	<u>11/4</u>	<u>DR</u>

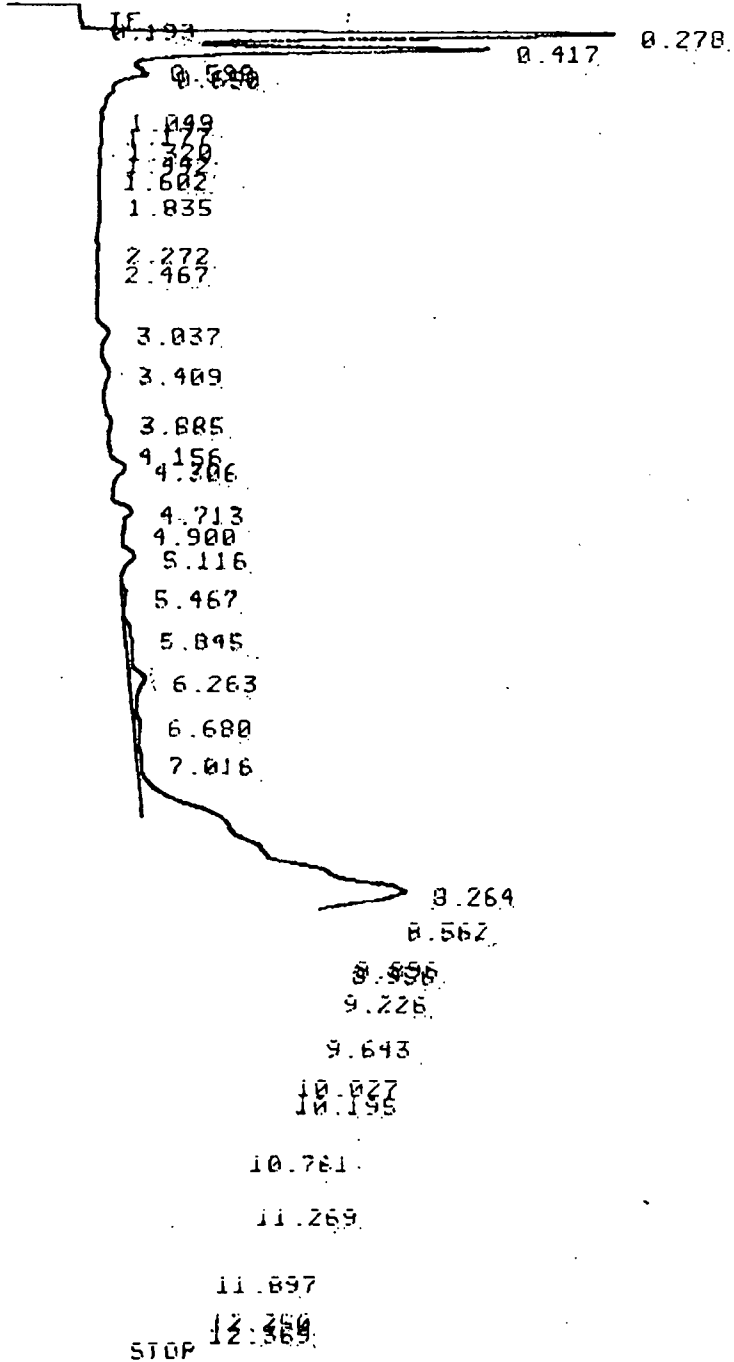
Sample No.	Type/Description	ug	PPM	1242	1254	1260	Other	Total
<u>1</u>	<u>PCB</u>		<u>X</u>			<u>10</u>		<u>10</u>

Approved by/Date: JP Jones 11-4-97

1.100

22

* RUN #25962 NOV 4, 1997 15:10:43
START



$$\frac{2}{23} \times \frac{100}{.88} = 10 @ 1260$$

STOP 12:38

RUN# 25982 NOV 4, 1997 15:10:43

AREAX

RT	AREA	TYPE	WIDTH	AREAX
.193	8088	UU	.111	.04995
.278	634077	UU	.082	3.91567
.417	494037	UU	.084	3.05087
.598	61043	UU	.066	.37696
.650	115905	UU	.116	.71576
1.049	38222	UU	.107	.23604
1.177	35339	UU	.118	.21823
1.320	48519	UU	.144	.28110
1.442	37075	UU	.128	.22895
1.602	55765	UU	.202	.34439
1.635	105890	UU	.347	.65391
2.272	68483	UU	.231	.41056
2.467	45313	UU	.164	.27983
3.037	121811	UU	.282	.75223
3.409	152573	UU	.342	.94220
3.885	169156	UU	.356	1.04460
4.156	68779	UU	.147	.42474
4.306	184734	UU	.277	1.14080
4.713	171169	UU	.222	1.05703
4.900	100479	UU	.159	.62050
5.116	230840	UU	.287	1.42552
5.467	185824	UU	.278	1.14753
5.845	185961	UU	.246	1.14638
6.263	384471	UU	.402	2.37426
6.680	237340	UU	.271	1.46567
7.016	210597	UU	.234	1.30052
8.264	3472594	UU	.745	21.44459
8.562	1401922	UU	.328	8.65741
8.896	420094	UU	.118	2.59424
8.956	659732	UU	.189	4.07410
9.226	980544	UU	.290	6.05524
9.543	1115794	UU	.355	6.89045
10.027	508830	UU	.188	3.14222
10.195	1302118	UU	.484	8.04108
10.761	692703	UU	.339	4.27771
11.269	945908	UU	.441	5.04134
11.897	207049	UU	.132	1.27861
12.250	125821	UU	.084	.77699
12.369	213729	UU	.142	1.31986

TOTAL AREA=1.6193E+07
MUL FACTOR=1.0000E+00

2A

AREALOR	AREA	PEAK RANGE (RT)
1242	265217	1.37 - 2.39
1254	575242	3.23 - 4.51
1260	886959	4.52 - 6.29 6.03 - 6.47

*

Environmental Protection Agency

§ 761.180

sampling indicates that the remaining concentration level exceeds the required level, EPA will require further cleanup. For this purpose, the numerical level of cleanup required for spills cleaned in accordance with § 761.125(b) is deemed to be the equivalent of numerical cleanup requirements required for cleanups under § 761.125(c)(2) through (4). Using its best engineering judgment, EPA may sample a statistically valid random or grid sampling technique, or both. When using engineering judgment or random "grab" samples, EPA will take into account that there are limits on the power of a grab sample to dispute statistically based sampling of the type required of the responsible party. EPA headquarters will provide guidance to the EPA regions on the degree of certainty associated with various grab sample results.

§ 761.135 Effect of compliance with this policy and enforcement.

(a) Although a spill of material containing 50 ppm or greater PCBs is considered improper PCB disposal, this policy establishes requirements that EPA considers to be adequate cleanup of the spilled PCBs. Cleanup in accordance with this policy means compliance with the procedural as well as the numerical requirements of this policy. Compliance with this policy creates a presumption against both enforcement action for penalties and the need for further cleanup under TSCA. The Agency reserves the right, however, to initiate appropriate action to compel cleanup where, upon review of the records of cleanup or EPA sampling following cleanup, EPA finds that the decontamination levels in the policy have not been achieved. The Agency also reserves the right to seek penalties where the Agency believes that the responsible party has not made a good faith effort to comply with all provisions of this policy, such as prompt notification of EPA of a spill, recordkeeping, etc.

(b) EPA's exercise of enforcement discretion does not preclude enforcement action under other provisions of TSCA or any other Federal statute. This includes, even in cases where the numerical decontamination levels set

forth in this policy have been met, civil or criminal action for penalties where EPA believes the spill to have been the result of gross negligence or knowing violation.

Subparts H and I—[Reserved]

Subpart J—General Records and Reports

§ 761.180 Records and monitoring.

This section contains recordkeeping and reporting requirements that apply to PCBs, PCB Items, and PCB storage and disposal facilities that are subject to the requirements of the part.

(a) *PCBs and PCB Items in service or projected for disposal.* Beginning February 5, 1990, each owner or operator of a facility, other than a commercial storer or a disposer of PCB waste, using or storing at any one time at least 45 kilograms (99.4 pounds) of PCBs contained in PCB Container(s), or one or more PCB Transformers, or 50 or more PCB Large High or Low Voltage Capacitors shall develop and maintain at the facility, or a central facility provided they are maintained at that facility, all annual records and the written annual document log of the disposition of PCBs and PCB Items. The written annual document log must be prepared for each facility by July 1 covering the previous calendar year (January through December). The annual document log shall be maintained for at least 3 years after the facility ceases using or storing PCBs and PCB Items in the quantities prescribed in this paragraph. Annual records (manifests and certificates of disposal) shall be maintained for the same period. The annual records and the annual document log shall be available for inspection at the facility where they are maintained by authorized representatives of EPA during normal business hours, and each owner or operator of a facility subject to these requirements shall know the location of these records. All records and annual documents required to be prepared and maintained by this section prior to February 5, 1990 shall continue to be maintained at the facility for the same time as the annual

MARK

§761.130**40 CFR Ch. I (7-1-92 Edition)**

option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(v) Soil contaminated by the spill will be decontaminated to 10 ppm PCBs by weight provided that soil is excavated to a minimum depth of 10 inches. The excavated soil will be replaced with clean soil, i.e., containing less than 1 ppm PCBs, and the spill site will be restored (e.g., replacement of turf).

(5) *Records.* The responsible party shall document the cleanup with records of decontamination. The records must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill, e.g., type of equipment.

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location and the nature of the materials contaminated. This information should include whether the spill occurred in an outdoor electrical substation, other restricted access location, or in a nonrestricted access area.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces and a brief description of the sampling methodology used to establish the spill boundaries.

(vi) A brief description of the solid surfaces cleaned.

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) Postcleanup verification sampling data and, if not otherwise apparent from the documentation, a brief description of the sampling methodology and analytical technique used.

(ix) While not required for compliance with this policy, information on the estimated cost of cleanup (by man-hours, dollars, or both) would be useful if maintained in the records.

(52 FR 10705, Apr. 2, 1987, as amended at 53 FR 40884, Oct. 19, 1988)

§761.130 Sampling requirements.

Postcleanup sampling is required to verify the level of cleanup under §761.125(c) (2) through (4). The responsible party may use any statistically valid, reproducible, sampling scheme (either random samples or grid samples) provided that the requirements of paragraphs (a) and (b) of this section are satisfied.

(a) The sampling area is the greater of (1) an area equal to the area cleaned plus an additional 1-foot boundary, or (2) an area 20 percent larger than the original area of contamination.

(b) The sampling scheme must ensure 95 percent confidence against false positives.

(c) The number of samples must be sufficient to ensure that areas of contamination of a radius of 2 feet or more within the sampling area will be detected, except that the minimum number of samples is 3 and the maximum number of samples is 40.

(d) The sampling scheme must include calculation for expected variability due to analytical error.

(e) EPA recommends the use of a sampling scheme developed by the Midwest Research Institute (MRI) for use in EPA enforcement inspections: "Verification of PCB Spill Cleanup by Sampling and Analysis." Guidance for the use of this sampling scheme is available in the MRI report "Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup." Both the MRI sampling scheme and the guidance document are available from the TSCA Assistance Office, Environmental Protection Agency, Rm. E-543, 401 M St. SW., Washington, DC 20460 (202-554-1404). The major advantage of this sampling scheme is that it is designed to characterize the degree of contamination within the entire sampling area with a high degree of confidence while using fewer samples than any other grid or random sampling scheme. This sampling scheme also allows some sites to be characterized on the basis of composite samples.

(f) EPA may, at its discretion, take samples from any spill site. If EPA's

Environmental Protection Agency**§ 761.125**

accordance with paragraphs (c)(2)(i) and (ii) of this section. Conformance to the cleanup standards under paragraphs (c)(2)(i) and (ii) of this section shall be verified by post-cleanup sampling as specified under § 761.130. At such times as outdoor electrical substations are converted to another use, the spill site shall be cleaned up to the nonrestricted access requirements under paragraph (c)(4) of this section.

(i) Contaminated solid surfaces (both impervious and non-impervious) shall be cleaned to a PCB concentration of 100 micrograms (μg)/100 square centimeters (cm^2) (as measured by standard wipe tests).

(ii) At the option of the responsible party, soil contaminated by the spill will be cleaned either to 25 ppm PCBs by weight, or to 50 ppm PCBs by weight provided that a label or notice is visibly placed in the area. Upon demonstration by the responsible party that cleanup to 25 ppm or 50 ppm will jeopardize the integrity of the electrical equipment at the substation, the EPA regional office may establish an alternative cleanup method or level and place the responsible party on a reasonably timely schedule for completion of cleanup.

(3) *Requirements for decontaminating spills in other restricted access areas.* Spills which occur in restricted access locations other than outdoor electrical substations, as defined under § 761.123, shall be decontaminated in accordance with paragraphs (c)(3) (i) through (v) of this section. Conformance to the cleanup standards in paragraphs (c)(3) (i) through (v) of this section shall be verified by post-cleanup sampling as specified under § 761.130. At such times as restricted access areas other than outdoor electrical substations are converted to another use, the spill site shall be cleaned up to the nonrestricted access area requirements of paragraph (c)(4) of this section.

(i) High-contact solid surfaces, as defined under § 761.163 shall be cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ (as measured by standard wipe tests).

(ii) Low-contact, indoor, impervious solid surfaces will be decontaminated to 10 $\mu\text{g}/100 \text{ cm}^2$.

(iii) At the option of the responsible party, low-contact, indoor, nonimpervious surfaces will be cleaned either to 10 $\mu\text{g}/100 \text{ cm}^2$ or to 100 $\mu\text{g}/100 \text{ cm}^2$ and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associated with that option pose special concerns at that site. That is, the Regional Administrator would not permit encapsulation if he/she determined that if the encapsulation failed the failure would create an imminent hazard at the site.

(iv) Low-contact, outdoor surfaces (both impervious and nonimpervious) shall be cleaned to 100 $\mu\text{g}/100 \text{ cm}^2$.

(v) Soil contaminated by the spill will be cleaned to 25 ppm PCBs by weight.

(4) *Requirements for decontaminating spills in nonrestricted access areas.* Spills which occur in nonrestricted access locations, as defined under § 761.123, shall be decontaminated in accordance with paragraphs (c)(4)(i) through (v) of this section. Conformance to the cleanup standards at paragraphs (c)(4)(i) through (v) of this section shall be verified by post-cleanup sampling as specified under § 761.130.

(i) Furnishings, toys, and other easily replaceable household items shall be disposed of in accordance with the provisions of § 761.60 and replaced by the responsible party.

(ii) Indoor solid surfaces and high-contact outdoor solid surfaces, defined as high contact residential/commercial surfaces under § 761.123, shall be cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ (as measured by standard wipe tests).

(iii) Indoor vault areas and low-contact, outdoor, impervious solid surfaces shall be decontaminated to 10 $\mu\text{g}/100 \text{ cm}^2$.

(iv) At the option of the responsible party, low-contact, outdoor, nonimpervious solid surfaces shall be either cleaned to 10 $\mu\text{g}/100 \text{ cm}^2$ or cleaned to 100 $\mu\text{g}/100 \text{ cm}^2$ and encapsulated. The Regional Administrator, however, retains the authority to disallow the encapsulation option for a particular spill situation upon finding that the uncertainties associated with that

§ 761.125

40 CFR Ch. I (7-1-92 Edition)

(vii) Approximate depth of soil excavation and the amount of soil removed.

(viii) A certification statement signed by the responsible party stating that the cleanup requirements have been met and that the information contained in the record is true to the best of his/her knowledge.

(ix) While not required for compliance with this policy, the following information would be useful if maintained in the records:

(A) Additional pre- or post-cleanup sampling.

(B) The estimated cost of the cleanup by man-hours, dollars, or both.

(c) *Requirements for cleanup of high-concentration spills and low-concentration spills involving 1 pound or more PCBs by weight (270 gallons or more of untested mineral oil).* Cleanup of low-concentration spills involving 1 lb or more PCBs by weight and of all spills of materials other than low-concentration materials shall be considered complete if all of the immediate requirements, cleanup standards, sampling, and recordkeeping requirements of paragraphs (c) (1) through (5) of this section are met.

(1) *Immediate requirements.* The four actions in paragraphs (c)(1) (i) through (iv) of this section must be taken as quickly as possible and within no more than 24 hours (or within 48 hours for PCB Transformers) after the responsible party was notified or became aware of the spill, except that actions described in paragraphs (c)(1) (ii) through (iv) of this section can be delayed beyond 24 hours if circumstances (e.g., civil emergency, hurricane, tornado, or other similar adverse weather conditions, lack of access due to physical impossibility, or emergency operating conditions) so require for the duration of the adverse conditions. The occurrence of a spill on a weekend or overtime costs are not acceptable reasons to delay response. Owners of spilled PCBs who have delayed cleanup because of these types of circumstances must keep records documenting the fact that circumstances precluded rapid response.

(i) The responsible party shall notify the EPA regional office and the NRC

as required by § 761.125(a)(1) or by other applicable statutes.

(ii) The responsible party shall effectively cordon off or otherwise delineate and restrict an area encompassing any visible traces plus a 3-foot buffer and place clearly visible signs advising persons to avoid the area to minimize the spread of contamination as well as the potential for human exposure.

(iii) The responsible party shall record and document the area of visible contamination, noting the extent of the visible trace areas and the center of the visible trace area. If there are no visible traces, the responsible party shall record this fact and contact the regional office of the EPA for guidance in completing statistical sampling of the spill area to establish spill boundaries.

(iv) The responsible party shall initiate cleanup of all visible traces of the fluid on hard surfaces and initiate removal of all visible traces of the spill on soil and other media, such as gravel, sand, oyster shells, etc.

(v) If there has been a delay in reaching the site and there are insufficient visible traces of PCBs remaining at the spill site, the responsible party must estimate (based on the amount of material missing from the equipment or container) the area of the spill and immediately cordon off the area of suspect contamination. The responsible party must then utilize a statistically based sampling scheme to identify the boundaries of the spill area as soon as practicable.

(vi) Although this policy requires certain immediate actions, as described in paragraphs (c)(1)(i) through (iv) of this section, EPA is not placing a time limit on completion of the cleanup effort since the time required for completion will vary from case to case. However, EPA expects that decontamination will be achieved promptly in all cases and will consider promptness of completion in determining whether the responsible party made good faith efforts to clean up in accordance with this policy.

(2) *Requirements for decontaminating spills in outdoor electrical substations.* Spills which occur in outdoor electrical substations, as defined under § 761.123, shall be decontaminated in

Environmental Protection Agency

§ 761.125

with the immediate requirements specified under paragraph (b) or (c) of this section, depending on the source of the spill, in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(ii) Where a spill exceeds 10 pounds of PCBs by weight and is not addressed in paragraph (a)(1) (i) or (ii) of this section, the responsible party will notify the appropriate EPA regional office (Pesticides and Toxic Substances Branch) and proceed to decontaminate the spill area in accordance with this TSCA policy in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(iv) Spills of 10 pounds or less, which are not addressed in paragraph (a)(1) (i) or (ii) of this section, must be cleaned up in accordance with this policy (in order to avoid EPA enforcement liability), but notification of EPA is not required.

(2) *Disposal of cleanup debris and materials.* All concentrated soils, solvents, rags, and other materials resulting from the cleanup of PCBs under this policy shall be properly stored, labeled, and disposed of in accordance with the provisions of § 761.60.

(3) *Determination of spill boundaries in the absence of visible traces.* For spills where there are insufficient visible traces yet there is evidence of a leak or spill, the boundaries of the spill are to be determined by using a statistically based sampling scheme.

(b) *Requirements for cleanup of low-concentration spills which involve less than 1 pound of PCBs by weight (less than 270 gallons of untested mineral oil)—(1) Decontamination requirements.* Spills of less than 270 gallons of untested mineral oil, low-concentration PCBs, as defined under § 761.123, which involve less than 1 pound of PCBs by weight (e.g., less than 270 gallons of untested mineral oil containing less than 500 ppm PCBs) shall be cleaned in the following manner:

(i) Solid surfaces must be double washed/rinsed (as defined under § 761.123); except that all indoor, residential surfaces other than vault areas must be cleaned to 10 micrograms per 100 square centimeters ($10 \mu\text{g}/100 \text{cm}^2$) by standard commercial wipe tests.

(ii) All soil within the spill area (i.e., visible traces of soil and a buffer of 1 lateral foot around the visible traces) must be excavated, and the ground be restored to its original configuration by back-filling with clean soil (i.e., containing less than 1 ppm PCBs).

(iii) Requirements of paragraphs (b)(1) (i) and (ii) of this section must be completed within 48 hours after the responsible party was notified or became aware of the spill.

(2) *Effect of emergency or adverse weather.* Completion of cleanup may be delayed beyond 48 hours in case of circumstances including but not limited to, civil emergency, adverse weather conditions, lack of access to the site, and emergency operating conditions. The occurrence of a spill on a weekend or overtime costs are not acceptable reasons to delay response. Completion of cleanup may be delayed only for the duration of the adverse conditions. If the adverse weather conditions, or time lapse due to other emergency, has left insufficient visible traces, the responsible party must use a statistically based sampling scheme to determine the spill boundaries as required under paragraph (a)(3) of this section.

(3) *Records and certification.* At the completion of cleanup, the responsible party shall document the cleanup with records and certification of decontamination. The records and certification must be maintained for a period of 5 years. The records and certification shall consist of the following:

(i) Identification of the source of the spill (e.g., type of equipment).

(ii) Estimated or actual date and time of the spill occurrence.

(iii) The date and time cleanup was completed or terminated (if cleanup was delayed by emergency or adverse weather: the nature and duration of the delay).

(iv) A brief description of the spill location.

(v) Precleanup sampling data used to establish the spill boundaries if required because of insufficient visible traces, and a brief description of the sampling methodology used to establish the spill boundaries.

(vi) A brief description of the solid surfaces cleaned and of the double wash/rinse method used.

§ 761.125

40 CFR Ch. I (7-1-92 Edition)

which the PCBs were spilled. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm, but less than 500 ppm PCBs and is subject to the relevant requirements of this policy.

Spill area means the area of soil on which visible traces of the spill can be observed plus a buffer zone of 1 foot beyond the visible traces. Any surface or object (e.g., concrete sidewalk or automobile) within the visible traces area or on which visible traces of the spilled material are observed is included in the spill area. This area represents the minimum area assumed to be contaminated by PCBs in the absence of precleanup sampling data and is thus the minimum area which must be cleaned.

Spill boundaries means the actual area of contamination as determined by postcleanup verification sampling or by precleanup sampling to determine actual spill boundaries. EPA can require additional cleanup when necessary to decontaminate all areas within the spill boundaries to the levels required in this policy (e.g., additional cleanup will be required if postcleanup sampling indicates that the area decontaminated by the responsible party, such as the spill area as defined in this section, did not encompass the actual boundaries of PCB contamination).

Standard wipe test means, for spills of high-concentration PCBs on solid surfaces, a cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol. A standard-size template (10 centimeters (cm) x 10 cm) will be used to delineate the area of cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Fur-

ther, EPA requires the collection and testing of field blanks and replicates.

[52 FR 10705, Apr. 2, 1987; 52 FR 23397, June 19, 1987]

§ 761.125 Requirements for PCB spill cleanup.

(a) *General*. Unless expressly limited, the reporting, disposal, and precleanup sampling requirements in paragraphs (a) (1) through (3) of this section apply to all spills of PCBs at concentrations of 50 ppm or greater which are subject to decontamination requirements under TSCA, including those spills listed under § 761.120(b) which are excluded from the cleanup standards at paragraphs (b) and (c) of this section.

(1) *Reporting requirements*. The reporting in paragraphs (a)(1) (i) through (iv) of this section is required in addition to applicable reporting requirements under the Clean Water Act (CWA) or the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA). For example, under the National Contingency Plan all spills involving 10 pounds or more by weight of PCBs must currently be reported to the National Response Center (1-800-424-8802). The requirements in paragraphs (a)(1) (i) through (iv) of this section are designed to be consistent with existing reporting requirements to the extent possible so as to minimize reporting burdens on governments as well as the regulated community.

(i) Where a spill directly contaminates surface water, sewers, or drinking water supplies, as discussed under § 761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Prevention, Pesticides and Toxic Substances Branch) and obtain guidance for appropriate cleanup measures in the shortest possible time after discovery, but in no case later than 24 hours after discovery.

(ii) Where a spill directly contaminates grazing lands or vegetable gardens, as discussed under § 761.120(d), the responsible party shall notify the appropriate EPA regional office (the Office of Prevention, Pesticides and Toxic Substances Branch) and proceed

Amc


- Dave Anderson (313) 692-7683
U.S. EPA Mich page 800 395-8903

Request

IAG - Interagency Agreement

Request to come out for:

- 1.) Conference + our own
- or. 2.) Conf. + cleanup
- 3.) Once off site

 50 ppm.
5 ppm cutoff for soil.

military still responsible for ground and contamination of water from.

Dig trench down slope as deep as existing/suspected drains. Plug down slope drains.

West Substation

12:40 P.M.

~~ER~~ (ER) Emergency Response Bruce Miller

Call Spill Response
1(800) 282-9378

certain, determine
possible discharge
pt.

Chris Holmes

took info on

DEPA Emergency Response = Time

Spill I.D. No.

9711-67-4371

8.56 ppm 1981 (Dec ?)



- My Name

- Ph. #

- Address (gen.)

- specific Address

Fuze; Booster West Substation

- Vol

= PCB level

Tom Arthur 330 773-1430

Tom's Salvage

Mike Arthur

1588 High View Ave

Danny Emeick

Akron, OH 44301

T.R. Crane (330) 296-7967

434 Beecher Ave

Tom Ralston - owner - onsite

Ravenna, OH 44266

Mat Ralston - Operator

Mark Roberts - 330 630-7000 x3297 Hazmat Myers.

SD Myers - Hauler
800 444-9580

Tom Crocker - Driver
Harold Arjev - Mechanic
Ernie Belnap - Driver

Harold - Difficulty lifting, dragging once past concrete pad, swung into building.

42⁵⁴⁰~~000~~ lbs - Total weight (w/ oil)
(21⁶⁰~~000~~ gal) 16,200 lbs - oil
Ser. No. 2981475 West House

Top & Bottom of one ^(radiating) recirculation tube broken. Estimate only

Tom Arthur

- Tom Ralston supervised removal, Mat Ralston operated crane
- S.D. Myers was contracted to removal oil once on truck
- Crane rated at 50000 lbs Transformer was "bouncing around"

SD Myers told him

Jim Whitten 330 630-7000

- S.D. Myers responsible for emptying
once on truck and also for transport
Pump truck

Carla Aucker } West Lake Ohio US EPA
Joe Freedle } (216 or) 835-5200
312 353-2318 - US EPA Emerg. Response.

Renechater
Co.

Darling - S. Cleveland
DEM - Randolph

Resample oil for PCBs

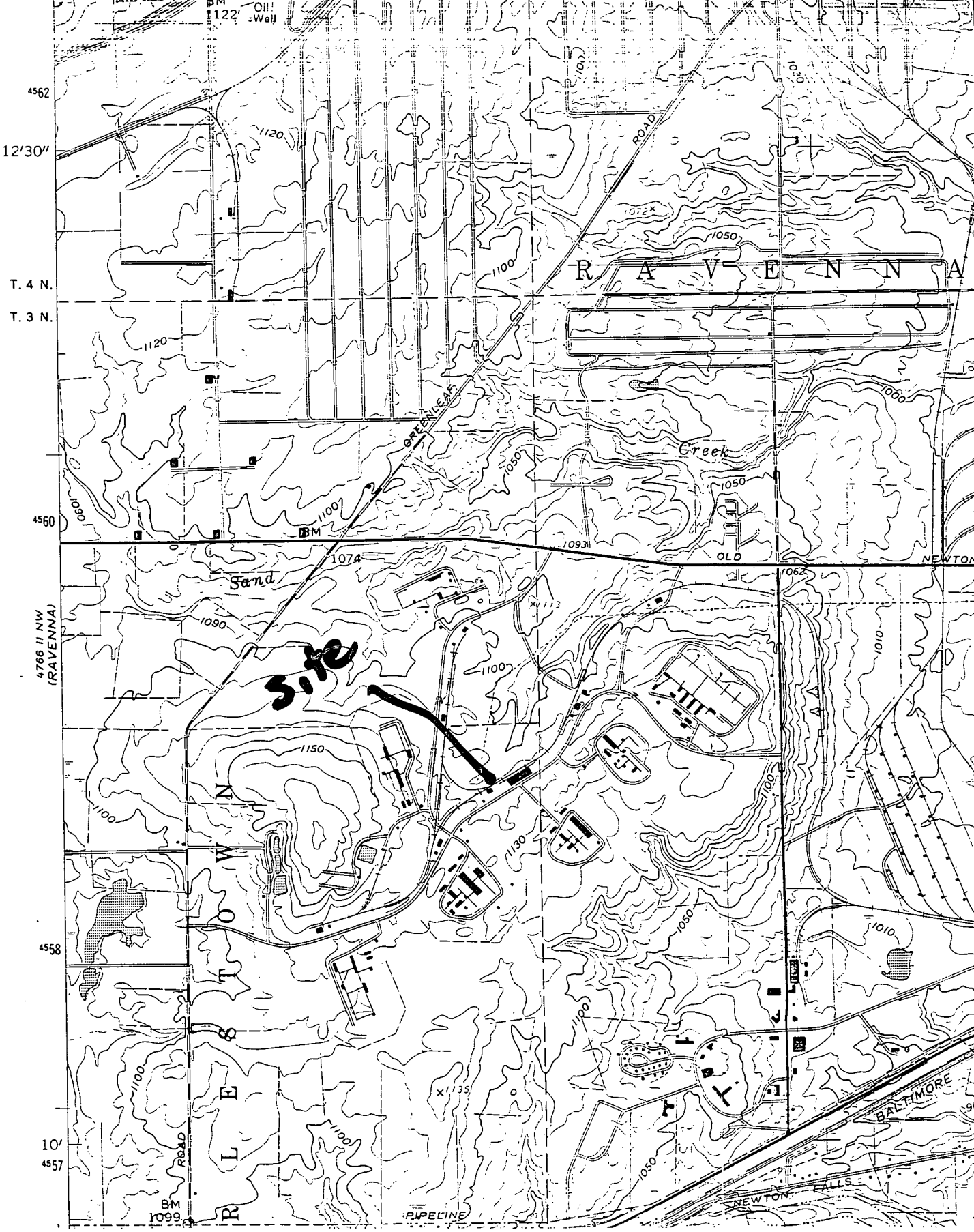
Bruce
Miller
Recomm

Report to NRC (800) 424-8802

U.S. EPA - more latitude determining imminent
threat.

OPA 90 - Oil Pollution Act of 1990

Inland water's jurisdiction - U.S. EPA



Transformer oil spill 11/3/97

TRANSFORMER RECORDS

LOCATION WEST SUB GARRETTSTVILLE

TAG NUMBER 18931

POLE NUMBER _____ KVA CAPACITY 2000

SERIAL NUMBER 2981475

SERVICE TO: _____ MANUFACTURER Westinghouse STYLE SP

TYPE SL FORM _____ PHASE 3 CYCLE 60 % IMP. 6.4 PRIV. 24000

SEC. V 4160 KIND OF SERVICE _____ OUTDOOR INDOOR _____ SUBWAY _____

ACCESSORIES: _____ SEMAPHORE OIL GAGE THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	<u>2-11-93 J.F.</u>					
MAY	<u>5-14-93 J.F.</u>					
AUGUST						
NOVEMBER						

DATE DEFICIENCIES

DATE

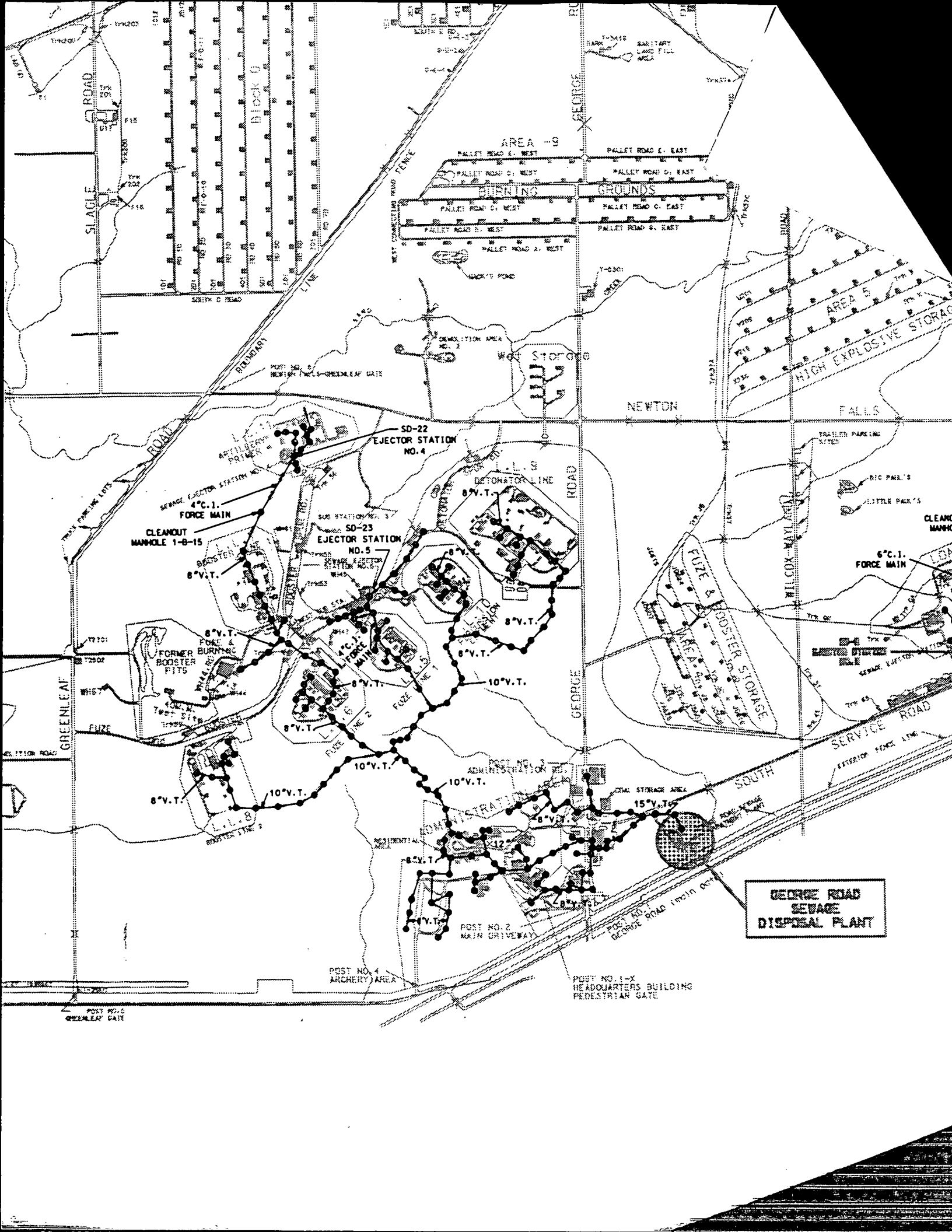
CORRECTIVE ACTION

INTERSTATE TRANSFORMER INC. FILE NO. 111-00-121-142, DATED 12/15/81.

12-5-81 PCB TEST 8.56 PPM J.F.

OUT OF SERVICE

IN SERVICE



GEORGE ROAD
SEWAGE
DISPOSAL PLANT

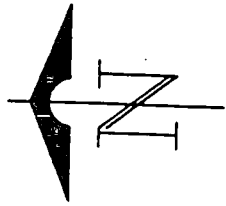
POST NO. 1-K
HEADQUARTERS BUILDING
PEDESTRIAN GATE

POST NO. 4
ARCHERY AREA

POST NO. 2
MAIN DRIVEWAY

POST NO. 3
ADMINISTRATION

POST NO. 5
GREENLEAF GATE



RAVENNA ARMY AMMUNITION PLANT

RAVENNA, OHIO

OPERATED BY RAVENNA ARSENAL, INC.

APPROVED	SIGNATURE	DATE	TITLE
SAFETY			GENERAL AREA MAP
TECHNICAL MANAGER			SANITARY SEWER SYSTEM
PRODUCTION			
ENGINEERING			
GENERAL MANAGER			
COMMANDING OFFICER			
REF. DWG. NO.		CHKD.	ENGR.
DRWN. R.C.B.		DATE	SCALE
		10/21/71	A-1400.2

x
5

TRANSFORMER RECORDS

LOCATION WEST sub in Board TAG NUMBER 18932
POLE NUMBER _____ SERIAL NUMBER 3003082 STYLE _____
SERVICE TO: _____ MANUFACTURER Westinghouse PHASE _____
TYPE _____ FORM _____ CYCLE 60 % IMP. 2.9 SUBWAY _____
SEC. V 120/240 KIND OF SERVICE _____ INDOOR OUTDOOR _____
ACCESSORIES: _____ SEMAPHORE _____ OIL GAGE _____ THERMOMETER _____ DRAIN VALVE _____

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY						
MAY	<u>2-11-93 Y.Y.</u> <u>5-14-93</u>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
			<u>PCB TEST 11/11/94 Y.F.</u>
	<u>OUT OF SERVICE</u>		<u>IN SERVICE</u>

TAP CHANGER
TRANSFORMER RECORDS

LOCATION WEST SUB TAG NUMBER 18931

POLE NUMBER KVA CAPACITY 2000 SERIAL NUMBER

SERVICE TO: MANUFACTURER WESTINGHOUSE STYLE

TYPE FORM PHASE CYCLE % IMP. PRIV.

SEC. V KIND OF SERVICE OUTDOOR INDOOR SUBWAY

ACCESSORIES: SEMAPHORE OIL GAGE THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 Y.J.					
MAY	5/14/93 E.C.					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
		12/5/81	PCB CONTENT, 7.29 PPM @ 1260. INTERSTATE TRANSFORMER INC., FILE NO. ITI-00-121-143, DATED 12/15/81. J.F.
	OUT OF SERVICE		IN SERVICE

TRANSFORMER RECORDS

11-1

LOCATION WEST SUB BARRETTSVILLE TAG NUMBER 18931
 POLE NUMBER _____ KVA CAPACITY 2000 SERIAL NUMBER 2981475
 SERVICE TO: _____ MANUFACTURER Westinghouse STYLE SP
 TYPE SL FORM _____ PHASE 3 CYCLE 60 % IMP. 6.4 PRIV. 24000
 SEC. V 4160 KIND OF SERVICE _____ OUTDOOR INDOOR _____ SUBWAY _____
 ACCESSORIES: _____ SEMAPHORE OIL GAGE THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	<u>2-11-93 Y.L.</u>					
MAY	<u>5-14-93 BR</u>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
		<u>12-5-81</u>	<u>PCB TEST 0.50 PPM Y.Y.</u>
	<u>OUT OF SERVICE</u>		<u>IN SERVICE</u>

INTERSTATE TRANSFORMER INC., FILE NO. 111-00-121-142, DATED 12/15/81.

TRANSFORMER RECORDS

LOCATION WEST SUB || TAG NUMBER 18930

POLE NUMBER KVA CAPACITY 2000 SERIAL NUMBER 2981474

SERVICE TO: MANUFACTURER WESTINGHOUSE STYLE

TYPE SL FORM PHASE 3 CYCLE 60 % IMP. 6.4 PRIV. 24000

SEC. V 4160 KIND OF SERVICE OUTDOOR X INDOOR SUBWAY

ACCESSORIES: SEMAPHORE X OIL GAGE X THERMOMETER X DRAIN VALVE X

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 J.F.					
MAY	5/14/93 ER					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
		12/5/81	PCB CONTENT, 8.56 PPM @ 1260, INTERSTATE TRANS. INC., FILE NO. ITI-00-121-140, DATED 12/15/81. J.F.
	OUT OF SERVICE		IN SERVICE

TAP CHANGER
TRANSFORMER RECORDS

LOCATION WEST SUB | | (CIL) TAG NUMBER 18935
 POLE NUMBER _____ KVA CAPACITY 2000 SERIAL NUMBER 2981474
 SERVICE TO: _____ MANUFACTURER WESTINGHOUSE STYLE _____
 TYPE _____ FORM _____ PHASE _____ CYCLE _____ % IMP. _____ PRIV. _____
 SEC. V _____ KIND OF SERVICE _____ OUTDOOR _____ INDOOR _____ SUBWAY _____
 ACCESSORIES: _____ SEMAPHORE _____ OIL GAGE _____ THERMOMETER _____ DRAIN VALVE _____

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 <i>ER</i>					
MAY	5/14/93 <i>ER</i>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
		12/5/81	PCB CONTENT, 18.72 PPM @ 1260. INTERSTATE TRANS INC., FILE NO. ITI-00-121-141 DATED 12/15/81. <i>R.A.</i>
	OUT OF SERVICE		IN SERVICE

4 1



TRANSFORMER RECORDS
SUBSTATION P.O.D. | Depot

LAG NUMBER _____ POD 2829

POLE NUMBER _____ KVA CAPACITY 1500 SERIAL NUMBER 3153429

SERVICE TO: _____ DEPT _____ MANUFACTURER _____ WESTINGHOUSE STYLE _____ 401992

TYPE _____ SL _____ FORM _____ PHASE _____ 3 CYCLE _____ 60 % IMP. _____ 5.9 PRIV. 24000

SEC. V 6900 KIND OF SERVICE _____ OUTDOOR _____ X INDOOR _____ SUBWAY _____

ACCESSORIES: _____ SEMAPHORE _____ X OIL GAGE _____ X THERMOMETER _____ X DRAIN VALVE _____ X

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 <i>JS</i>					
MAY	5/14/93 <i>LR</i>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
9/8/93	OUT OF SERVICE OIL PUMPED & REMOVED FROM RVAAP. P.O. 27808, WORK ORDER 3PEL-0001, P-17, 5938327-5. WORK DONE BY ELECTRICAL TESTING SERVICE, NEW CASTLE, PA. <i>J.D. McDee</i>	12/5/81	PCB CONTENT, 36.98 PPM @ 1242, 1016. INTERSTATE <i>J.F.</i> TRANSFORMER, INC., FILE NO. ITI-00-121-170 DTD 12/15/1981.

61X

TRANSFORMER RECORDS

LOCATION EAST Sub In Board TAG NUMBER 10335

POLE NUMBER KVA CAPACITY 25 SERIAL NUMBER 3003081

SERVICE TO: MANUFACTURER Westinghouse STYLE 119857

TYPE S FORM PHASE 1 CYCLE 60 % IMP. 2.9 PRIV. 2400

SEC. V 129240 KIND OF SERVICE OUTDOOR INDOOR X SUBWAY

ACCESSORIES: SEMAPHORE OIL GAGE THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	<u>2-11-93 Y.H.</u>					
MAY	<u>5-14-93 BK</u>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
			<u>PCB Test 7 PPM</u>
	<u>OUT OF SERVICE</u>		<u>IN SERVICE</u>

TOP CHANGER
TRANSFORMER RECORDS

LOCATION EAST Sub GARRETTVILLE TAG NUMBER ROP-18325

POLE NUMBER _____ KVA CAPACITY 298/444 SERIAL NUMBER 298/444

SERVICE TO: _____ MANUFACTURER Westinghouse STYLE Part of Transformer ROP-18325

TYPE _____ FORM _____ PHASE _____ CYCLE _____ % IMP. _____ PRIV. _____

SEC. V _____ KIND OF SERVICE _____ OUTDOOR _____ INDOOR _____ SUBWAY _____

ACCESSORIES: _____ SEMAPHORE _____ OIL GAGE _____ THERMOMETER _____ DRAIN VALVE _____

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY						
MAY	2-11-93 5-14-93 BY					
AUGUST						
NOVEMBER						

DATE _____ DEFICIENCIES _____ DATE _____ CORRECTIVE ACTION _____
 INTERSTATE TRANSFORMER, INC. 15.97 PPM @ 1242, 1260.
 PCB TEST 15.97 PPM FILE NO ITI-00-121-157, DATED 12/15/81.

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
9-8-93	Oil pumped & removed from plants	12-5-81	
PO 27808, w/o 3PEL-0001			
P-17 5938027-5			
	OUT OF SERVICE		IN SERVICE
	Work done by - Electrical Testing Service, New Castle, PA.		J.D. McAfee

TAP CHANGER
TRANSFORMER RECORDS

LOCATION EAST Sub Newton Falls TAG NUMBER ROP-18326
POLE NUMBER _____ KVA CAPACITY _____ SERIAL NUMBER 2981445

SERVICE TO: _____ MANUFACTURER Westinghouse STYLE Part of Transformer ROP-18326
TYPE _____ FORM _____ PHASE _____ CYCLE _____ % IMP. _____ PRIV. _____

SEC. V _____ KIND OF SERVICE _____ OUTDOOR _____ INDOOR _____ SUBWAY _____
ACCESSORIES: _____ SEMAPHORE _____ OIL GAGE _____ THERMOMETER _____ DRAIN VALVE _____

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	<u>2-11-93 J.F.</u>					
MAY	<u>5-14-93 BR</u>					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
<u>9-8-93</u>	<u>Oil Pumped & removed from plant.</u>	<u>12-5-81</u>	<u>ICB TEST 11.17 PPM J.F.</u>
	<u>PO 27808, w/o 3951-0001</u>		<u>NO. ITI-00-121-155,</u>
	<u>P-17-5938327-5</u>		<u>DATED 12/15/81.</u>

IN SERVICE

OUT OF SERVICE

Work done by - Electrical Testing Service, New Castle, PA.
J.D. Muelhae

TRANSFORMER RECORDS

LOCATION EAST SUB NEWTON FALLS #2 TAG NUMBER ROP-18326

POLE NUMBER KVA CAPACITY 3000 SERIAL NUMBER 2981445

SERVICE TO: MANUFACTURER WESTINGHOUSE STYLE L 387145

TYPE SL FORM PHASE 3 CYCLE 60 % IMP. 6.2 PRIV. 24000

SEC. V 4160 KIND OF SERVICE OUTDOOR X INDOOR SUBWAY

ACCESSORIES: SEMAPHORE X OIL GAGE X THERMOMETER X DRAIN VALVE X

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	2/11/93 J.F.					
MAY	5/14/93 ER					
AUGUST						
NOVEMBER						

DATE	DEFICIENCIES	DATE	CORRECTIVE ACTION
9/8/93	OUT OF SERVICE OIL PUMPED & REMOVED FROM RVAAP. P.O. 27808, WORK ORDER 3PEL-0001, P-17, 5938327-5, WORK PERFORMED BY ELECTRICAL TESTING SERVICE, INC., NEW CASTLE, PA. J. B. McBe	12/5/81	PCB CONTENT: 9.54 PPM @ 1260, INTERSTATE FILE NO. ITI-00-121-154, DATED 12/15/81.
			IN SERVICE

TRANS. INC. X.F.

TRANSFORMER RECORDS

LOCATION ERST Sub GARRETTVILLE #1

TAG NUMBER 18325 ROP

POLE NUMBER _____ KVA CAPACITY 3000

SERIAL NUMBER 2981444

SERVICE TO: _____ MANUFACTURER Westinghouse

STYLE A 387145

TYPE 54 FORM _____ PHASE 3 CYCLE 60 % IMP. 6.3 PRIV. 24000

SEC. V 4160 KIND OF SERVICE _____ OUTDOOR INDOOR _____ SUBWAY _____

ACCESSORIES: _____ SEMAPHORE OIL GAGE _____ THERMOMETER DRAIN VALVE

QUARTERLY INSPECTIONS:

	1993	1994	1995	1996	1997	1998
FEBRUARY	<u>2-11-93</u> <u>OK</u>					
MAY	<u>5-14-83</u> <u>OK</u>					
AUGUST						
NOVEMBER						

DATE _____ DEFICIENCIES _____ DATE 12-5-81 CORRECTIVE ACTION INTERSTATE TRANSFORMER INC., FILE NO. ITI-00-121-156, PCB TEST N.D. DATED 12/15/81.

OUT OF SERVICE

9-8-93 Oil pumped & removed from plant Work done by Electrical Testing Service NewCastle, PA.
P0 27808, w/o 38EL-0001
P-17 5938327-5 J.D. McKeel

IN SERVICE

Author: CKING1 at ri3503s1
Date: 11/4/97 8:48 AM
Priority: Normal
TO: GNELSON at ri3505m2
TO: RVERMOST
TO: JCICERO at ccremote
Subject: Re: Oil Spill Ravenna AAP

----- Message Contents -----

John,

Glenda & I talked to Larry and requested they get moving. He is going to call Ray and have him talk to you & Mark to see how EPA is viewing the release. Larry has document that states 7.62 ppm, which he says does not constitute a hazardous release. Ray is getting quotes on the clean-up. Let me know any further developments.

Carl King
COR
Contract# DAAA08-96-C-0044

Reply Separator

Subject: Oil Spill Ravenna AAP

Author: JCICERO at CCREMOTE
Date: 11/4/97 7:28 AM

The EPA has directed that a trench be dug and samples of the oil tested. PDG has requested that we not allow the crane company to move the crane off post. Need Glenda to advise PDG. Everyone pointing fingers at each other. I do not know what kind of contract NISI has with the crane operator if any. Nor do I know what agreements PDG & NISI have between each other. This should be PDG's corrective action under their contract with the Army and than PDG would have to deal with the others directly. Need to get these EPA actions moving. Please advise. I am limited under the contract as to what I can direct PDG to do.



Emerald Environmental, Inc.

FAX TRANSMITTAL

DATE 11/14/97

TO Dave Golde

COMPANY National Industrial Services

FAX # (330) 358-9904

FROM Scott Hershberger

No. of PAGES 9 (INCLUDING COVER)

COMMENTS Please find the preliminary results from soil and oil samples to follow.

This document is intended for use only by the individual or company to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you have received this communication in error, please notify the sender immediately and return the item via U.S. mail.

SENT BY luje

TIME 1:25

If there are any problems receiving this transmission, please call: (330) 677-0785
Fax: (330) 677-1567

P.O. Box 1953 Kent, OH 44240 (330) 677-0785

NSL ANALYTICAL SERVICES, INC.

FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES



QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945

7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1550 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970087 Ravenna Army Munitions Plant

Client Sample ID: 11-12-97 970087-1 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23005
 PO#: _____
 Page 1 of 7
 Preliminary Report

<u>BTEX 8020</u>	<u>Results</u> µg/kg	<u>Estimated Quantitation</u> Limit µg/kg
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	<2	2
Xylenes (total)	17	2

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
m,m-a-Trifluorotoluene	98	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy



NSL ANALYTICAL SERVICES, INC.

FORMERLY NATIONAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTING SINCE 1945



7650 HUB PARKWAY, CLEVELAND, OHIO 44125
 PHONE: (216) 447-1530 FAX: (216) 447-0716
 (800) 497-6752
 HTTP://www.nslanalytical.com

Emerald Environmental
 PO Box 1053
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970087

Client Sample ID: 11-12-97 970087-1 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23005
 PO#:
 Page 2 of 7
 Preliminary Report

Analyte	Results mg/Kg	Estimated Quantitation Limit mg/Kg
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	<1	1

Surrogate:	% Recovery	Acceptance Range
2,4,5,6-Tetrachloro-m-xylene	120	Not Established
Decachlorobiphenyl	41	Not Established

We certify the above analysis to be the true results based on the designated sample

Henry Collins, General Manager

HC/dy





Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23006
 PO#:
 Page 4 of 7
 Preliminary Report

<u>BTEX 8020</u>	<u>Results</u> μg/kg	<u>Estimated Quantitation</u> Limit μg/kg
Benzene	<2	2
Toluene	<2	2
Ethylbenzene	4	2
Xylenes (total)	47	2

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
a,e,s-Trifluorotoluene	74	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins, General Manager

HC/dy





Emerald Environmental
 PO Box 1053
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-2 Grab Soil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23008
 PO#:
 Page 5 of 7
 Preliminary Report

<u>Analyte</u>	<u>Results</u> <u>mg/Kg</u>	<u>Estimated Quantitation</u> <u>Limit</u> <u>mg/Kg</u>
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	.	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	122	Not Established
Decachlorobiphenyl	51	Not Established

* To Follow

We certify the above analysis to be the true results based on the designated sample.

Henry Collins

Henry Collins, General Manager

HC/dy





Emerald Environmental
 PO Box 1953
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970087

Client Sample ID: 11-12-97 970087-3 Grab Oil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8020

Date: 13 November, 1997
 Report#: 11028EP
 Lab#: 23007
 PO#:
 Page 8 of 7
 Preliminary Report

<u>STEX 8020</u>	<u>Results</u> µg/kg	<u>Estimated Quantitation</u> Limit µg/kg
Benzene	<20	20
Toluene	70	20
Ethylbenzene	230	20
Xylenes (total)	2,300	20

<u>BTEX Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
m,m,m-Trifluorotoluene	82	50-134%

We certify the above analysis to be the true results based on the designated sample.

Henry Collins

Henry Collins, General Manager

HC/dy



Emerald Environmental
 PO Box 1963
 Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-3 Grab Oil

Date Sampled: 11-12-97
 Date Received: 11-12-97
 Date Prepared: 11-13-97
 Date Analyzed: 11-13-97

EPA Method: 8081 PCBs

Date: 13 November, 1997
 Report#: 11026EP
 Lab#: 23007
 POW:
 Page 7 of 7
 Preliminary Report

<u>Analyte</u>	<u>Results</u> mg/Kg	<u>Estimated Quantitation</u> Limit mg/Kg
Aroclor-1016	<1	1
Aroclor-1221	<1	1
Aroclor-1232	<1	1
Aroclor-1242	<1	1
Aroclor-1248	<1	1
Aroclor-1254	<1	1
Aroclor-1260	5*	1

<u>Surrogate:</u>	<u>% Recovery</u>	<u>Acceptance Range</u>
2,4,5,6-Tetrachloro-m-xylene	118	Not Established
Decachlorobiphenyl	78	Not Established

* Estimated

We certify the above analysis to be the true results based on the designated sample.



Henry Collins, General Manager

HC/dy





Emerald Environmental
PO Box 1953
Kent, OH 44240

Attn: Scott Hershberger

Client Description: 970067

Client Sample ID: 11-12-97 970067-1 Grab Soil

TCLP Metals Analysis to follow

Date: 13 November, 1997
Report#: 11028EP
Lab#: 23005
PO#:
Page 3 of 7
Preliminary Report





ANALYTICAL SERVICES, INC.
FORENSIC NATURAL SPECTROGRAPHIC LABORATORIES

QUALITY MATERIALS & ENVIRONMENTAL TESTERS SINCE 1945
7650 HUB PARKWAY, CLEVELAND, OHIO 44125
216-447-1550 • 1-800-497-6752 • FAX 216-447-0716

CHAIN-OF-CUSTODY

CUSTOMER INFORMATION

COMPANY NAME: Emerald Environmental, Inc.
 BILLING ADDRESS: P.O. Box 1953
 CITY: Kent
 STATE: OH
 ZIP: 44240
 CONTACT NAME: Scott Hershberg
 PHONE: (330) 177-0785
 FAX: (330) 177-1567
 PURCHASE ORDER NUMBER:

COLLECTOR(S) NAME(S): Scott Hershberg
 COLLECTOR(S) SIGNATURE(S): *[Signature]*
 TURN-AROUND (days): 24 hr
 ANALYSIS REQUIRED - SEE REVERSE

PROJECT LOCATION	PROJECT NUMBER	DATE COLLECTED	TIME COLLECTED	TEST COLLECTED	CUSTOMER SAMPLE IDENTIFICATION	COMP. GRADE	NO. OF CONT. TANKERS	REMARKS (BOTTLE TYPE, SAMPLING CONDITIONS, ETC.)
Bayview Army Munitions Plant	9700067	11/12/97	11:12 AM	PCB	PCB	X	1	
	9700067-2	11/12/97	11:12 AM	PCB	PCB	X	1	
	9700067-3	11/12/97	11:12 AM	PCB	PCB	X	1	

DATE/TIME	RECEIVED BY (S)	DATE/TIME	RECEIVED BY (S)	ADDITIONAL REMARKS
11/12/97 1532	[Signature]	11/12/97 1532	[Signature]	
11/12/97 520 PM	[Signature]	11/12/97 520 PM	[Signature]	

REMOVED BY (S): [Signature]
 RE-UNDOUGED BY (S): [Signature]
 RE-OUTGAGED BY (S): [Signature]

RECEIVED BY (S): [Signature]
 RECEIVED BY (S): [Signature]
 RECEIVED FOR LABORATORY BY (S): [Signature]

RECEIVED BY (S): [Signature]
 RECEIVED BY (S): [Signature]
 RECEIVED FOR LABORATORY BY (S): [Signature]