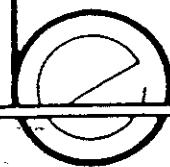


APPENDIX D

**BEST ENVIRONMENTAL, "FINAL REPORT, ENVIRONMENTAL ASSESSMENT",
OCTOBER 1990**



BEST

Environmental, Inc.

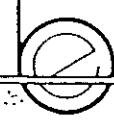
Final Report
Environmental Assessment

The Torrington Company
Bantam Bearing Division Plant
South Bend, Indiana

October 1990

Prepared For:
Urban Enterprise Association of South Bend, Inc.
South Bend, Indiana

Best Environmental Services & Technology

 **BEST**

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FINAL REPORT

ENVIRONMENTAL ASSESSMENT
TORRINGTON SITE
3702 W. SAMPLE STREET
SOUTH BEND, IN

PREPARED FOR
URBAN ENTERPRISE ASSOCIATION OF SOUTH BEND

OCTOBER 1990

BEST ENVIRONMENTAL, INC.

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1.0 INTRODUCTION

BEST Environmental, Inc. was retained by Urban Enterprise Association of South Bend, Inc. to assess potential environmental concerns at the Torrington Company's Bantam Bearing Division plant in South Bend, Indiana. BEST was also requested to recommend remediation deemed necessary and to provide cost estimates for such remediation activities.

1.1 REVIEW

In 1983, the Torrington Company elected to close its South Bend plant located at 3702 W. Sample Street. The site consists of approximately fifteen acres and contains a 352,000 square foot plant and associated outbuildings. Torrington elected to undertake several assessments to determine any environmental problems on the site. An initial assessment was conducted in early 1984 by Environmental Instrument Systems, Inc. (EIS). EIS sampled the two plant production wells, and the water and sediments from the five ponds on the site. Two volatile organic compounds were detected at low levels in the production wells and one volatile organic compound was detected at 70 ppm in the sediments of pond #4.

wire
who needs?
mins.

Canonie Engineers performed a more detailed study in 1984. Canonie sampled the water and sediments of the five ponds as well as the two production wells. In addition, eight monitoring wells were installed and sampled (W1-W5, W-7, W-8, S-3) and soil samples were taken near the southwest corner of the plant. Volatile organic compounds were found in several of the monitoring wells with highest concentrations at W-4 and S-3. Volatile organic compounds were also detected in the sediments of pond #5. The production well contamination was not demonstrated in the Canonie study. Extensive volatile organic contamination was found in most of the soil borings taken near the southwest side of the plant near S-3 and W-4. As a result of these findings, several underground and above ground storage tanks and associated piping were removed. Leaking piping was determined to be the cause of the soil contamination near S-3 and W-4. Remediation was performed in 1986 involving the removal of 1600 yards of contaminated soil from the impacted area.

*Was a tank leak responsible?
No not necessary in 1983
Cf. 26, 1983 say*

In 1986 Harza Engineering performed investigations at the site to verify the results of previous sampling programs. Harza sampled several of the monitoring wells as well as sediments from ponds #4 and #5. Harza confirmed volatile organic contamination at similar levels at S-3 and W-4 and also confirmed volatile organic contamination in sediments of ponds #4 and #5.

In October 1989 Torrington and Urban Enterprise Association of South Bend, Inc. (UEA) began negotiations for transfer of ownership of the property to UEA, in conjunction with the Neighborhood Business Development Corporation (NBDC). UEA, as part of its agreement with Torrington, elected to conduct additional investigations of the property in an attempt to define potential liabilities associated with the site. BEST Environmental, Inc. was retained in June, 1990 to conduct additional sampling and analysis as well as to provide remediation recommendations and associated cost estimates.

1.2 PURPOSE AND SCOPE

Based on a review of previous studies at the site, it was decided by UEA to address certain areas within the plant not previously studied and to confirm past analysis results at various groundwater monitoring well locations. This assessment addresses potential environmental contamination at the following locations:

- a. Beneath the concrete floor around areas associated with past operation processes in the main building, foundry and solvent still building.
- b. Existing pit contents, main building.
- c. Paint chips from machine shop and heat treat areas.
- d. Groundwater from monitoring wells with evidence of contamination indicated in previous studies.

2.0 SITE INVESTIGATION

The site investigation was conducted August 6 through 10, and September 10, 1990. The investigation was comprised of four parts: corings and soil samples beneath the plant floor at select locations, pit contents sampling, paint chip sampling from two areas in the main building, installation of one monitoring well and sampling of the installed well and three existing wells.

~~✓~~ 2.1 FLOOR CORINGS

Thirty-one (31) corings were installed through the concrete floor of the main building, foundry and solvent still building. Coring locations were selected on the basis of previous process equipment locations and other indications of potential contamination sources. Soil samples were collected from each coring hole to a depth of 18 inches. Each sample was analyzed for RCRA contaminants. (Table 4).

2.2 PIT CONTENTS

Twenty-one (21) individual pits were sampled from the main plant building and composited into 10 samples for RCRA analysis (Table 4). Samples containing all solids were analyzed for toxic characteristics (TCLP) in anticipation of land ban regulations.

2.3 PAINT CHIPS

Two paint chip composite samples were collected from the main building. One composite each was collected from the machine shop and heat treat areas. Paint chip samples were analyzed for 8 RCRA metals (Table 4).

2.4 GROUNDWATER MONITORING WELLS

Monitoring well S-3, located on the southwest portion of the property (Figure 1), was destroyed during past soil remediation activities. Previous sampling analysis from this well indicated suspect contaminant levels and was deemed necessary for this assessment. BEST reinstalled well (B) S-3 and included it in the sampling plan (See Appendix C).

BEST sampled two (2) wells (W-4 and S-3) with past histories of contamination from the areas described as the primary source of groundwater contamination on the site. Wells W-1 and W8 were also sampled as a means of representing apparent down gradient groundwater. W-1, W4 and S-3 were sampled twice at 30 day intervals (August 9 and September 10, 1990). The well samples were analyzed for priority pollutants (Table 4). Well W-8 was sampled once on October 11, 1990 and was analyzed only for volatiles.

2.5 LABORATORY ANALYSIS

All samples collected during this investigation were analyzed by Environmental Consultants, Inc. (ECI), Clarksville, Indiana. The samples were iced down in coolers for transport by special courier for next day delivery to the lab. Chain-of-custody procedures were utilized to ensure proper quality control of sample handling. ECI is a State of Indiana certified laboratory.

Laboratory data sheets for all analysis performed are contained in Appendix B.

3.0 ENVIRONMENTAL ASSESSMENT

3.1 Plant Floor Corings

The laboratory test results for corings B1 through B31 indicated that no localized subfloor contaminants were detected at any of the coring locations in the main building, foundry and solvent still building (Figure 1). Based on these findings, no remedial action will be required in those areas tested.

3.2 Pit Contents

A data summary of the 10 pit samples is found in Table 1. Laboratory analysis indicated that only one of the pit samples (P3) showed RCRA hazardous characteristics. Barium metal was detected in P3 at 126 ppm (TCLP) * which exceeds the regulatory level of 100 ppm. The contents of P3 will require disposal at a licensed hazardous waste treatment, storage and disposal facility (TSD).

Analysis of pit samples P2, P6 and P8, which represent nine pits and contents, indicated that no RCRA contaminants were detected which characterize the waste as "hazardous". All of these pit contents, however, were visually stained with oils or other process liquids. The visual contamination, together with the association with industrial processes, tend to categorize this waste as non-hazardous "special waste". State of Indiana regulations would therefore stipulate proper disposal.

Results of pits P5, P7 and P10 (5 total pits) also indicated no levels of RCRA contaminants that would characterize the waste as "hazardous". These pits contained water, oils, other liquids and sludges that would also require disposal at a special waste approved facility.

* Toxic Characteristic Leachate Procedure

Pits P1 and P9 contain water only which may have originated from roof leaks and other infiltration. Analysis indicated no RCRA contaminants. The water from these 3 pits may be amenable to discharge to the city sewer. The city wastewater treatment plant should be contacted and respective analyses offered prior to discharge.

Pit P4 (3 pits) appears to contain only sand with no visual contamination. Laboratory analysis indicated no RCRA contaminant levels in this sample. The contents of these pits may be disposed in a sanitary landfill.

3.3 Paint Chips

Metal-containing pigments were often constituents of industrial paints and coatings. The heat treat and machine shop areas of the main building contain large areas of peeling paint from beams, ceilings and walls. Much of this paint has fallen to the floor in these areas. Results of laboratory analysis for PP1 (heat treat) did not indicate levels of the 8 RCRA metals above the regulatory limits (Table 2).

Sample PP2, composited from the machine shop, however, indicated a lead level of 32.2 ppm E.P. Toxic *. The regulatory level for lead is 5 ppm. Based on this analysis, the paint chips from the machine shop may require disposal as a hazardous waste.

3.4 Groundwater Monitoring Wells

Volatile organic compounds were the only priority pollutants found in the monitoring well samples W-1, W-4 and S-3. No other priority pollutants were detected in any of the well samples. Table 3 shows comparison results from monitoring well samples from past assessment studies as well as this investigation. In particular, halogenated organic volatile compounds are the important contaminants that show a history of presence in the wells.

Well W-4: BEST sampling confirmed the presence of 1, 1-Dichloroethane, Chloroethane and particularly 1, 1, 1-Trichloroethane (TCA), which was detected in all three studies at comparable concentrations.

* Extraction Procedure Toxic

Harza found
Low

Well S-3: BEST found relatively high levels of 1, 1-Dichloroethane, 1, 1, 1-Trichloroethylene, and cis-1, 2-Dichloroethene, the former two at concentrations similar to the 1984 Canonie study. Harza found lower concentrations of these contaminants. BEST samples detected several more halogenated organic compounds at S-3 not detected in either of the previous studies.

waterfound
Aug 1990

Well W-1: BEST results indicated the presence of 1, 1-Dichloroethane (DCA) and 1, 1, 1-Trichloroethane. Previous studies did not detect any volatile organic compounds at W-1.

Below
1: buried
2: don't think it's buried

Well W-8: BEST results indicated non-detectable levels of volatiles at this location. Canonie study also indicated absence of detectible volatiles at W-8.

4.0 SUMMARY AND CONCLUSIONS

In August and September, 1990, BEST Environmental, Inc. investigated potential contamination from beneath the floor of the main plant building, foundry and solvent still building. Pit contents and paint chip samples from the main building as well as groundwater monitoring well samples were also analyzed. The primary findings of the investigation were:

1. No localized subsurface contamination was found at any of the 31 coring locations sampled.
2. Pit contents analysis indicated one pit sample characterized as a RCRA hazardous waste, 6 pit samples characterized as non-hazardous but requiring "special waste" disposal, and 3 pit samples characterized as non-hazardous and either amenable to city sewer discharge or not requiring disposal as waste.
3. Paint chip analysis indicated no RCRA metals present in sample collected from the heat treat area. The sample collected from the machine shop contained E.P. Toxic lead concentrations exceeding the regulatory level. Paint chips from this area may require disposal as hazardous waste.

4. Volatile organic compounds and particularly halogenated volatiles, were confirmed in monitoring wells W-4 and S-3. Past studies have shown that the southwest corner of the main building near the old waste oil tank to be the most likely source of the groundwater contamination on the site. Data from soil borings and monitoring well analysis confirmed contaminant levels in this area (Canonie, Harza and BEST studies). Analysis of apparent down gradient wells W-1 and W-7 have also indicated the presence of similar volatile contaminants.

5. Previous investigations indicated volatile organic compound contamination in the sediments of ponds #4 and #5. These sediments may require remediation.

Based upon areas sampled, this assessment has shown that there is no evidence that past process operations in the main plant building, foundry and solvent still building have contributed to localized subfloor contamination.

Paint chip disposal from the machine shop area may involve considerable cost based on the size of the room, the volume of paint chip waste produced, the difficulty in removal and whether it must be disposed as a hazardous waste. *pb?*

Contamination from the W-4 and S-3 well locations are sources for concern at the site. In addition, past studies have indicated the presence of chlorinated volatile compounds in the old pond sediments as well as the groundwater downgradient of the ponds, at W-2 and W-5 (Table 3). Past assessment reports have indicated that the ponds were filled in with no remediation activities enacted. Contaminated sediments from these pond areas may still be a potential source of groundwater contamination.

ECK

Informal conversations with Indiana Department of Environmental Management (IDEM) indicated that a state-run water quality program will soon be implemented which will enforce both Indiana Interim Ground Water Standards as well as adopting the Federal EPA Drinking Water Regulations (maximum contaminant levels MCLs) as clean up guidelines. Two of the contaminants found on the site, particularly at S-3, exceed the MCLs. 1,1,1-Trichloroethane (MCL=200 ppb) and Trichloroethylene (MCL=5 ppb) were found at S-3 in concentrations exceeding their respective MCL. These concentration levels may be key factors in clean up decisions should IDEM elect to use the Federal Drinking Water Standards as guidelines for remediation. The Canonic Assessment in 1984 noted the Olive Street well field, located approximately 4,000 feet east of the Torrington site, as a source of potable water for the City of South Bend. Although some of the wells in the field were out of service in the past, the City of South Bend Water Treatment Works indicated that at least four wells in the field are presently used as a source of potable water.

Based on the above discussion, it is BEST's opinion that there is potential for considerable groundwater contamination and therefore, environmental liability, at the site.

5.0 RECOMMENDATIONS AND REMEDIATION COST ESTIMATES

5.1 Pit Contents

BEST would recommend remediation in the form of off-site disposal for pit contents as summarized in Table 1. Estimated costs for off-site disposal are as follows:

Pit	Material	Volume	Cost	
P2				
P6	Oily solids, debris	~15 cu yd	\$3,600.00	Waste Liquid For Disposal
P8				
P3	Oily sludge (hazardous)	1 drum	\$1,300.00	Waste Liquid For Disposal
P5				
P7	Oil, sludge debris (liquid)	~10 drums	\$8,700.00	
P10				
TOTAL PIT COST ESTIMATE:				\$13,600.00

5.2 Paint Chips

Remedial cost are unable to be determined at this time due to difficulty in assessing removal techniques and waste dilution factors.'

5.3 Groundwater and Soil Contamination

To adequately assess the extent of groundwater and pond sediment contamination on the site, it is recommended that an extensive subsurface investigation be performed. The investigation would also determine if any contamination is migrating onto the property from off-site, and also if any on-site contamination is migrating off-site. Subsequent to defining the contamination extent, the remediation technology could then be recommended and implemented. The standard for the groundwater remediation is to bring the groundwater into compliance with all relevant federal, state and local environmental statutes, regulations and policies.

An applicable investigation is described below with estimated costs. Also included are applicable remediation alternatives and estimated costs for site remediation.

5.3.1 Subsurface Investigation

	<u>COST</u>
- 20 soil borings to 50'-60' with continuous split spoon sampling and analysis	\$30,000.00
- Develop 10 wells and perform analysis	\$29,000.00
- Data analysis and report	\$ 8,000.00
TOTAL ESTIMATED COST	<hr/> <u>\$67,000.00</u>

This is just a
guesstimate

5.3.2 Site Remediation

Remediation Methods:

- Groundwater pumping and treatment by air stripping and carbon adsorption, or sewer discharge.
- Soil venting/vapor extraction and carbon absorption.
- Excavation/disposal
- Bioremediation - Oxygen and nutrient introduction with biodegradation.

Costs:

As a means of providing cost estimates for remediation activities, past experience has indicated that site investigation costs typically represent 20% of the total remediation costs for the project. Using the \$67,000.00 subsurface investigation cost figure, a projected remediation cost estimate may be.....\$335,000.00 A 30% contingency margin added.....\$100,500.00

TOTAL POTENTIAL REMEDIATION COST: \$435,500.00.

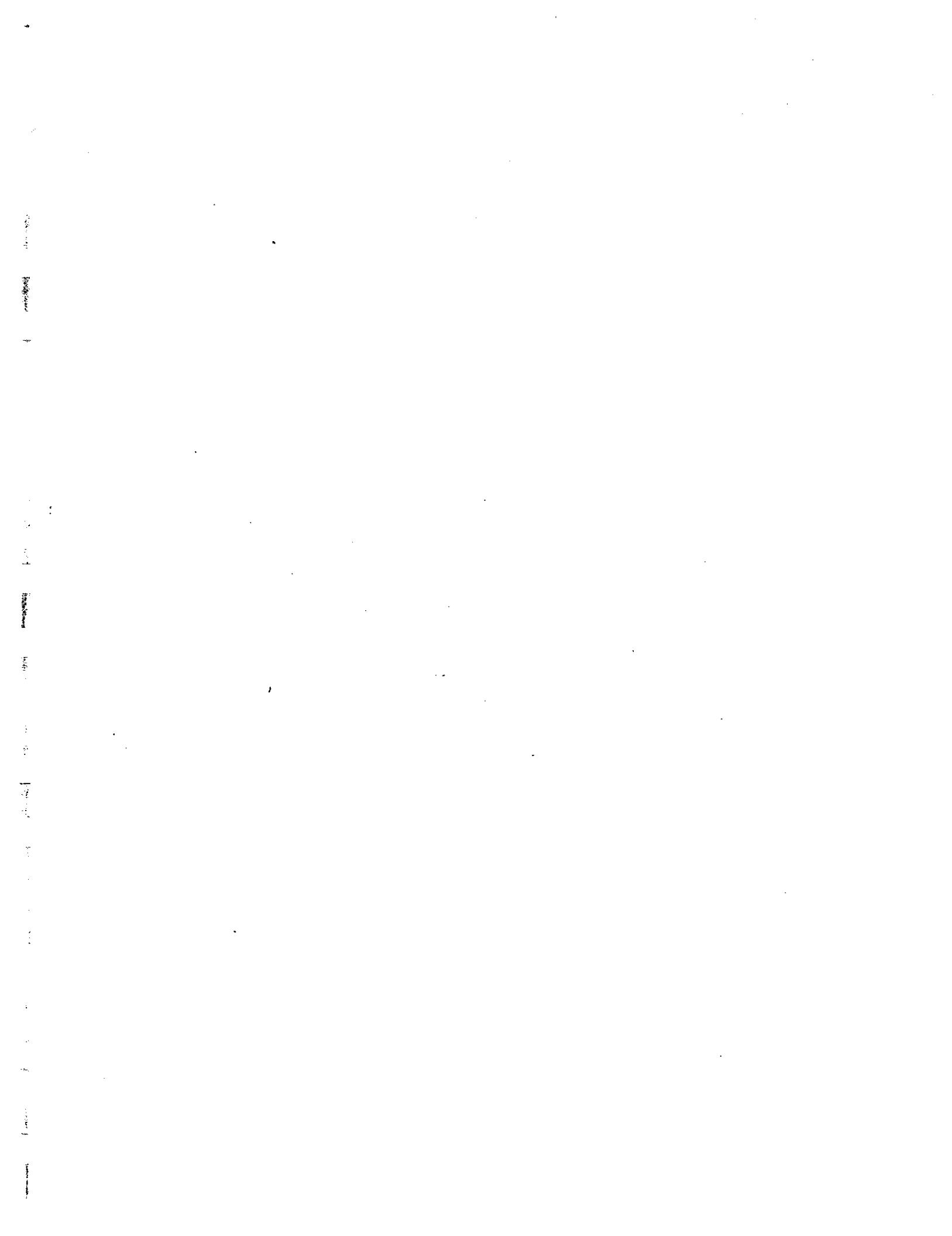


TABLE 1.
ANALYSIS RESULTS FOR PIT CONTENTS
AND RECOMMENDED DISPOSAL

PIT	LOCATION	MATERIAL	ANALYSIS	APPROX.	DISPOSITION OF CONTENTS
			RESULT	VOLUME	
P1 a,b	Grind	Water	NH	500-1000 Gallons	Apply For Permit To Discharge to City Sewer
P2 a,b,c	Grind	Sludge	NH	1 Drum**	Dispose at Licensed TSD Facility As Special Waste (Landfill)
P3	Grind	Oil Stained Sludge	126 ppm Barium TCLP*	1 Drum	Dispose at Licensed TSD Facility as Hazardous Waste
P4 a,b,c	Grind	Sand	NH	"5 Cu Yds	Disposal Unnecessary
P5 a,b,c	Grind, Shipping	Oil & Sludge	NH	3 Drums	Dispose at Licensed TSD Facility as Special Waste
P6	Machine Shop	Sludge	NH	1 Drum	Combine With P2 & Landfill as Special Waste
P7	Lg Machine	Solvents Oil, Water	NH	3 Drums	Dispose at Licensed TSD Facility
P8 a,b,c,d	Heat Treat	Oily Sand, Oil Dri	NH	10 Cu Yds	Combine With P2 & P6 & Landfill as Special Waste
P9	Heat Treat	Sewage & Water	NH	"200 Gallons	Apply For Permit To Discharge To City Sewer
P10	Heat Treat	Oil, Water	NH	3 Drums	Dispose at License TSD Facility

NOTES: NH = Non-Hazardous

* Hazard Level = 100 ppm TCLP

** 55 Gallon Capacity

TABLE 2.
ANALYSIS RESULTS FOR PAINT CHIP
SAMPLES AND RECOMMENDED DISPOSAL

Paint Chip Sample =====	Location =====	Result =====	Disposal =====
1	Heat Treat	NH	Unnecessary
2	Machine Shop	32.2 ppm EP Toxic Lead*	Disposal at Licensed TSD Facility

NOTES: NH = Non-Hazardous

* Hazardous Level = 5.0 ppm E.P. Toxic

TABLE 3.

11/20/90

COMPARISON OF RESULTS FOR MONITORING WELLS W-2, W-4
W-5, S-3, W-7 AND W-8, CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L) (ppm)

WELL	CONTAMINANT	CANONIE	HARZA	BEST	BEST
	*****	*****	*****	*****	*****
W-1	1,1-Dichloroethane (DCA)	ND	NT	0.006	ND
	1,1,1-Trichloroethane (TCA)	ND	NT	0.018	ND
W-4	1,1-Dichloroethane (DCE)	0.065	ND	0.160	0.026
	1,1-Dichloroethylene (DCE)	0.020	0.010	ND	ND
	1,1,1-Trichloroethane (TCA)	0.285	0.470	0.190	0.081
	1,2-Dichloroethane (DCE)	ND	0.094	ND	ND
	Chloroethane (CE)	ND	0.011	0.015	ND
	1,1-Dichloroethene	ND	ND	0.006	ND
S-3	1,1-Dichloroethane (DCA)	3.23	ND, ND	1.600	1.200
	1,1-Dichloroethylene (DCE)	0.15	<0.050, <0.050	ND	ND
	1,1,1-Trichloroethane (TCA)	4.90	0.510, 0.580	5.600	3.600
	1,2-Dichloroethane (DCE)	ND	1.000, 1.200	ND	ND
	Trichloroethylene (TCE)	ND	ND, ND	0.190	0.580
	Trans-1,2-Dichloroethylene	ND	ND, ND	0.017	0.016
	Chloroethane (CE)	ND	<0.100, <0.100	0.110	0.140
	Toluene (TOL)	ND	ND, ND	0.038	0.039
	1,1-Dichloroethene	ND	ND, ND	0.058	0.029
	CIS-1/2-Dichloroethene	ND	ND, ND	3.400	5.500
	Trans-1,2-Dichloroethene	ND	0.220, 0.260	ND	ND
W-2	1,1-Dichloroethane (DCA)	0.030	<0.005	NT	NT
	1,1,1-Trichloroethane (TCA)	0.030	<0.005	NT	NT
W-5	1,1-Dichloroethane (DCA)	0.014	<0.005	NT	NT
	1,1,1-Trichloroethane (TCA)	0.055	<0.005	NT	NT
W-7	1,1-Dichloroethane (DCA)	97.00	ND, ND	NT	NT
	1,1,1-Trichloroethane (TCA)	72.00	0.033, 0.026	NT	NT
	1,1-Dichloroethylene (DCE)	28.00	ND, ND	NT	NT
	1,2-Dichloroethane (DCE)	ND	0.005, <0.005	NT	NT
	Acetone	NT	0.092, 0.062	NT	NT
	1,4-Dimethyl trans - Cyclooctane	NT	0.003, 0.003	NT	NT
W-8		ND	NT	NT	ND*

NOTES: NT = Not Tested
ND = Not Detected

- 1 Canonie Environmental Assessment, 1984
- 2 Harza Environmental Assessment, 1986
- 3 BEST Environmental Assessment, August, 1990
- 4 BEST Environmental Assessment, September, 1990

* Sampling Date October 11, 1990

TABLE 4

Analysis Parameters, Torrington Environmental Assessment,
August - September 1990.

MONITORING WELL SAMPLES

Priority Pollutants:

Volatiles
Semi volatiles
Phenols
Cyanides
Metals
Pesticides
PCB

PAINT CHIP SAMPLES

E.P. Toxic Metals (8)

Arsenic
Barium
Cadmium
Chromium
Lead
Mercury
Silver
Selenium

SOIL CORING SAMPLES

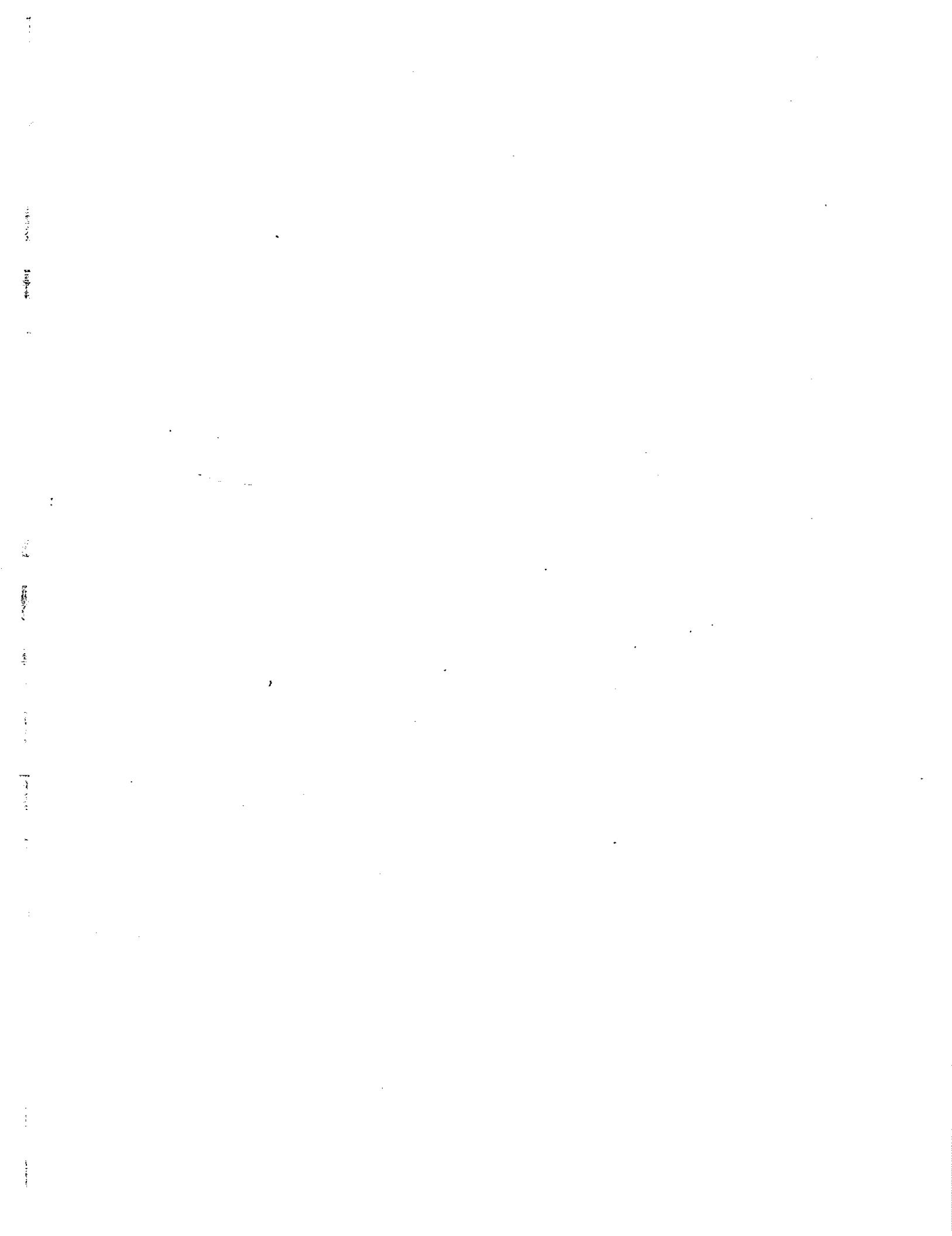
RCRA Contaminants:

Flash Point
PH
Paint Filter
Reactive Sulfide
Reactive Cyanide
F-List Solvents
Metals (E.P. Toxic)
PCB

PIT CONTENTS SAMPLES

RCRA Contaminants:

Flash Point
PH
Paint Filter
Reactive Sulfide
Reactive Cyanide
F-List Solvents
* Metals
PCB
* TCLP For Solids
Samples



BEST

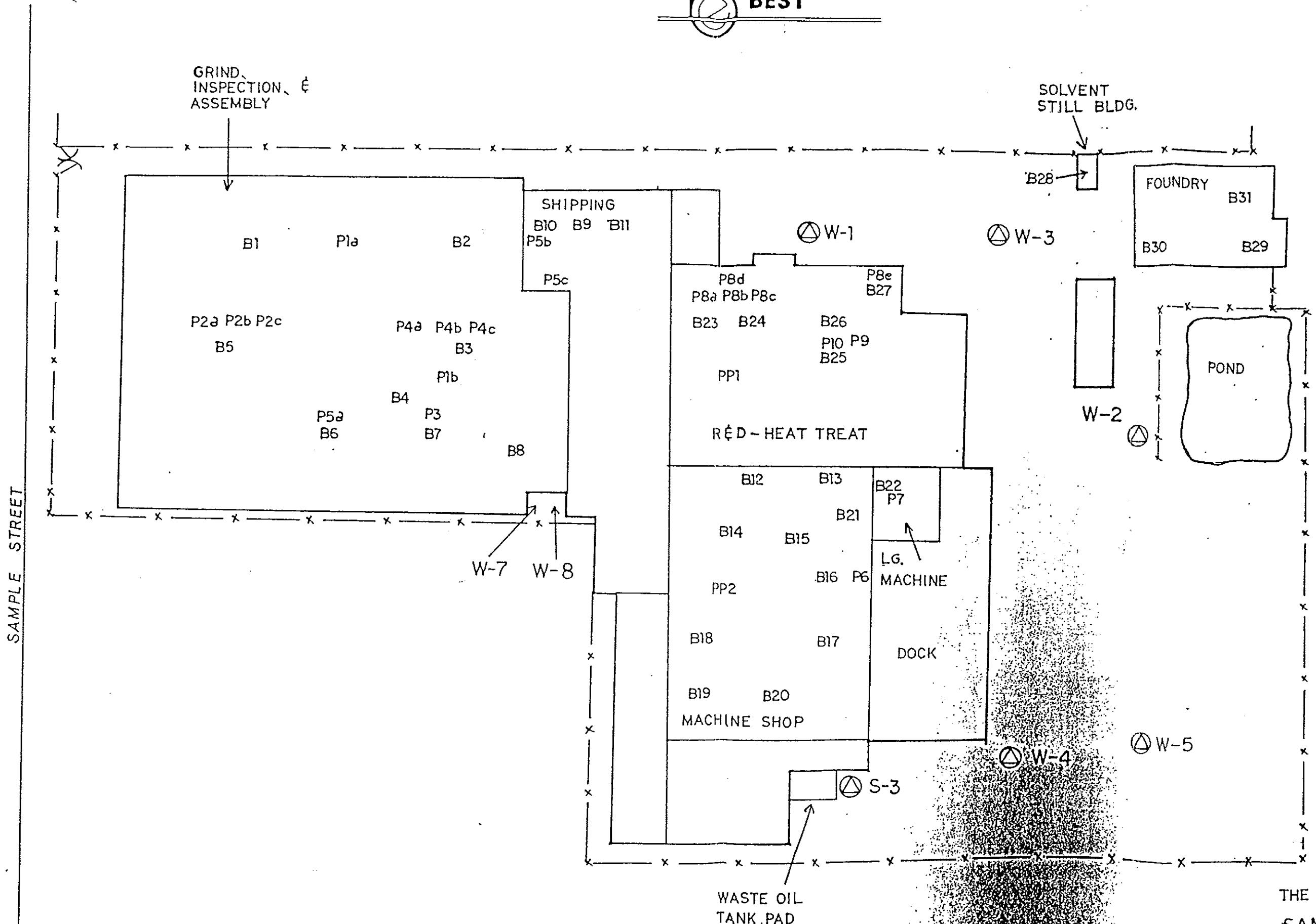


FIGURE 1

LEGEND

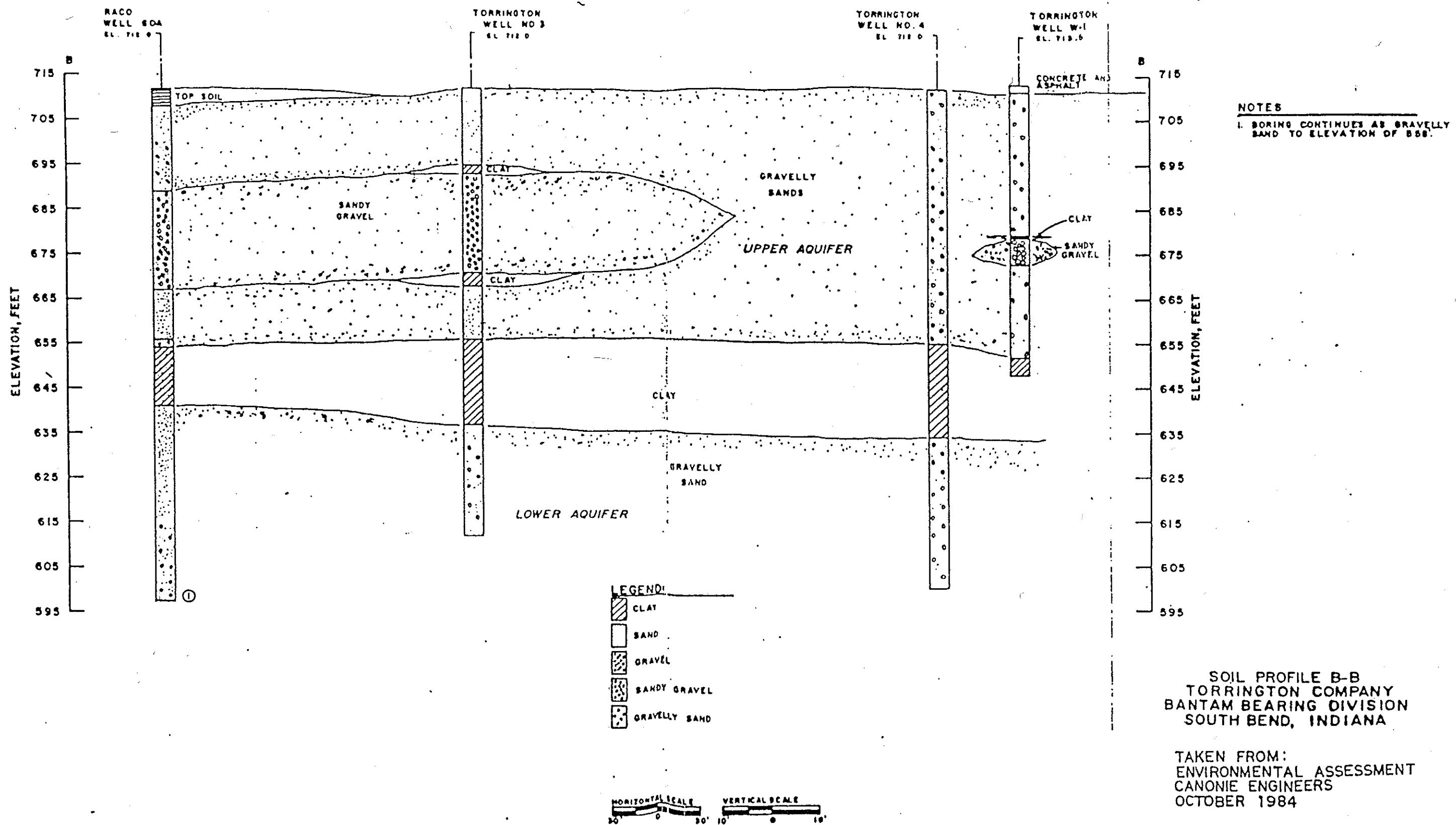
- B1 SOIL CORING
- P1 PIT SAMPLE
- PP1 PAINT CHIP SA
- MONITORING WE
- x— FENCE LINE

N

N.T.S.

THE TORRINGTON COMPANY
SAMPLING PLAN
BEST ENVIRONMENTAL, INC.
OCTOBER 1990

FIGURE 2



INFORMATION SOURCES

1. Canonie Engineers, "Environmental Assessment", 1984
2. HARZA Engineering, "Environmental Assessment", 1986
3. U.S.E.P.A., Office of Drinking Water, "Drinking Water Regulations and Health Advisories", Washington, D.C., April, 1990.
4. U.S.E.P.A., Office of Solid Waste and Emergency Response, "Test Methods For Evaluating Solid Waste". Washington, D.C., November 1986. Third Edition.

APPENDIX A

APPENDIX A

Methodology

Soil Corings

The coring locations were marked on the concrete floor with paint to facilitate future reference (Figure 1). The 31 concrete coring holes were made utilizing rotary coring machines. When the concrete floor at each sampling location was penetrated, the core and all cuttings were removed from the hole. The subfloor soil was then sampled to a depth of 18" using a stainless steel trowel or auger. The sample was placed in a stainless steel pan and thoroughly mixed to ensure homogeneity prior to filling sample containers. Three sample containers were filled at each location. Soil coring samples were analyzed for RCRA contaminants (Appendix B). All sampling equipment was decontaminated with a detergent wash and deionized water rinse prior to proceeding to the next location. Field log sheets were completed for each coring location.

Pit Samples

Representative samples were collected from each pit with either stainless steel trowel or glass sampling container depending on whether the material was liquid or solid. Composites were made of pits containing similar materials. A total of 10 composites were analyzed representing 20 total pits. Four sample containers were filled at location and analyzed for RCRA contaminants (Appendix B). All sampling equipment was thoroughly decontaminated between locations with a detergent wash and deionized water rinse. Pits sampled were indicated by painting a number on the floor next to each pit for future reference (Figure 1). Field log sheets were completed for each pit location.

Paint Chips

Paint chips were collected from representative areas in both the heat treat and machine shop rooms of the main plant. Two sample containers were filled at each location and analyzed for the 8 RCRA metals (Appendix B). Field log sheets were completed for each location.

Groundwater Monitoring Wells

Well S-3 was destroyed during past remediation activities. BEST reinstalled the well during this investigation for inclusion

Were Sam. Discovered
for S-3?

in the sampling plan. A B-40 truck-mounted drill rig was used to install the well. The rig was equipped with a rotary head and hollow-stem augers. All augers and well components were thoroughly cleaned with a trisodium phosphate (TSP) solution and a high pressure water rinse prior to installation. The well materials consisted of 2 inch stainless steel flush joint riser and factory slotted (#10) screen. The well screen was positioned at the bottom of the auger hole at the same level as previously installed. The borehole annulus was filled with native formation backfill to a depth of 5 feet below the surface. A 2 foot bentonite seal was placed in the annulus above the backfill. Finally, concrete was placed in the annulus above the bentonite seal to surface and an 8 inch flush mount cover installed. A locking cap was provided for the well. The well log is provided in Appendix C.

Does not seem to be sufficient
(2-1) A peristaltic pump and teflon tubing were used to develop the wells prior to sampling. The wells were considered developed when 3 casing volumes were removed from the well and the extracted water was free of "fines". Eight (8) sample containers were filled at each well location. Each well sample was analyzed for priority pollutants (Appendix B). All sampling equipment was decontaminated between locations with a trisodium phosphate/hexane/deionized water rinse to avoid cross contamination. A field log sheet was completed for each location.

Shipping and Chain-of-Custody

Environmental Consultants, Inc. (ECI) provided all sampling containers and shipping coolers. All sample containers were labeled prior to filling. After collection, samples were immediately placed in a cooler with "blue ice" for shipment. Prior to shipment a chain-of-custody record was completed and signed by the field technician and the courier. The form was then placed inside the cooler for transport. A synopsis of analysis to be performed also accompanied each shipment. Federal Express "Priority #1" service was utilized to ensure next day delivery to the laboratory.

Quality Assurance/Quality Control

ECI provided all sample containers for this investigation. As part of the sampling protocol, field blanks and rinsate blanks were collected and analyzed along with the project samples. A field blank and rinsate blank was collected and analyzed for every 10 soil corings and pit samples. A field blank and a rinsate blank also accompanied each set of groundwater samples. ECI performed in-house quality assurance/quality control procedures as part of standard laboratory protocol.

ANALYTICAL METHODS, TORRINGTON ASSESSMENT

SW-846 Method *

MONITORING WELL SAMPLES

Priority Pollutants:

Volatiles	8240
Semi Volatiles	8270
pH, Total	9065
Cyanide, Total	9010
Metals	1310/variou
Pesticides/PCB	8080

SOIL CORING SAMPLES

RCRA Contaminants:

Flash Point	1010
pH	9040
Paint Filter	9095
Reactive Sulfide	Sec. 7.3.4.1
Reactive Cyanide	Sec. 7.3.3.2
F-List Solvents	8010/8020
Metals (E.P. Toxic)	1310/variou
PCB	8080

PAINT CHIP SAMPLES

E.P. Toxic Metals (8)	1310/variou
-----------------------	-------------

PIT CONTENT SAMPLES

(Same as soil corings except TCLP metals) 8240/1310

* See References

APPENDIX B

ENVIRONMENTAL CONSULTANTS INC.

391 Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481



**Environment
Consultants**

Professional Laboratory Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Soil

Date Collected
08-07-90

Parameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB(s)

Remarks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.

Laboratory Report

Date

09/05/90

Page 1

Lab Control No

► 10,372

P.O. Number

0609

Job No.

0073

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total	<0.166 mg/kg	08/16/90	Rogers	Distillation Chloroform extract
Total React. Cyanide	<0.02 mg/kg	08/13/90	Hoover	Colorimetric
Total React. Sulfide	0.99 mg/kg	08/13/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	Passed	08/08/90	Cariel	Visual
pH(w)	8.60	08/10/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/13/90	Davis	
F-List Solvent Scan (2)	None Detected	08/20/90	Peyton	Gas chromatograph, PID, HECD and FID
Total PCB(s)	None Detected DL = 1 mg/kg	08/14/90	Peyton	Gas chromatograph Electron capture

State Certification No. M-10-1

Analysis Reviewed
By *Brad Corrin*



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
SoilDate Collected
08-07-90

Parameter

EPA EXTRACTION PROCEDURE

Date Received
08/08/90Sample Type
GRABCollected By
ClientLocation
Sample B-1

Date

09/05/90

Page 2

Lab Control No

► 10,372

P.O. Number
0609Job No.
00735

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
EPA EXTRACTION PROCEDURE	COMPLETED	08/24/90	Vick	SW-846 Test Methods Evaluating Solid Waste
Arsenic (leachate)	0.005 mg/l	08/30/90	Isler	Atomic absorption Graphite furnace
Manganese (leachate)	(0.01 mg/l	08/31/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.007 mg/l	08/31/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l	08/31/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l	08/31/90	Isler	Flame atomic abs.
Mercury (leachate)	0.0003 mg/l	08/30/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.003 mg/l	08/29/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.015 mg/l	08/31/90	Isler	Flame atomic abs.

SEP 17 1990

Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481


**Environment
Consultants**

Private Laboratory Service

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1

Lab Control No

10,440

P.O. Number

0609

Job No.
00735

To:

As above

Sample Description

Soil

Date Collected

08-08-90

Date Received

08/09/90

Sample Type
GRABCollected By
ClientLocation
Boring B-2Time of Collection
00:00 :

Diameter

Phenols, total

Results

<0.25 mg/kg

Date Analyzed

08/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extracti

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/30/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.10

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED.

08/13/90

Davis

F-List Solvent Scan (2)

None Detected

08/20/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected
DL = 1 mg/kg

08/14/90

Peyton

Gas chromatography
Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.

State Certification No. M-10-1

 Analysis Review
By *Boddinage*
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

10,440

P.O. Number

0609

Job No
00735

To:

As above

Sample Description
SoilDate Collected
08-08-90Date Received
08/09/90Sample Type
GRABCollected By
ClientLocation
Boring B-2Time of Collection
00:00 :

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
EPA EXTRACTION PROCEDURE	COMPLETED	08/14/90	Vick	SW-846 Test Methods Evaluating Solid Wa
Arsenic (leachate)	0.006 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Barium (leachate)	0.24 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.004 mg/l	08/17/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l	08/16/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l	08/20/90	Isler	Flame atomic abs.
Mercury (leachate)	(0.0002 mg/l	08/15/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.004 mg/l	08/21/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.013 mg/l	08/20/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1

Lab Control No.

10,441

P.O. Number

0609

Job No.

00735

To

As above

Sample Description

Soil

Date Collected

08-08-90

Date Received

08/09/90

Sample Type

GRAB

Collected By

Client

Location

Boring B-3

Time of Collection

00:00 :

Diameter

Phenols, total

Results

<0.25 mg/kg

Date Analyzed

08/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extracti

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Method of Analysis

Total React. Sulfide

<0.49 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

08/27/90

Analyst

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/09/90

Analyst

Cariel

Visual

pH(w)

7.95

Date Analyzed

08/09/90

Analyst

Rogers

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/14/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/21/90

Analyst

Peyton

Gas chromatography

PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

Date Analyzed

08/14/90

Analyst

Peyton

Gas chromatography

Electron capture

Remarks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory R-

Date

08/31/90

Lab Control No

10,441

P.O. Number

0609

Bill To:

As above

Sample Description Soil	Date Received 08/09/90	Sample Type GRAB	Location Boring B-3	Time of Collection 00:00 :	Method of Anal
Parameter	Results	Collected By Client	Date Analyzed	Analyst	
EPA EXTRACTION PROCEDURE	COMPLETED		08/21/90	Vick	SW-846 T-Evaluati
5 Arsenic (leachate)	0.004 mg/l		08/27/90	Isler	Atomic a Graphite
100 Barium (leachate)	0.08 mg/l		08/28/90	Isler	Flame at
1 Cadmium (leachate)	<0.002 mg/l		08/28/90	Isler	Flame at
5 Chromium (leachate)	<0.01 mg/l		08/28/90	Isler	Flame at
5 Lead (leachate)	<0.03 mg/l		08/24/90	Isler	Flame a
0.2 Mercury (leachate)	<0.0002 mg/l		08/24/90	Hostettler	Atomic Cold va
1.0 Selenium (leachate)	0.005 mg/l		08/27/90	Isler	Atomic Graphit
5.0 Silver (leachate)	<0.002 mg/l		08/28/90	Isler	Flame a

Remarks

State Certification No. M-10-1

Analysis Reviewed
By *Rod Carriger*
ORIGINAL



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1

of 2

Lab Control No

► 10,442

P.O. Number

0609

Job No.

007357

To:

As above

Sample Description

Soil

Date Collected

08-08-90

Date Received

08/09/90

Sample Type

GRAB

Location

Boring B-4

Collected By

Client

Time of Collection

00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.156 mg/kg

08/16/90

Rogers

Distillation

Chloroform extraction

Total React. Cyanide

0.03 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F.

08/27/90

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

7.68

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

08/14/90

Peyton

Gas chromatography
Electron capture

Marks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/31/90

Page 1

Lab Control No

10,442

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Date Collected

08-08-90

Parameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB(s)

Remarks

Sample Type	Location		
GRAB	Boring B-4		
Date Received	Collected By	Time of Collection	
08/09/90	Client	00:00 :	
Results	Date Analyzed	Analyst	Method of Analysis
(0.156 mg/kg)	08/16/90	Rogers	Distillation Chloroform extraction
0.03 mg/kg	08/13/90	Hoover	Colorimetric
(0.49 mg/kg)	08/13/90	Hoover	Titrimetric
>210. deg. F	08/27/90	Mattingly	Pensky-Martens Closed Cup
See Comments	08/09/90	Cariel	Visual
7.68	08/09/90	Rogers	Electrometric
PERFORMED	08/14/90	Davis	
None Detected	08/21/90	Peyton	Gas chromatography PID, HECD and FID
None Detected DL = 1 mg/kg	08/14/90	Peyton	Gas chromatography Electron capture

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To
As above

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

10,442

P.O. Number

0609

Job No.

007357

Sample Description
Soil

Date Collected
08-08-90

Date Received
08/09/90

Sample Type
GRAB

Collected By
Client

Location
Boring B-4

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Vick

Analyst

Method of Analysis
SW-846 Test Methods
Evaluating Solid Was-

EPA EXTRACTION PROCEDURE

COMPLETED

Arsenic (leachate)

0.005 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.08 mg/l

08/28/90

Isler

Flame atomic abs.

Cadmium (leachate)

(0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Chromium (leachate)

(0.01 mg/l

08/28/90

Isler

Flame atomic abs.

Lead (leachate)

(0.03 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (leachate)

(0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.006 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

(0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Remarks



Sample Source
Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date 08/31/90 Page 2
Lab Contro. No. 10,442
P.O. Number 0609 Job No. 007357

Sample Description Soil	Sample Type GRAB	Location Boring B-4	Time of Collection 00:00 :	Method of Analysis
Date Collected 08-08-90	Date Received 08/09/90	Collected By Client		
Parameter	Results	Date Analyzed	Analyst	
EPA EXTRACTION PROCEDURE	COMPLETED	08/21/90	Vick	SW-846 Test Methods Evaluating Solid Wa
Arsenic (leachate)	0.005 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Barium (leachate)	0.08 mg/l	08/28/90	Isler	Flame atomic abs.
Cadmium (leachate)	(0.002 mg/l	08/28/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l	08/28/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l	08/24/90	Isler	Flame atomic abs.
Mercury (leachate)	(0.0002 mg/l	08/24/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.006 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	(0.002 mg/l	08/28/90	Isler	Flame atomic abs.

Remarks

State Certification No. M-10-1

Analysis Reviewed
By *Bardering*
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

10,442

P.O. Number

0609

Job No.

007357

To:

As above

Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRAB

Collected By

Client

Location
Boring B-4Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/21/90

Vick

SW-846 Test Methods
Evaluating Solid Was

Arsenic (leachate)

0.005 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.08 mg/l

08/28/90

Isler

Flame atomic abs.

Cadmium (leachate)

<0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/28/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (leachate)

<0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.006 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

<0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above**Laboratory Report**

Date

08/31/90

Page 1

of 2

Lab Control No

10,443

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Collected

08-08-90

Date Received

08/09/90

Sample Type
GRAB

Collected By

Client

Location
Boring B-5Time of Collection
00:00 :

Diameter

Phenols, total

Results

0.35 mg/kg

Date Analyzed

08/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Method of Analysis

Colorimetric

Total React. Sulfide

0.49 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Method of Analysis

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

08/27/90

Analyst

Mattingly

Method of Analysis

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/09/90

Analyst

Cariel

Method of Analysis

Visual

pH(w)

7.35

Date Analyzed

08/09/90

Analyst

Rogers

Method of Analysis

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/14/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/21/90

Analyst

Peyton

Method of Analysis

Gas chromatography

PID, HECD and FID

Total PCB(s)

None Detected

Date Analyzed

08/15/90

Analyst

Taylor

Method of Analysis

Gas chromatography

Electron capture

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1 of 2

Lab Control No

10,443

P.O. Number

0609

Job No.

007357

To

As above

Sample Description

Soil

Date Collected
08-08-90

Date Received

08/09/90

Sample Type

GRAB

Location

Boring B-5

Collected By

Client

Time of Collection

00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

0.35 mg/kg

08/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/27/90

Mattingly

Penksy-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

7.35

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

08/15/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/31/90

Page 1

Lab Control No

10,444

P.O. Number

0609

Job No.

007357

Sample Description
Soil

Date Collected
08-08-90

Date Received

08/09/90

Sample Type
GRAB

Collected By
Client

Location
Boring B-6

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.23 mg/kg

08/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/27/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.25

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

08/14/90

Peyton

Gas chromatography
Electron capture

Remarks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1

of 2

Lab Control No

10,444

P.O. Number
0609Job No.
007357

To:

As above

Sample Description

Soil

Date Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABCollected By
ClientLocation
Boring B-6Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.23 mg/kg

08/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/27/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.25

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

08/14/90

Peyton

Gas chromatography
Electron capture

Marks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Environmental Laboratory Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 2

of 2

Lab Control No

► 10,444

P.O. Number

0609

Job No.

007357

To:

As above

Sample Description
Soil

Date Collected
08-08-90

Parameter

EPA EXTRACTION PROCEDURE

Arsenic (leachate)

Barium (leachate)

Cadmium (leachate)

Chromium (leachate)

Lead (leachate)

Mercury (leachate)

Selenium (leachate)

Silver (leachate)

Remarks

Date Received

08/09/90

Sample Type
GRAB

Collected By
Client

Location
Boring B-6

Time of Collection
00:00 :

Results

COMPLETED

Date Analyzed

08/14/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid Waste

Atomic absorption
Graphite furnace

Flame atomic abs.

Flame atomic abs.

Flame atomic abs.

Flame atomic abs.

Atomic absorption
Cold vapor

Atomic absorption
Graphite furnace

Flame atomic abs.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/31/90

Page 1

of 2

Lab Control No

10,445

P.O. Number

0609

Job No.

007357

Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABLocation
Boring B-7Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.25 mg/kg

08/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/27/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

6.77

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected

08/15/90

Taylor

Gas chromatography
Electron capture

DL = 1 mg/kg

Remarks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

10,445

P.O. Number

0609

Job No

007357

To:

As above

Sample Description

Soil

Date Collected

08-08-90

Date Received

08/09/90

Sample Type

GRAB

Collected By

Client

Location

Boring B-7

Time of Collection

00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE	COMPLETED	08/14/90	Vick	SW-846 Test Methods Evaluating Solid Was-
Arsenic (leachate)	0.003 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Barium (leachate)	0.14 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.002 mg/l	08/17/90	Isler	Flame atomic abs.
Chromium (leachate)	<0.01 mg/l	08/16/90	Isler	Flame atomic abs.
Lead (leachate)	<0.03 mg/l	08/20/90	Isler	Flame atomic abs.
Mercury (leachate)	<0.0002 mg/l	08/20/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.006 mg/l	08/21/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	<0.002 mg/l	08/20/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/04/90

Page 1

Lab Control No

10,451

P.O. Number

0609

Job No.

007357

To:

As above

Sample Description

Soil

Date Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABLocation
Boring B-12Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

(0.246 mg/kg)

08/16/90

Rogers

Distillation

Chloroform extractic

Total React. Cyanide

(0.02 mg/kg)

08/20/90

Hoover

Colorimetric

Total React. Sulfide

0.49 mg/kg

08/20/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.10

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography

PID, HECD and FID

Total PCB(s)

None Detected
DL = 1 mg/kg

08/15/90

Taylor

Gas chromatography

Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Sample Description
Soil

Date Collected
08-08-90

Date Received
08/09/90

Sample Type
GRAB

Collected By
Client

Location
Boring B-12

P.O. Number
0609

Job No.
007357

Date
09/04/90

Page 2 of 2

Lab Control No
10,451

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/21/90

Vick

SW-846 Test Methods
Evaluating Solid Waste

Arsenic (leachate)

0.011 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Sodium (leachate)

0.14 mg/l

08/28/90

Isler

Flame atomic abs.

Cadmium (leachate)

<0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/28/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (leachate)

<0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.005 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.003 mg/l

08/28/90

Isler

Flame atomic abs.

parts



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Soil

Date Collected
08-08-90

Date Received
08/09/90

Sample Type
GRAB

Location
Boring B-8

Collected By
Client

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

0.24 mg/kg

08/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

0.99 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/31/90

Taylor

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

7.93

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected
DL = 1 mg/kg

08/15/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Sample Description
SoilDate Collected
08-08-90Date Received
08/09/90Sample Type
GRABLocation
Boring B-8Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/14/90

Vick

SW-846 Test Methods
Evaluating Solid Was

Arsenic (leachate)

0.002 mg/l

08/17/90

Hostettler

Atomic absorption
Graphite furnace

Barium (leachate)

0.14 mg/l

08/16/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.002 mg/l

08/17/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/16/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/20/90

Isler

Flame atomic abs.

Mercury (leachate)

(0.0002 mg/l)

08/20/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.006 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

(0.002 mg/l)

08/20/90

Isler

Flame atomic abs.

arks



Sample Source

Best Environmental
P.O. Box 576
ISS & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date 09/04/90 Page 1 of

Lat Control 10, 447

P.O. Number 0E09

Job No 007357

Sample Description Soil	Sample Type GRAB	Location Boring B-9		
Date Collected 08-08-90	Date Received 08/09/90	Collected By Client		Time of Collection 00:00 :
Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total	(0.215 mg/kg	08/16/90	Rogers	Distillation Chloroform extractic
Total React. Cyanide	(0.02 mg/kg	08/13/90	Hoover	Colorimetric
Total React. Sulfide	0.99 mg/kg	08/13/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	See Comments	08/09/90	Cariel	Visual
pH(w)	8.85	08/09/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/14/90	Davis	
F-List Solvent Scan (2)	None Detected	08/21/90	Peyton	Gas chromatography PID, HECD and FID
Total PCB(s)	None Detected DL = 1 mg/kg	08/15/90	Taylor	Gas chromatography Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Sample Description
SoilDate Collected
08-08-90

Parameter

EPA EXTRACTION PROCEDURE

Arsenic (leachate)

Barium (leachate)

Cadmium (leachate)

Chromium (leachate)

Lead (leachate)

Mercury (leachate)

Selenium (leachate)

Silver (leachate)

Remarks

State Certification No. M-10-1

Laboratory Report

Date

09/04/90

Page 2

Lab Control No

10,447

P.O. Number
0609Job No
007357

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
EPA EXTRACTION PROCEDURE	COMPLETED	08/14/90	Vick	SW-846 Test Methods Evaluating Solid Was-
Arsenic (leachate)	0.003 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Barium (leachate)	0.36 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.003 mg/l	08/17/90	Isler	Flame atomic abs.
Chromium (leachate)	<0.01 mg/l	08/16/90	Isler	Flame atomic abs.
Lead (leachate)	<0.03 mg/l	08/20/90	Isler	Flame atomic abs.
Mercury (leachate)	<0.0002 mg/l	08/20/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.003 mg/l	08/21/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.012 mg/l	08/20/90	Isler	Flame atomic abs.

Analysis Reviewed

By

ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/04/90

Page 1

of 2

Lab Control No

10,448

P.O. Number
0609Job No.
007357

To:

As above

Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABCollected By
ClientLocation
Boring B-10Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.250 mg/kg

08/16/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/13/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.44

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/14/90

Davis

F-List Solvent Scan (2)

None Detected

08/21/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected
DL = 1 mg/kg

08/15/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

As above

Laboratory Report

Date

09/04/90

Page 2

Lab Control No

10,448

P.O. Number

0609

Job No.
007357Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABLocation
Boring B-10Collected By
ClientTime of Collection
00:00 :

Parameter

EPA EXTRACTION PROCEDURE

Results

COMPLETED

Date Analyzed

08/14/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid Was

Arsenic (leachate)

0.006 mg/l

08/17/90

Hostettler

Atomic absorption
Graphite furnace

Barium (leachate)

0.27 mg/l

08/16/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.004 mg/l

08/17/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/16/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/20/90

Isler

Flame atomic abs.

Mercury (leachate)

<0.0002 mg/l

08/20/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.007 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.019 mg/l

08/20/90

Isler

Flame atomic abs.

Remarks

ECI 110444

Environmental Consultants
Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481



**Environmental
Consultants**

Environmental Quality Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

08/31/90

Page 1 of 1

Lab Control No

10,449

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description	Sample Type	Location		
Rinse Water	GRAB	Rinsate Blank		
Date Collected	Date Received	Collected By	Time of Collection	
08-08-90	08/09/90	Client	00:00 :	
F-List Solvent Scan (1)	None Detected	08/21/90	Peyton	Gas chromatography PID, HECD and FID
Arsenic, total	0.002 mg/l	08/13/90	Isler	Atomic absorption Graphite furnace
Manganese, total	<0.01 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium, total	0.004 mg/l	08/15/90	Isler	Flame atomic abs.
Chromium, total	0.001 mg/l	08/15/90	Isler	Atomic absorption Graphite furnace
Lead, total	0.001 mg/l	08/15/90	Hostettler	Atomic absorption Graphite furnace
Mercury, total	<0.0002 mg/l	08/10/90	Hostettler	Atomic absorption Cold vapor
Selenium, total	0.006 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Silver, total	<0.002 mg/l	08/15/90	Isler	Flame atomic abs.

marks

(1) See attached list for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis Reviewed
By *Blodgett*
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/04/90

Page 1 of 2

Lab Control No

► 10,450

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
Soil

Sample Collected
08-08-90

Date Received
08/09/90

Sample Type
GRAB

Collected By
Client

Location
Boring B-11

Time of Collection
00:00 :

Parameter

Phenols, total

Results

(0.250 mg/kg)

Date Analyzed

08/16/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

(0.02 mg/kg)

Date Analyzed

08/20/90

Analyst

Hoover

Method of Analysis

Colorimetric

Total React. Sulfide

(0.49 mg/kg)

Date Analyzed

08/20/90

Analyst

Hoover

Method of Analysis

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

09/03/90

Analyst

Mattingly

Method of Analysis

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/09/90

Analyst

Cariel

Method of Analysis

Visual

pH(w)

7.70

Date Analyzed

08/09/90

Analyst

Rogers

Method of Analysis

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/14/90

Analyst

Davis

Method of Analysis

Gas chromatography

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/24/90

Analyst

Clark, T.

Method of Analysis

PID, HECD and FID

Total PCB(s)

None Detected

Date Analyzed

08/15/90

Analyst

Taylor

Method of Analysis

Gas chromatography

DL = 1 mg/kg

Electron capture

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/04/90

Page 2

of 2

Lab Control No

► 10,450

P.O. Number
0609Job No
007357Sample Description
SoilDate Collected
08-08-90Date Received
08/09/90Sample Type
GRABCollected By
ClientLocation
Boring B-11Time of Collection
00:00 :

Parameter

EPA EXTRACTION PROCEDURE	Results	Date Analyzed	Analyst	Method of Analysis
Arsenic (leachate)	<0.002 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Strontium (leachate)	0.49 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.003 mg/l	08/17/90	Isler	Flame atomic abs.
Chromium (leachate)	<0.01 mg/l	08/16/90	Isler	Flame atomic abs.
Lead (leachate)	<0.03 mg/l	08/20/90	Isler	Flame atomic abs.
Mercury (leachate)	<0.0002 mg/l	08/20/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.003 mg/l	08/21/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.003 mg/l	08/20/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/04/90

Page 2 of 2

Lab Control No.

► 10,452

P.O. Number
0609Job No.
007357Sample Description
SoilSite Collected
08-08-90Date Received
08/09/90Sample Type
GRABCollected By
ClientLocation
Boring B-13Time of Collection
00:00 :

Parameter

EPA EXTRACTION PROCEDURE

Results

COMPLETED

Date Analyzed

08/21/90

Analyst

Vick

Method of Analysis
SW-846 Test Methods
Evaluating Solid Waste

Arsenic (leachate)

0.005 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.15 mg/l

08/28/90

Isler

Flame atomic abs.

Cadmium (leachate)

(0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Chromium (leachate)

(0.01 mg/l

08/28/90

Isler

Flame atomic abs.

Lead (leachate)

(0.03 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (leachate)

(0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.004 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.003 mg/l

08/28/90

Isler

Flame atomic abs.

Marks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/04/90

Page 1 of 2

Lab Control No

► 10,453

P.O. Number
0609

Job No.
007357

Sample Description
Soil

Date Collected
08-08-90

Parameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB[s]

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.

Sample Type
GRAB

Collected By
Client

Location
Boring B-14

Time of Collection
00:00 :

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total	<0.244 mg/kg	08/16/90	Rogers	Distillation Chloroform extraction
Total React. Cyanide	<0.02 mg/kg	08/20/90	Hoover	Colorimetric
Total React. Sulfide	4.50 mg/kg	08/20/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	See Comments	08/09/90	Cariel	Visual
pH(w)	8.73	08/09/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/15/90	Davis	
F-List Solvent Scan (2)	None Detected	08/24/90	Clark, T.	Gas chromatography PID, HECD and FID
Total PCB[s]	None Detected DL = 1 mg/kg	08/16/90	Taylor	Gas chromatography Electron capture



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date

09/04/90

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of 2

Lab Control No

10,453

P.O. Number
0609Job No.
007357Sample Description
SoilDate Collected
08-08-90

Parameter

EPA EXTRACTION PROCEDURE

Arsenic (leachate)

Barium (leachate)

Cadmium (leachate)

Chromium (leachate)

Lead (leachate)

Mercury (leachate)

Selenium (leachate)

Silver (leachate)

Remarks

Sample Type
GRABCollected By
ClientLocation
Boring B-14Time of Collection
00:00 :

Results

COMPLETED

Date Analyzed

08/21/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid Wast

0.006 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

0.17 mg/l

08/28/90

Isler

Flame atomic abs.

(0.002 mg/l)

08/28/90

Isler

Flame atomic abs.

<0.01 mg/l

08/28/90

Isler

Flame atomic abs.

<0.03 mg/l

08/24/90

Isler

Flame atomic abs.

<0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

0.005 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

0.003 mg/l

08/28/90

Isler

Flame atomic abs.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/04/90

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of 2

Lab Control No

10,454

P.O. Number

0609

Job No.
007357Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRAB

Collected By

Client

Location

Boring B-15

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

(0.183 mg/kg)

08/16/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

(0.02 mg/kg)

08/20/90

Hoover

Colorimetric

Total React. Sulfide

1.49 mg/kg

08/20/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

08/09/90

Cariel

Visual

pH(w)

8.36

08/09/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/15/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected
DL = 1 mg/kg

08/16/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date

09/04/90

Page 2 of 2

Lab Control No

10,454

P.O. Number

0609

Job No
007357Sample Description
SoilDate Collected
08-08-90Date Received
08/09/90Sample Type
GRABLocation
Boring B-15Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/21/90

Vick

SW-846 Test Methods
Evaluating Solid Wast

Arsenic (leachate)

0.008 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.15 mg/l

08/28/90

Isler

Flame atomic abs.

Cadmium (leachate)

<0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/28/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (leachate)

<0.0002 mg/l

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.006 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.002 mg/l

08/28/90

Isler

Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Chanrahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/11/90

Page 1 of 1

Lab Control No

► 10,455

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
Soil

Date Collected
08-08-90

Parameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB(s)

Remarks

- (1) No free liquid.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/11/90

Page 2

Lab Control No

10,455

P.O. Number

0609

Job No
007357Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRABLocation
Boring B-16Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE	COMPLETED	08/21/90	Vick	SW-846 Test Methods Evaluating Solid Wastes
Arsenic (leachate)	0.008 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Barium (leachate)	0.13 mg/l	08/28/90	Isler	Flame atomic abs.
Cadmium (leachate)	(0.002 mg/l	08/28/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l	08/28/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l	08/24/90	Isler	Flame atomic abs.
Mercury (leachate)	(0.0002 mg/l	08/24/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.004 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	(0.002 mg/l	08/28/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/11/90

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Lab Control No

► 10,455

P.O. Number

0609

Job No.

007357

Sample Description
SoilDate Collected
08-08-90

Date Received

08/09/90

Sample Type
GRAB

Collected By

Client

Location
Boring B-16Time of Collection
00:00 :

Parameter

Quality Control Data

Results

See Attached

Date Analyzed

09/11/90

Analyst

Method of Analysis

Remarks



Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date

09/18/90

Page 1 of 2

Lab Control No.

10,514

P.O. Number

0609

Job No.

007357

Bill To:

As above

Sample Description
SoilDate Collected
08-10-90

Date Received

08/11/90

Sample Type
GRABCollected By
ClientLocation
Sample B-17Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.157 mg/kg

09/11/90

Rogers

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/21/90

Hoover

Colorimetric

Total React. Sulfide

0.99 mg/kg

08/21/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

8.22

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/16/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected
DL = 1 mg/kg

08/16/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/18/90

Page 2

Lab Control No

10,514

P.O. Number

0609

Job No
007357

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-17

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/24/90

Vick

SW-846 Test Methods
Evaluating Solid Wast

Arsenic (leachate)

0.002 mg/l

08/30/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.07 mg/l

08/31/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.004 mg/l

08/31/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/31/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0002 mg/l

08/30/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

0.003 mg/l

08/29/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.002 mg/l

08/31/90

Isler

Flame atomic abs.

Remarks



REFERENCES AND NOTES

Laboratory Report

Date

09/18/90

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Lan Caiwei No.

10,515

Job No
007357

the Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To

As above

Sample Description Soil		Sample Type GRAB	Location Sample B-18	
Date Collected 08-10-90	Date Received 08/11/90	Collected By Client	Time of Collection 00:00 :	
Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total	<0.164 mg/kg	09/11/90	Rogers	Distillation Chloroform extraction
Total React. Cyanide	<0.02 mg/kg	08/21/90	Hoover	Colorimetric
Total React. Sulfide	<0.49 mg/kg	08/21/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	Passed	08/11/90	Cariel	Visual
pH(w)	8.64	08/11/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/16/90	Davis	
F-List Solvent Scan (2)	None Detected	08/24/90	Clark, T.	Gas chromatography PID, HECD and FID
Total PCB(s)	None Detected DL = 1 mg/kg	08/17/90	Taylor	Gas chromatography Electron capture

Remarks

- (1) No free liquids.
(2) See attached list for target compounds & respective detection limits.



**Enviro
Consult**

391 Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory

Date

09/18/90

Lab Control No

10,515

P.O. Number

0609

Bill To:

As above

Sample Description	Sample Type	Location		
Soil	GRAB	Sample B-18		
Date Collected	Date Received	Collected By	Time of Collection	
08-10-90	08/11/90	Client	00:00 :	
Parameter	Results	Date Analyzed	Analyst	Method
EPA EXTRACTION PROCEDURE	COMPLETED	08/24/90	Vick	SW-84 Evalu
Arsenic (leachate)	0.002 mg/l	08/30/90	Isler	Atom Graph
Barium (leachate)	0.08 mg/l	08/31/90	Isler	Flame
Cadmium (leachate)	0.004 mg/l	08/31/90	Isler	Flame
Chromium (leachate)	0.05 mg/l	08/31/90	Isler	Flame
Lead (leachate)	0.03 mg/l	08/31/90	Isler	Flame
Mercury (leachate)	0.0003 mg/l	08/30/90	Hostettler	Atom Cold
Selenium (leachate)	0.004 mg/l	08/29/90	Isler	Atom Graph
Silver (leachate)	0.003 mg/l	08/31/90	Isler	Flame

Remarks

State Certification No. M-10-1

Analysis Reviewed
By *Alton A. Sch*
ORIGINAL



sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Charlestown, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/18/90

Page 1 of 2

Lab Control No

10,516

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-19

Time of Collection
00:00 :

Diameter

Phenols, total

Results

<0.153 mg/kg

Date Analyzed

09/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/21/90

Hoover

Colorimetric

Total React. Sulfide

1.49 mg/kg

08/21/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

8.01

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/16/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected
DL = 1 mg/kg

08/17/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Re-

Date 09/18/90

Lab Control No

10,516

P.O. Number
0609

Bill To:

As above

Sample Description Soil	Date Collected 08-10-90	Date Received 08/11/90	Sample Type GRAB Collected By Client	Location Sample B-19	Time of Collection 00:00 :
Parameter	Results		Date Analyzed	Analyst	Method of Analysis
EPA EXTRACTION PROCEDURE	COMPLETED		08/24/90	Vick	SW-846 Test Evaluation
Arsenic (leachate)	0.003 mg/l		08/30/90	Isler	Atomic absorption Graphite furnace
Barium (leachate)	0.04 mg/l		08/31/90	Isler	Flame atomic absorption
Cadmium (leachate)	0.002 mg/l		08/31/90	Isler	Flame atomic absorption
Chromium (leachate)	(0.01 mg/l		08/31/90	Isler	Flame atomic absorption
Lead (leachate)	(0.03 mg/l		08/31/90	Isler	Flame atomic absorption
Mercury (leachate)	0.0003 mg/l		08/30/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	0.003 mg/l		08/29/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	(0.002 mg/l		08/31/90	Isler	Flame atomic absorption

Remarks

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL

Ronald J. Schaefer



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/06/90

Page 1 of 2

Lab Control No

10,517

P.O. Number

0609

Job No.
007357

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Location
Sample B-20

Collected By
Client

Time of Collection
00:00 :

Diameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

<0.222 mg/kg

08/27/90

Rogers

Distillation

Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/21/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/21/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F.

09/03/90

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

8.14

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/16/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

08/17/90

Taylor

Gas chromatography
Electron capture

- (1) No free liquid.
(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/06/90

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Lab Control No

10,517

P.O. Number

0609

Job No.
007357Sample Description
SoilDate Collected
08-10-90

Date Received

08/11/90

Sample Type
GRABLocation
Sample B-20Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE	COMPLETED	08/28/90	Vick	SW-846 Test Methods Evaluating Solid Wast
Arsenic (leachate)	(0.002 mg/l)	08/30/90	Isler	Atomic absorption Graphite furnace
Manganese (leachate)	0.05 mg/l	08/31/90	Isler	Flame atomic abs.
Cadmium (leachate)	(0.002 mg/l)	08/31/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l)	08/31/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l)	08/31/90	Isler	Flame atomic abs.
Mercury (leachate)	0.0003 mg/l	09/04/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	(0.002 mg/l)	09/05/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.002 mg/l	08/31/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To

As above

Sample Description

Soil

Date Collected

08-10-90

Date Received

08/11/90

Sample Type
GRAB

Location
Sample B-21

Collected By
Client

Time of Collection
00:00

Diameter

Phenolics, total

Results

<0.165 mg/kg

Date Analyzed

09/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Method of Analysis

Colorimetric

Total React. Sulfide

<0.49 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Method of Analysis

Titrimetric

Ignitability (Fl. Pt.),

>210. deg. F

Date Analyzed

09/03/90

Analyst

Mattingly

Method of Analysis

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

Date Analyzed

08/11/90

Analyst

Cariel

Method of Analysis

Visual

pH(w)

8.20

Date Analyzed

08/11/90

Analyst

Rogers

Method of Analysis

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/17/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/24/90

Analyst

Clark, T.

Method of Analysis

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected

DL = 1 mg/kg

Date Analyzed

08/21/90

Analyst

Taylor

Method of Analysis

Gas chromatography
Electron capture

Remarks

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Bardine

To:

As above

Laboratory Report

Date

09/18/90

Page 1

Lab Control No

10,518

P.O. Number

0609

Job No.
00735Sample Description
SoilDate Collected
08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location

Sample B-21

Time of Collection
00:00 :

Diameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB[s]

Remarks

	Results	Date Analyzed	Analyst	Method of Analysis
	(0.165 mg/kg)	09/11/90	Rogers	Distillation Chloroform extract:
	(0.02 mg/kg)	08/21/90	Hoover	Colorimetric
	(0.49 mg/kg)	08/21/90	Hoover	Titrimetric
	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
	Passed	08/11/90	Cariel	Visual
	8.20	08/11/90	Rogers	Electrometric
	PERFORMED	08/17/90	Davis	
	None Detected	08/24/90	Clark, T.	Gas chromatography PID, HECD and FID
	None Detected DL = 1 mg/kg	08/21/90	Taylor	Gas chromatography Electron capture

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory

Date

09/18/90

Lab Control No

10,518

P.O. Number
0609

Bill To:

As above

Sample Description Soil	Date Collected 08-10-90	Date Received 08/11/90	Sample Type GRAB	Collected By Client	Location Sample B-21	Time of Collection 00:00 :
Parameter		Results		Date Analyzed	Analyst	Method of
EPA EXTRACTION PROCEDURE		COMPLETED		08/28/90	Vick	SW-846 Evaluation
Arsenic (leachate)		(0.002 mg/l)		08/30/90	Isler	Atomic Graphite
Barium (leachate)		0.21 mg/l		08/31/90	Isler	Flame
Cadmium (leachate)		(0.002 mg/l)		08/31/90	Isler	Flame
Chromium (leachate)		(0.01 mg/l)		08/31/90	Isler	Flame
Lead (leachate)		(0.03 mg/l)		08/31/90	Isler	Flame
Mercury (leachate)		0.0003 mg/l		07/04/90	Hostettler	Atomic Cold v
Selenium (leachate)		(0.002 mg/l)		09/05/90	Isler	Atomic Graphite
Silver (leachate)		(0.002 mg/l)		08/31/90	Isler	Flame

Remarks



Sample Source

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Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory

Date 09/18
Lab Control No. ▶ 10,51
P.O. Number 0609

Bill To:

As above

Sample Description		Sample Type	Location	
Soil		GRAB	Sample B-22	
Date Collected	Date Received	Collected By	Time of Collection	
08-10-90	08/11/90	Client	00:00	
Parameter	Results	Date Analyzed	Analyst	Method
Phenols, total	(0.159 mg/kg	09/11/90	Rogers	Dist Chlc
Total React. Cyanide	<0.02 mg/kg	08/21/90	Hoover	Calc
Total React. Sulfide	4.99 mg/kg	08/21/90	Hoover	Titr
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pens Clos
Paint Filter Test (1)	Passed	08/11/90	Cariel	Visu
pH(w)	8.76	08/11/90	Rogers	Elec
PCB Extraction	PERFORMED	08/17/90	Davis	
F-List Solvent Scan (2)	None Detected	08/24/90	Clark, T.	Gas PID
Total PCB[s]	None Detected DL = 1 mg/kg	08/21/90	Taylor	Gas Elec

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits



Purchaser:

Laboratory:

Date:

09/16

Lab Control No.:

10,51

P.O. Number:

0609

Sample Source:

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 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Bill To:

As above

Sample Description	Sample Type	Location		
Soil	GRAB	Sample B-22		
Date Collected	Date Received	Collected By	Time of Collection	
08-10-90	08/11/90	Client	00:00	
Parameter	Results	Date Analyzed	Analyst	Method
EPA EXTRACTION PROCEDURE	COMPLETED	08/28/90	Vick	SW-EV
Arsenic (leachate)	(0.002 mg/l)	08/30/90	Isler	At Gr.
Barium (leachate)	0.11 mg/l	08/31/90	Isler	F1
Cadmium (leachate)	(0.002 mg/l)	08/31/90	Isler	F1
Chromium (leachate)	(0.01 mg/l)	08/31/90	Isler	F1
Lead (leachate)	(0.03 mg/l)	08/31/90	Isler	F1
Mercury (leachate)	0.0003 mg/l	09/04/90	Hostettler	At Cc
Selenium (leachate)	(0.002 mg/l)	09/05/90	Isler	At Gr
Silver (leachate)	0.002 mg/l	08/31/90	Isler	F1

Remarks:

State Certification No. M-10-1

Analysis Reviewed
By
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Sample Source

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Laboratory Report

Date

09/18/90

Page 1

Lab Control No

10,520

P.O. Number

0609

Job No
0071

Sample Description

Soil

Date Collected
08-10-90

Date Received

08/11/90

Sample Type
GRABCollected By
ClientLocation
Sample B-23Time of Collection
00:00 :

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total :	0.433 mg/kg	09/11/90	Rogers	Distillation Chloroform extract
Total React. Cyanide	<0.02 mg/kg	08/21/90	Hoover	Colorimetric
Total React. Sulfide	0.99 mg/kg	08/21/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	Passed	08/11/90	CarieI	Visual
pH(w)	7.41	08/11/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/17/90	Davis	
F-List Solvent Scan (2)	None Detected	08/24/90	Clark, T.	Gas chromatography FID, HECD and FID
Total PCB(s)	None Detected DL = 1 mg/kg	08/21/90	Taylor	Gas chromatography Electron capture

Marks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.

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Sample Source

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Laboratory Report

Date

09/18/90

Page 2

Lab Control No

► 10,520

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-23

Time of Collection
00:00

Diameter

EPA EXTRACTION PROCEDURE

Arsenic (leachate)

Barium (leachate)

Cadmium (leachate)

Chromium (leachate)

Lead (leachate)

Mercury (leachate)

Selenium (leachate)

Silver (leachate)

Results

COMPLETED

Date Analyzed

08/28/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid Wa-

Atomic absorption
Graphite furnace

Flame atomic abs.

Flame atomic abs.

Flame atomic abs.

Flame atomic abs.

Atomic absorption
Cold vapor

Atomic absorption
Graphite furnace

Flame atomic abs.

Remarks

State Certification No. M-10-1

Analysis Reviewed
By

ORIGINAL

A. Marshall



Sample Source

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At To:

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Laboratory Report

Date

09/18/90

Page 1

Lab Control No

► 10,521

P.O. Number

0609

Job No
00735

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-24

Time of Collection
00:00 :

Parameter

Phenols, total

Results

(0.142 mg/kg)

Date Analyzed

09/11/90

Analyst

Rogers

Method of Analysis

Distillation:
Chloroform extract

Total React. Cyanide

(0.02 mg/kg)

Date Analyzed

08/21/90

Analyst

Hoover

Calorimetric

Total React. Sulfide

0.99 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

09/03/90

Analyst

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

Date Analyzed

08/11/90

Analyst

Cariel

Visual

pH(w)

8.06

Date Analyzed

08/11/90

Analyst

Rogers

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/17/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/24/90

Analyst

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected

DL = 1 mg/kg

Date Analyzed

08/21/90

Analyst

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

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Date

09/18/90

Page 2

Lab Control No.

10,521

P.O. Number

0609

Job No.
007357Sample Description
SoilDate Collected
08-10-90

Cimeter

EPA EXTRACTION PROCEDURE

Arsenic (leachate)

Barium (leachate)

Cadmium (leachate)

Chromium (leachate)

Lead (leachate)

Mercury (leachate)

Selenium (leachate)

Silver (leachate)

Remarks

State Certification No. M-10-1

Sample Type
GRABCollected By
ClientLocation
Sample B-24Time of Collection
00:00 :

Results	Date Analyzed	Analyst	Method of Analysis
COMPLETED	08/28/90	Vick	SW-846 Test Methods Evaluating Solid Was
0.004 mg/l	08/30/90	Isler	Atomic absorption Graphite furnace
(0.01 mg/l	08/31/90	Isler	Flame atomic abs.
0.003 mg/l	08/31/90	Isler	Flame atomic abs.
0.02 mg/l	08/31/90	Isler	Flame atomic abs.
(0.03 mg/l	08/31/90	Isler	Flame atomic abs.
(0.0002 mg/l	09/04/90	Hostettler	Atomic absorption Cold vapor
(0.002 mg/l	09/05/90	Isler	Atomic absorption Graphite furnace
0.008 mg/l	08/31/90	Isler	Flame atomic abs.

Analysis Reviewed
By

ORIGINAL



Sample Source

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Attn: Mr. Paul Barding

To

As above

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-25

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

0.573 mg/kg

09/11/90

Rogers

Distillation

Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

08/21/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

08/21/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

7.43

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/17/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography

PID, HECD and FID

Total PCB[s]

None Detected

08/21/90

Taylor

Gas chromatography

Electron capture

Remarks

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

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Date

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Lab Control No

10,522

P.O. Number

0609

Job No.

007357

To

 Sample Description
 Soil

 Date Collected
 08-10-90

 Date Received
 08/11/90

 Sample Type
 GRAB

 Location
 Sample B-25

 Collected By
 Client

 Time of Collection
 00:00 :

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
EPA EXTRACTION PROCEDURE	COMPLETED	08/28/90	Vick	SW-B46 Test Methods Evaluating Solid Waste
Arsenic (leachate)	0.003 mg/l	08/30/90	Isler	Atomic absorption Graphite furnace
Manganese (leachate)	0.18 mg/l	08/31/90	Isler	Flame atomic abs.
Cadmium (leachate)	(0.002 mg/l)	08/31/90	Isler	Flame atomic abs.
Chromium (leachate)	(0.01 mg/l)	08/31/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l)	08/31/90	Isler	Flame atomic abs.
Mercury (leachate)	0.0002 mg/l	09/04/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	(0.002 mg/l)	09/05/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.017 mg/l	08/31/90	Isler	Flame atomic abs.

Remarks

State Certification No. M-10-1

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Date

09/18/90

Page 1 of

Lab Control No

10,523

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Date Collected
08-10-90

Diameter

Phenols, total

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB(s)

Remarks

Sample Type

GRAB

Collected By

Client

Location

Sample B-26

Time of Collection

00:00 :

Results

<0.158 mg/kg

Date Analyzed

09/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extractive

<0.02 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Method of Analysis

Colorimetric

2.49 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Method of Analysis

Titrimetric
Pensky-Martens
Closed Cup

Passed

Date Analyzed

08/11/90

Analyst

Cariel

Method of Analysis

Visual

7.72

Date Analyzed

08/11/90

Analyst

Rogers

Method of Analysis

Electrometric

PERFORMED

Date Analyzed

08/17/90

Analyst

Davis

None Detected

Date Analyzed

08/24/90

Analyst

Clark, T.

Method of Analysis

Gas chromatography
PID, HECD and FID

None Detected

Date Analyzed

08/21/90

Analyst

Taylor

Method of Analysis

Gas chromatography
Electron capture

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

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Laboratory Report

Date

09/18/90

Page 2

Lab Control No

10,523

P.O. Number

0609

Job No.
0073E

To

As above

Sample Description
SoilDate Collected
08-10-90Date Received
08/11/90Sample Type
GRABLocation
Sample B-26Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE	COMPLETED	08/28/90	Vick	SW-846 Test Methods Evaluating Solid Waste
Arsenic (leachate)	0.003 mg/l	08/30/90	Isler	Atomic absorption Graphite furnace
Barium (leachate)	(0.01 mg/l	08/31/90	Isler	Flame atomic abs.
Cadmium (leachate)	0.002 mg/l	08/31/90	Isler	Flame atomic abs.
Chromium (leachate)	0.05 mg/l	08/31/90	Isler	Flame atomic abs.
Lead (leachate)	(0.03 mg/l	08/31/90	Isler	Flame atomic abs.
Mercury (leachate)	0.0002 mg/l	09/04/90	Hostettler	Atomic absorption Cold vapor
Selenium (leachate)	(0.002 mg/l	09/05/90	Isler	Atomic absorption Graphite furnace
Silver (leachate)	0.012 mg/l	08/31/90	Isler	Flame atomic abs.

Remarks

State Certification No. M-10-1

 Analysis Reviewed
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Laboratory Report

Date

09/18/90

Page 1

Lab Control No.

10,524

P.O. Number

0609

Job No.

007351

Sample Description
Soil

Date Collected
08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location
Sample B-27

Time of Collection
00:00 :

Diameter

Phenols, total

Results

0.852 mg/kg

Date Analyzed

09/11/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

Date Analyzed

08/21/90

Analyst

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

09/03/90

Analyst

Mattingly

Perisky-Martens
Closed Cup

Paint Filter Test (1)

Passed

Date Analyzed

08/11/90

Analyst

Cariel

Visual

pH(w)

6.06

Date Analyzed

08/11/90

Analyst

Rogers

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/17/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/24/90

Analyst

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

Date Analyzed

08/21/90

Analyst

Taylor

Gas chromatography
Electron capture

Remarks

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

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Laboratory Report

Date

09/18/90

Page 2 of 2

Lab Control No

10,524

P.O. Number

0609

Job No.
007357Sample Description
SoilDate Collected
08-10-90Date Received
08/11/90Sample Type
GRABCollected By
ClientLocation
Sample B-27Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/28/90

Vick

SW-846 Test Methods
Evaluating Solid Was-

Arsenic (leachate)

0.003 mg/l

08/30/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

0.13 mg/l

08/31/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.006 mg/l

08/31/90

Isler

Flame atomic abs.

Chromium (leachate)

0.06 mg/l

08/31/90

Isler

Flame atomic abs.

Lead (leachate)

0.04 mg/l

08/31/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0003 mg/l

09/04/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

(0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.009 mg/l

08/31/90

Isler

Flame atomic abs.

Remarks



Sample Source

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Laboratory Report

Date

09/18/90

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Lab Control No

10,525

P.O. Number

0609

Job No.
007357

Sample Description
Soil

Date Collected
08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location
Sample B-28

Time of Collection
00:00 :

Parameter

Phenols, total :

Total React. Cyanide

Total React. Sulfide

Ignitability (Fl. Pt.)

Paint Filter Test (1)

pH(w)

PCB Extraction

F-List Solvent Scan (2)

Total PCB(s)

Remarks

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



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Environmental Quality Services

Sample Source

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Attn: Mr. Paul Barding

Laboratory Report

Date

09/18/90

Page 2 of

Lab Control No

10,525

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-28

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/29/90

Vick

SW-846 Test Methods
Evaluating Solid Was

Arsenic (leachate)

0.013 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

(0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.004 mg/l

09/07/90

Isler

Flame atomic abs.

Chromium (leachate)

0.02 mg/l

08/31/90

Isler

Flame atomic abs.

Lead (leachate)

(0.03 mg/l

09/07/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0003 mg/l

09/04/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

(0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.011 mg/l

09/07/90

Isler

Flame atomic abs.

Remarks

State Certification No. M-10-1

Analysis Reviewed
By



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**Environmental
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Environmental Quality Services

Sample Source

Best Environmental
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Laboratory Report

Date

09/18/90

Page 1

Lab Control No.

10,526

P.O. Number

0609

Job No.

007357

Sample Description
Soil

Date Collected

08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location

Sample B-29

Time of Collection

00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

(0.152 mg/kg)

09/11/90

Rogers

Distillation :
Chloroform extractive

Total React. Cyanide

(0.02 mg/kg)

08/21/90

Hoover

Colorimetric

Total React. Sulfide

1.99 mg/kg

08/21/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

8.06

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/17/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

08/23/90

Taylor

Gas chromatography
Electron capture

Remarks

(1) No free liquids.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/18/90

Page 2 of 2

Lab Control No

10,526

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description
SoilDate Collected
08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location

Sample B-29

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

EPA EXTRACTION PROCEDURE

COMPLETED

08/29/90

Vick

SW-846 Test Methods
Evaluating Solid Wast

Arsenic (leachate)

0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

(0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Cadmium (leachate)

<0.002 mg/l

08/31/90

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

08/31/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0002 mg/l

09/04/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

<0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.008 mg/l

08/31/90

Isler

Flame atomic abs.

marks



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/18/90

Page 1

Lab Control No

10,527

P.O. Number

0609

Job No.

007357

 Sample Description
 Soil

 Date Collected
 08-10-90

Date Received

08/11/90

 Sample Type
 GRAB

Collected By

Client

Location

Sample B-30

 Time of Collection
 00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total	<0.154 mg/kg	09/11/90	Rogers	Distillation Chloroform extraction
Total React. Cyanide	<0.02 mg/kg	08/21/90	Hoover	Colorimetric
Total React. Sulfide	1.49 mg/kg	08/21/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	Passed	08/11/90	Cariel	Visual
pH(w)	8.36	08/11/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/17/90	Davis	
F-List Solvent Scan (2)	None Detected	08/24/90	Clark, T.	Gas chromatography PID, HECD and FID
Total PCB[s]	None Detected DL = 1 mg/kg	08/23/90	Taylor	Gas chromatography Electron capture

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/18/90

Page 2

Lab Control No

10,527

P.O. Number

0609

Job No
0073

To:

As above

Sample Description
Soil

Date Collected
08-10-90

Date Received
08/11/90

Sample Type
GRAB

Collected By
Client

Location
Sample B-30

Time of Collection
00:00 :

Parameter

EPA EXTRACTION PROCEDURE

Results

COMPLETED

Date Analyzed

08/29/90

Analyst

Vick

Method of Analysis
SW-846 Test Method
Evaluating Solid W

Arsenic (leachate)

0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

(0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.002 mg/l

08/31/90

Isler

Flame atomic abs.

Chromium (leachate)

(0.01 mg/l

08/31/90

Isler

Flame atomic abs.

Lead (leachate)

(0.03 mg/l

08/31/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0005 mg/l

09/04/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

(0.002 mg/l

09/05/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.007 mg/l

08/31/90

Isler

Flame atomic abs.

Remarks

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date

09/19/90

Page 1

Lab Control No

► 10,528

P.O. Number

0609

Job No.

00735

Sample Description
Soil

Date Collected

08-10-90

Date Received

08/11/90

Sample Type
GRAB

Collected By

Client

Location
Sample B-31

Time of Collection

00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

(0.150 mg/kg)

09/11/90

Rogers

Distillation
Chloroform extracti

Total React. Cyanide

(0.02 mg/kg)

08/22/90

Hoover

Colorimetric

Total React. Sulfide

2.99 mg/kg

08/22/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

Passed

08/11/90

Cariel

Visual

pH(w)

8.19

08/11/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/17/90

Davis

F-List Solvent Scan (2)

None Detected

08/24/90

Clark, T.

Gas chromatography
PID, HECD and FID

Total PCB[s]

None Detected
DL = 1 mg/kg

08/23/90

Taylor

Gas chromatography
Electron capture

Remarks

- (1) No free liquids.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
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 155 & R6 Frontage Road N.W.
 Chanrahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/19/90

Page 2

of 2

Lab Control No

► 10,528

P.O. Number

0609

Job No.

007357

 Sample Description
 Soil

 Date Collected
 08-10-90

Date Received

08/11/90

 Sample Type
 GRAB

Collected By

Client

Location
Sample B-31
 Time of Collection
 00:00 :

Diameter

EPA EXTRACTION PROCEDURE

Results

COMPLETED

Date Analyzed

08/29/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid:Wast

Arsenic (leachate)

0.003 mg/l

Date Analyzed

09/05/90

Analyst

Isler

Atomic absorption
Graphite furnace

Barium (leachate)

<0.01 mg/l

Date Analyzed

08/31/90

Analyst

Isler

Flame atomic abs.

Cadmium (leachate)

<0.002 mg/l

Date Analyzed

09/07/90

Analyst

Isler

Flame atomic abs.

Chromium (leachate)

<0.01 mg/l

Date Analyzed

08/31/90

Analyst

Isler

Flame atomic abs.

Lead (leachate)

<0.03 mg/l

Date Analyzed

09/07/90

Analyst

Isler

Flame atomic abs.

Mercury (leachate)

0.0002 mg/l

Date Analyzed

09/04/90

Analyst

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

<0.002 mg/l

Date Analyzed

09/05/90

Analyst

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.010 mg/l

Date Analyzed

09/07/90

Analyst

Isler

Flame atomic abs.

Remarks

State Certification No. M-10-1

 ► Analysis Reviewed
By
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date 09/05/90 Page 1

Lab Control No.

► 10,360

P.O. Number
0609

Job No.
0073E

Sample Description
Water

		Sample Type GRAB	Location Sample P-1	
Parameter	Date Received	Collected By Client		Time of Collection 00:00
pH	08/08/90	8.38	08/10/90 Rogers	Electrometric
Phenols, total		0.006 mg/l	08/09/90 Rogers	Distillation Chloroform extracti
Flash point		>210. deg. F.	09/03/90 Mattingly	Pensky-Martens Closed Cup
Total React. Cyanide		<0.02 mg/l	08/14/90 Hoover	Colorimetric
Total React. Sulfide		<0.49 mg/l	08/14/90 Hoover	Titrimetric
Paint Filter Test	Failed		08/30/90 Vick	Gravimetric
PCB Extraction	PERFORMED		08/16/90 Davis	
F-List Solvent Scan (1)	None Detected		08/20/90 Clark, T.	Gas chromatography PID, HECD and FID
Total PCB(s)	None Detected DL = 10 ug/l		08/20/90 Taylor	Gas chromatography Electron capture

Remarks

(1) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

As above

Laboratory Report

Date

08/31/90

Page 1

Lab Control No

10,361

P.O. Number

0609

Job No.

007357

To:

Sample Description

Soil

Date Collected

08-07-90

Date Received

08/08/90

Sample Type	Location
GRAB	Sample P-2

Collected By

Client

Time of Collection

00:00

Parameter

Phenols, total

Results

(0.237 mg/kg)

Date Analyzed

08/16/90

Analyst

Rogers

Method of Analysis

Distillation

Chloroform extractic

Total React. Cyanide

(0.02 mg/kg)

Date Analyzed

08/14/90

Analyst

Hoover

Method of Analysis

Colorimetric

Total React. Sulfide

(0.49 mg/kg)

Date Analyzed

08/14/90

Analyst

Hoover

Method of Analysis

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

08/30/90

Analyst

Mattingly

Method of Analysis

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/08/90

Analyst

Cariel

Method of Analysis

Visual

pH(w)

8.73

Date Analyzed

08/10/90

Analyst

Rogers

Method of Analysis

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/13/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/20/90

Analyst

Clark, T.

Method of Analysis

Gas chromatography

PID, HECD and FID

Total PCB[s]

None Detected

Date Analyzed

08/14/90

Analyst

Peyton

Method of Analysis

Gas chromatography

Electron capture

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576.
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

► 10,361

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Date Collected

08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By

Client

Location

Sample P-2

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

TCLP Extraction Procedure

COMPLETED

08/15/90

Young

Arsenic (TCLP)

0.018 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Cesium (TCLP)

0.79 mg/l

08/20/90

Isler

Flame atomic abs.

Cadmium (TCLP)

0.020 mg/l

08/23/90

Isler

Flame atomic abs.

Chromium (TCLP)

3.46 mg/l

08/20/90

Isler

Flame atomic abs.

Lead (TCLP)

(0.03 mg/l)

08/20/90

Isler

Flame atomic abs.

Mercury (TCLP)

0.0003 mg/l

08/20/90

Hostettler

Atomic absorption
Cold vapor

Selenium (TCLP)

<0.01 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver (TCLP)

0.010 mg/l

08/20/90

Isler

Flame atomic abs.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Site To:

As above

Sample Description

Soil

Date Collected

08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By

Client

Location

Sample P-3

Time of Collection

00:00

Parameter

Phenols, total

Results

2.598 mg/kg

Date Analyzed

08/16/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extractive

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Method of Analysis

Colorimetric

Total React. Sulfide

<0.49 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Method of Analysis

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

08/30/90

Analyst

Mattingly

Method of Analysis

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/08/90

Analyst

Cariel

Method of Analysis

Visual

pH(w)

7.34

Date Analyzed

08/10/90

Analyst

Rogers

Method of Analysis

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/13/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/20/90

Analyst

Clark, T.

Method of Analysis

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected

DL = 2 mg/kg

Date Analyzed

08/14/90

Analyst

Peyton

Method of Analysis

Gas chromatography
Electron capture

etc

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576,
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Soil

Date Collected
08-07-90

Date Received
08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-3

Time of Collection
00:00

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
TCLP Extraction Procedure	COMPLETED	08/15/90	Young	
Arsenic (TCLP)	0.008 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Barium (TCLP) (1)	126. mg/l	08/28/90	Isler	Flame atomic abs.
Cadmium (TCLP)	0.047 mg/l	08/28/90	Isler	Flame atomic abs.
Chromium (TCLP)	(0.01 mg/l	08/28/90	Isler	Flame atomic abs.
Lead (TCLP)	0.06 mg/l	08/28/90	Isler	Flame atomic abs.
Mercury (TCLP)	(0.0002 mg/l	08/20/90	Hostettler	Atomic absorption Cold vapor
Selenium (TCLP)	0.005 mg/l	08/27/90	Isler	Atomic absorption Graphite furnace
Silver (TCLP)	0.007 mg/l	08/28/90	Isler	Flame atomic abs.

Remarks

(1) Exceeds the regulatory limit for Barium.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Sample Description

Soil

Date Collected
08-07-90

Date Received

08/08/90

Sample Type

GRAB

Location

Sample P-A

Collected By

Client

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Phenols, total

(0.236 mg/kg)

08/16/90

Rogers

Distillation

Chloroform extraction

Total React. Cyanide

(0.02 mg/kg)

08/14/90

Hoover

Colorimetric

Total React. Sulfide

1.99 mg/kg

08/14/90

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

08/30/90

Mattingly

Pensky-Martens

Closed Cup

Paint Filter Test (1)

See Comments

08/08/90

Cariel

Visual

pH(w)

8.47

08/10/90

Rogers

Electrometric

PCB Extraction

PERFORMED

08/13/90

Davis

F-List Solvent Scan (2)

None Detected

08/20/90

Clark, T.

Gas chromatography

PID, HECD and FID

Total PCB(s)

None Detected

DL = 1 mg/kg

08/14/90

Peyton

Gas chromatography

Electron capture

Remarks

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/31/90

Page 2

Lab Control No

► 10,363

P.O. Number
0609

Job No.
007357

Sample Description

Soil

Collected
08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By

Client

Location

Sample P-4

Time of Collection
00:00

Diameter

Results

Date Analyzed

Analyst

Method of Analysis

TCLP Extraction Procedure

COMPLETED

08/15/90

Young

Arsenic (TCLP)

0.008 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Brium (TCLP)

(0.01 mg/l

08/20/90

Isler

Flame atomic abs.

Cadmium (TCLP)

(0.002 mg/l

08/23/90

Isler

Flame atomic abs.

Chromium (TCLP)

(0.01 mg/l

08/20/90

Isler

Flame atomic abs.

Lead (TCLP)

(0.03 mg/l

08/20/90

Isler

Flame atomic abs.

Mercury (TCLP)

(0.0002 mg/l

08/20/90

Hostettler

Atomic absorption
Cold vapor

Selenium (TCLP)

0.003 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver (TCLP)

0.018 mg/l

08/20/90

Isler

Flame atomic abs.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/24/90

Page 1

Lab Control No

► 10,364

P.O. Number

0609

Job No.

00735

Sample Description

Unknown Oil/Soil

Date Collected
08-07-90

Date Received

08/08/90

Sample Type
GRABCollected By
ClientLocation
Sample P-5Time of Collection
00:00

Parameter

pH

Results

6.74

Date Analyzed

08/10/90

Analyst

Rogers

Method of Analysis

Electrometric

Phenols, total

5.093 mg/kg

Date Analyzed

08/23/90

Rogers

Distillation

Chloroform extraction

ash point

>210. deg. F.

Date Analyzed

09/03/90

Mattingly

Pensky-Martens

Closed Cup

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/14/90

Hoover

Colorimetric

Total React. Sulfide

0.99 mg/kg

Date Analyzed

08/14/90

Hoover

Titrimetric

Paint Filter Test

Failed

Date Analyzed

08/30/90

Vick

Gravimetric

F-List Solvent Scan (1)

Detected

Date Analyzed

08/20/90

Clark, T.

Gas chromatography

PID, HECD and FID

Total PCB(s) (2)

None Detected
DL = 50 ppm

Date Analyzed

09/06/90

Taylor

Gas chromatography

Electron capture

1,1,1-Trichloroethane

5.0 mg/kg

Date Analyzed

08/20/90

Clark, T.

Gas chromatography

HECD, Purge & Trap

- (1) See attached list for target compounds & respective detection limits.
 (2) Performed on oil layer - Detection limit high due to matrix interferences.



Sample Source

Best Environmental
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Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/24/90

Page 2

Lab Control No

► 10,364

P.O. Number
0609Job No.
007357

Sample Description

Unknown Oil/Soil

Sample Type
GRABLocation
Sample P-5Date Collected
08-07-90Date Received
08/08/90Collected By
ClientTime of Collection
00:00

Parameter

EPA EXTRACTION PROCEDURE

Results

COMPLETED

Date Analyzed

08/21/90

Analyst

Vick

Method of Analysis

SW-846 Test Methods
Evaluating Solid Was

Arsenic (leachate)

0.004 mg/l

09/19/90

Isler

Atomic absorption
Graphite furnace

Cadmium (leachate)

93.7 mg/l

09/21/90

Isler

Flame atomic abs.

Chromium (leachate)

0.015 mg/l

09/18/90

Isler

Flame atomic abs.

Lead (leachate)

0.15 mg/l

09/20/90

Isler

Flame atomic abs.

Mercury (leachate)

(0.0002 mg/l)

08/24/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

(0.002 mg/l)

09/24/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

(0.002 mg/l)

09/18/90

Isler

Flame atomic abs.

VIRGINIANAL CONSULTANTS, INC.

91 Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481



**Environmental
Consultants**

Professional Laboratory Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date

09/24/90

Page 3 of

Lab Control No

► 10,364

P.O. Number

0609

Job No.

007357

Sample Description

Unknown Oil/Soil

Date Collected

08-07-90

Date Received

08/08/90

Sample Type

GRAB

Collected By

Client

Location

Sample P-5

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

ADDITIONAL COMMENTS FOR SAMPLE 110364:

Comment for Paint Filter Test:

This sample contains free liquids as defined and regulated by 40 CFR 264.314 and 265.314.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/07/90

Page 1

Lab Control No

► 10,365

P.O. Number

0609

Job No.

007357

Sample Description
SoilSite Collected
08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By

Client

Location
Sample P-6

Time of Collection

00:00 :

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Phenols, total	4.927 mg/kg	08/23/90	Rogers	Distillation Chloroform extraction
Total React. Cyanide	<0.02 mg/kg	08/14/90	Hoover	Colorimetric
Total React. Sulfide	1.99 mg/kg	08/14/90	Hoover	Titrimetric
Ignitability (Fl. Pt.)	>210. deg. F	09/03/90	Mattingly	Pensky-Martens Closed Cup
Paint Filter Test (1)	See Comments	08/08/90	Cariel	Visual
pH(w)	7.04	08/10/90	Rogers	Electrometric
PCB Extraction	PERFORMED	08/13/90	Davis	
F-List Solvent Scan (2)	None Detected	08/20/90	Clark, T.	Gas chromatography PID, HECD and FID
Total PCB(s) (3)	None Detected DL = 10 mg/kg	09/06/90	Taylor	Gas chromatography Electron capture

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.

(3) Detection limit high due to matrix interferences.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Bill To:

As above

Sample Description
Soil

Date Collected
08-07-90

Parameter
TCLP Extraction Procedure

Arsenic (TCLP)

Barium (TCLP)

Cadmium (TCLP)

Chromium (TCLP)

Lead (TCLP)

Mercury (TCLP)

Selenium (TCLP)

Silver (TCLP)

Remarks

Date Received
08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-6

Time of Collection
00:00

Method of Analysis

RESULTS
COMPLETED

Date Analyzed
08/15/90

Analyst
Young

0.005 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

0.74 mg/l

08/20/90

Isler

Flame atomic abs.

0.043 mg/l

08/23/90

Isler

Flame atomic abs.

(0.01 mg/l

08/20/90

Isler

Flame atomic abs.

0.12 mg/l

08/20/90

Isler

Flame atomic abs.

0.0002 mg/l

08/20/90

Hostettler

Atomic absorption
Cold vapor

0.003 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

0.010 mg/l

08/20/90

Isler

Flame atomic abs.



Sample Source
 Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date 09/06/90 Page 1

Lab Control No
► 10,366P.O. Number
0609Job No
0073

To:

As above

Sample Description
Oil/WaterSample Type
GRABLocation
Sample P-7Date Collected
08-07-90Data Received
08/08/90Collected By
ClientTime of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

pH

8.61

08/10/90

Rogers

Electrometric

Phenols, total

12.500 mg/kg

08/09/90

Rogers

Distillation
Chloroform extract

Flash point

>210. deg. F.

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Total React. Cyanide

(0.02 mg/kg)

08/14/90

Hoover

Colorimetric

Total React. Sulfide

(0.49 mg/kg)

08/14/90

Hoover

Titrimetric

Paint Filter Test

Failed

08/30/90

Vick

Gravimetric

F-List Solvent Scan

Detected

08/20/90

Clark, T.

Gas chromatography
PID, HECD and FID

Toluene

205. ug/l

08/20/90

Clark, T.

Gas chromatography
PID, Purge and Trap

Total Xylenes

23. ug/l

08/20/90

Clark, T.

Gas chromatography
Flame ionization

Marks



Sample Source

Best Environmental
P.O. Box 576
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Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Oil/WaterDate Collected
08-07-90Date Received
08/08/90Sample Type
GRABCollected By
ClientLocation
Sample P-7Time of Collection
00:00

Parameter

Total PCB[s]

Results

None Detected
DL = 5 ppm

Date Analyzed

09/04/90

Analyst

Taylor

Method of Analysis

Gas chromatography
Electron capture

Arsenic, total

0.036 mg/l

Date Analyzed

08/21/90

Isler

Atomic absorption
Graphite furnace

Barium, total

0.52 mg/l

Date Analyzed

08/23/90

Isler

Flame atomic abs.

Cadmium, total

0.006 mg/l

Date Analyzed

08/23/90

Isler

Flame atomic abs.

Chromium, total

0.14 mg/l

Date Analyzed

08/23/90

Isler

Flame atomic abs.

Lead, total

0.18 mg/l

Date Analyzed

08/24/90

Isler

Flame atomic abs.

Mercury, total

0.0012 mg/l

Date Analyzed

08/15/90

Hostettler

Atomic absorption
Cold vapor

Selenium, total

0.020 mg/l

Date Analyzed

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver, total

0.018 mg/l

Date Analyzed

08/23/90

Isler

Flame atomic abs.

arks



Sample Source

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Channahon, IL 60410-
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To:

As above

Sample Description
Oil/Water

Date Collected
08-07-90

Date Received
08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-7

Time of Collection
00:00

Job No.
00735

P.O. Number

0609

Date

09/06/90

Page

3

Lab Control No

► 10,366

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
ADDITIONAL COMMENTS FOR SAMPLE 110366:				
	Comment for Paint Filter Test: This sample contains free liquids as defined and regulated by 40 CFR 264.314 and 265.314.			

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Bill To:

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Laboratory Report

Date

08/31/90

Page 1

Lab Control No

► 10,367

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Date Collected

08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-8

Time of Collection

00:00

Parameter

Phenols, total

Results

4.137 mg/kg

Date Analyzed

08/23/90

Analyst

Rogers

Method of Analysis

Distillation
Chloroform extraction

Total React. Cyanide

<0.02 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/kg

Date Analyzed

08/13/90

Analyst

Hoover

Titrimetric

Ignitability (Fl. Pt.)

>210. deg. F

Date Analyzed

08/30/90

Analyst

Mattingly

Pensky-Martens
Closed Cup

Paint Filter Test (1)

See Comments

Date Analyzed

08/08/90

Analyst

Cariel

Visual

pH(w)

8.90

Date Analyzed

08/10/90

Analyst

Rogers

Electrometric

PCB Extraction

PERFORMED

Date Analyzed

08/13/90

Analyst

Davis

F-List Solvent Scan (2)

None Detected

Date Analyzed

08/20/90

Analyst

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected
DL = 1 mg/kg

Date Analyzed

08/14/90

Analyst

Peyton

Gas chromatography
Electron capture

k6

(1) No free liquid.

(2) See attached list for target compounds & respective detection limits.



Sample Source

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To:

As above

Laboratory Report

Date

08/31/90

Page 2 of

Lab Control No

► 10,367

P.O. Number

0609

Job No.

007357

Sample Description

Soil

Collected

08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By

Client

Location
Sample P-8Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

TCLP Extraction Procedure

COMPLETED

08/15/90

Young

Arsenic (TCLP)

0.009 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Barium (TCLP)

2.04 mg/l

08/20/90

Isler

Flame atomic abs.

Cadmium (TCLP)

0.092 mg/l

08/17/90

Isler

Flame atomic abs.

Chromium (TCLP)

0.48 mg/l

08/20/90

Isler

Flame atomic abs.

Lead (TCLP)

<0.03 mg/l

08/20/90

Isler

Flame atomic abs.

Mercury (TCLP)

0.0003 mg/l

08/20/90

Hostettler

Atomic absorption
Cold vapor

Selenium (TCLP)

<0.002 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver (TCLP)

0.015 mg/l

08/20/90

Isler

Flame atomic abs.

marks



Sample Source

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Laboratory Report

Date

09/05/90

Page 1

Lab Control No

► 10,368

P.O. Number

0609

Job No.

007357

Sample Description

Sewage and Water

Sample Type

GRAB

Location

Sample P-9

Date Collected

08-07-90

Date Received

08/08/90

Collected By

Client

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

pH

7.89

08/10/90

Rogers

Electrometric

Phenols, total

0.170 mg/l

08/09/90

Rogers

Distillation
Chloroform extraction

Dew point

>210. deg. F.

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Total React. Cyanide

<0.02 mg/l

08/13/90

Hoover

Colorimetric

Total React. Sulfide

<0.49 mg/l

08/13/90

Hoover

Titrimetric

Paint Filter Test

Failed

08/30/90 Vick

Gravimetric

PCB Extraction

PERFORMED

08/14/90 Davis

F-List Solvent Scan (1)

None Detected

08/20/90 Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s) (2)

None Detected
DL = 1 mg/kg

08/15/90 Taylor

Gas chromatography
Electron capture

Remarks

- (1) See attached list for target compounds & respective detection limits.
(2) PCB analysis performed on solid layer of sample.



Sample Source

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Laboratory Report

Date

09/05/90

Page 2

Lab Control No

10,368

P.O. Number
0609Job No.
007357

Sample Description

Sewage and Water

Sample Type
GRABLocation
Sample P-9Date Collected
08-07-90Date Received
08/08/90Collected By
ClientTime of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Arsenic, total

0.011 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Barium, total

0.95 mg/l

08/20/90

Isler

Flame atomic abs.

Cadmium, total

0.023 mg/l

08/23/90

Isler

Flame atomic abs.

Chromium, total

0.12 mg/l

08/20/90

Isler

Flame atomic abs.

Lead, total

0.008 mg/l

08/20/90

Isler

Flame atomic abs.

Mercury, total

0.0006 mg/l

08/15/90

Hostettler

Atomic absorption
Cold vapor

Selenium, total

0.004 mg/l

08/21/90

Isler

Atomic absorption
Graphite furnace

Silver, total

0.005 mg/l

08/23/90

Isler

Flame atomic abs.

Remarks

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Sample Source

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Sample Description

Sewage and Water

Date Collected
08-07-90

Date Received
08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-9

Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

ADDITIONAL COMMENTS FOR SAMPLE 110368:

Comment for Paint Filter Test:

This sample contains free liquids as defined and
regulated by 40 CFR 264.314 and 265.314.

marks

State Certification No. M-10-1

Analysis Reviewed
By

B. H. Carrig



Sample Source

Best Environmental
P.O. Box 576,
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Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Oil Water

Date Collected

08-07-90

Date Received

08/08/90

Sample Type

GRAB

Location

Sample P-10

Collected By
Client

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

pH

6.25

08/10/90

Rogers

Electrometric

Phenols, total

2.238 mg/l

08/23/90

Rogers

Distillation
Chloroform extracti

ash point

>210. deg. F.

09/03/90

Mattingly

Pensky-Martens
Closed Cup

Total React. Cyanide

(0.02 mg/l)

08/14/90

Hoover

Colorimetric

Total React. Sulfide

(0.49 mg/l)

08/14/90

Hoover

Titrimetric

Paint Filter Test

Failed

08/30/90

Vick

Gravimetric

F-List Solvent Scan

None Detected

08/20/90

Peyton

Gas chromatography
PID, HECD and FID

Total PCB(s)

None Detected
DL = 5 ppm

09/04/90

Taylor

Gas chromatography
Electron capture

EPA EXTRACTION PROCEDURE

COMPLETED

08/24/90

Vick

SW-846 Test Methods
Evaluating Solid Wa

rks



Sample Source

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As above**Laboratory Report**

Date

09/24/90

Page 2 of

Lab Control No

► 10,369

P.O. Number

0609

Job No.

007357

Sample Description
Oil WaterDate Collected
08-07-90

Date Received

08/08/90

Sample Type
GRABCollected By
ClientLocation
Sample P-10Time of Collection
00:00 :

Parameter

Arsenic (leachate)

Results

(0.002 mg/l)

Date Analyzed

09/19/90

Analyst

Isler

Method of Analysis

Atomic absorption
Graphite furnace

Barium (leachate)

2.23 mg/l

09/18/90

Isler

Flame atomic abs.

Cadmium (leachate)

0.052 mg/l

09/18/90

Isler

Flame atomic abs.

Chromium (leachate)

0.07 mg/l

09/18/90

Isler

Flame atomic abs.

Lead (leachate)

(0.03 mg/l)

09/20/90

Isler

Flame atomic abs.

Mercury (leachate)

0.0003 mg/l

08/30/90

Hostettler

Atomic absorption
Cold vapor

Selenium (leachate)

(0.002 mg/l)

09/24/90

Isler

Atomic absorption
Graphite furnace

Silver (leachate)

0.006 mg/l

09/18/90

Isler

Flame atomic abs.

Marks

State Certification No. M-10-1

 Analysis Review
 By
 ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/24/90

Lab Control No

► 10,369

P.O. Number

0609

Bill To:

As above

Sample Description
Oil Water

Date Collected
08-07-90

Date Received

08/08/90

Sample Type
GRAB

Collected By
Client

Location
Sample P-10

Time of Collection
00:00 :

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

ADDITIONAL COMMENTS FOR SAMPLE 110369:

Comment for Paint Filter Test:

This sample contains free liquids as defined and
regulated by 40 CFR 264.314 and 265.314.

Remarks



Sample Source
Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Charinahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date 08/27/90 Page 1 of 2
Lab Control No 10,532
P.O. Number 0609 Job No. 007357

Sample Description Paint Chips	Sample Type GRAB	Location Paint Reel #1	
Collected 08-10-90	Date Received 08/11/90	Collected By Client	Time of Collection 00:00
Parameter			
TCLP Extraction Procedure	RESULTS COMPLETED	Date Analyzed 08/15/90	Analyst Young
Arsenic (TCLP)	0.019 mg/l	08/21/90	Isler
Boron (TCLP)	(0.01 mg/l	08/20/90	Isler
Cadmium (TCLP)	0.310 mg/l	08/23/90	Isler
Chromium (TCLP)	0.15 mg/l	08/20/90	Isler
Lead (TCLP)	3.59 mg/l	08/20/90	Isler
Mercury (TCLP)	0.0012 mg/l	08/23/90	Hostettler
Selenium (TCLP)	0.008 mg/l	08/21/90	Isler
Silver (TCLP)	0.040 mg/l	08/23/90	Isler



Sample Source

Best Environmental
P.O. Box 576
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Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

08/27/90

Page 2

Lab Control No

10,532

P.O. Number

0609

Job No.

007357

Sample Description

Paint Chips

Date Collected

08-10-90

Date Received

08/11/90

Sample Type

GRAB

Location

Paint Reel #1

Collected By

Client

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Quality Control Data

See Attached

08/27/90

Marks



Sample Source

Best Environmental
P.O. Box 576
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Attn: Mr. Paul Barding

To.

As above

Laboratory Report

Date

08/28/90

Page 1 of 2

Lab Control No

10,533

P.O. Number

0609

Job No.

007357

Sample Description

Paint Chips

Collected Date Received

08-10-90

08/11/90

Sample Type

GRAB

Collected By

Client

Location

Paint Reel #2

Time of Collection

00:00

Parameter

Results

Date Analyzed

08/16/90 Weldon

Isler

Method of Analysis

TCLP Extraction Procedure

COMPLETED

Arsenic (TCLP)

0.010 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Cadmium (TCLP)

0.78 mg/l

08/23/90

Isler

Flame atomic abs.

Cadmium (TCLP)

0.177 mg/l

08/23/90

Isler

Flame atomic abs.

Chromium (TCLP)

(0.01 mg/l

08/23/90

Isler

Flame atomic abs.

Lead (TCLP) (1)

32.2 mg/l

08/24/90

Isler

Flame atomic abs.

Mercury (TCLP)

0.0003 mg/l

08/23/90

Hostettler

Atomic absorption
Cold vapor

Selenium (TCLP)

(0.01 mg/l

08/27/90

Isler

Atomic absorption
Graphite furnace

Silver (TCLP)

0.010 mg/l

08/23/90

Isler

Flame atomic abs.

(1) Exceeds the regulatory limit for Lead.



Sample Source

Best Environmental
 P.O. Box 576
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To:
As above**Laboratory Report**

Date

08/28/90

Page 2 of 2

Lab Control No

10,533

P.O. Number

0609

Job No.

007357

Sample Description

Paint Chips

Date Collected	Data Received
08-10-90	08/11/90

Sample Type

GRAB

Collected By

Client

Location

Paint Reel #2

Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Quality Control Data

See Attached

08/28/90

Marks



Sample Source

Best Environmental
 P.O. Box 576
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 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/13/90

Page 1 of 6

Lab Control No.

10,493

P.O. Number

0609

Job No.
007357

Sample Description
Well Water

Date Collected
08-09-90Date Received
08/10/90

Sample Type
GRAB

Collected By
Client

Location
Monitoring Well BW-1

Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Cyanide, total (CN)

<0.02 mg/l

08/16/90

Hoover

Distillation/
Colorimetric

Phenols, total

<0.010 mg/l

08/11/90

Rogers

Distillation/
Chloroform extraction

Acid/Base/Neutral Extract.

PERFORMED

08/14/90

Davis

Priority Pollutant Vol. (1) Detected

08/21/90

Wilson

Gas Chromatography/
Mass Spectrometry

Priority Pollutant Semi-Vol None Detected

09/04/90

Cropper

Gas chromatography/
Mass Spectrometry

1,1-Dichloroethane

6. ug/l

08/21/90

Wilson

Gas chromatography/
Mass spectrometry

1,1,1-Trichloroethane

18. ug/l

08/21/90

Wilson

Gas chromatography/
Mass spectrometry

Antimony, total

<0.003 mg/l

08/21/90

Isler

Atomic absorption/
Graphite furnace

Arsenic, total

0.047 mg/l

08/17/90

Hostettler

Atomic absorption/
Graphite furnace

Remarks

- (1) See attached list for target compounds & respective detection limits.
- (2) See attached list for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL

Brad Coughlin



Sample Source

Best Environmental
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Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/13/90

Page 2 of 6

Lab Control No

10,493

PO Number

0609

Job No
007357Sample Description
Well Water

Date Collected	Date Received	Sample Type	Location
08-09-90	08/10/90	GRAB	Monitoring Well BW-1
Parameter	Results	Collected By	Time of Collection
Beryllium, total	<0.005 mg/l	Client	00:00
Cadmium, total	<0.002 mg/l	Isler	Flame atomic abs.
Chromium, total	0.090 mg/l	Isler	Atomic absorption Graphite furnace
Copper, total	0.12 mg/l	Hostettler	Flame atomic abs.
Lead, total	0.076 mg/l	Hostettler	Atomic absorption Graphite furnace
Mercury, total	0.0003 mg/l	Hostettler	Atomic absorption Cold vapor
Nickel, total	0.07 mg/l	Hostettler	Flame atomic abs.
Selenium, total	0.003 mg/l	Hostettler	Atomic absorption Graphite furnace
Silver, total	0.002 mg/l	Isler	Flame atomic abs.

Remarks

Date Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL



Sample Source

Best Environmental
 P.O. Box 576
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 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date 09/13/90 Page 3 of
 Lab Control No 10,493
 P.O. Number 0609 Job No. 007357

To:

As above

Sample Description
Well WaterDate Collected
08-09-90Date Received
08/10/90Sample Type
GRABCollected By
ClientLocation
Monitoring Well BW-1Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Thallium, total

(0.005 mg/l)

08/15/90

Isler

Atomic absorption
Graphite furnace

Zinc, total

0.247 mg/l

08/16/90

Hostettler

Flame atomic abs.

Pest./PCB Extraction

PERFORMED

08/14/90

Slider

Aldrin

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

alpha-BHC

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

beta-BHC

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

gamma-BHC (Lindane)

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

delta-BHC

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Chlordane

None Detected
DL = 2.5 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Remarks

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL



Sample Source
 Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date 09/13/90 Page 4 of 6
 Lab Control No 10,493
 P.O. Number 0609 Job No 007357

To:

As above

Sample Description Well Water	Sample Type GRAB	Location Monitoring Well BW-1		
Collected 08-09-90	Date Received 08/10/90	Collected By Client	Time of Collection 00:00	
Parameter	Results	Date Analyzed	Analyst	Method of Analysis
4, 4'-DDT	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
4, 4'-DDE	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
4'-DDD	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Dieldrin	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
alpha-Endosulfan	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
beta-Endosulfan	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endosulfan sulfate	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endrin	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endrin aldehyde	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/13/90

Page 5 of 6

Lab Control No

10,493

P.O. Number

0609

Job No.
007357

To:

As above

Sample Description	Sample Type	Location		
Well Water	GRAB	Monitoring Well BW-1		
Date Collected	Date Received	Collected By	Time of Collection	Method of Analysis
08-09-90	08/10/90	Client	00:00	
Parameter	Results	Date Analyzed	Analyst	
Heptachlor	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Heptachlor epoxide	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
B-1242	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1254	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1221	None Detected DL = 25.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1232	None Detected DL = 25.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1248	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1260	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1016	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture

Marks



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date

09/13/90

Page 6 of 6

Lab Control No

10,493

P.O. Number

0609

Job No

007357

Sample Description
Well WaterSample Type
GRABLocation
Monitoring Well BW-1Date Collected
08-09-90

Data Received

08/10/90

Collected By

Client

Time of Collection
00:00

Parameter

Toxaphene

Results

None Detected
DL = 25.0 ug/l

Date Analyzed

08/15/90

Analyst

Peyton

Method of Analysis

Gas chromatography
Electron capture

marks

State Certification No. M-10-1

Analysis Reviewed
By

ORIGINAL

I Sample Number I
I WELL-BW-1 IVOLATILE ORGANICS ANALYSIS DATA SHEET
VOLATILE COMPOUNDS

(Page 1)

Laboratory Name: ENV CONS INC
Lab Sample ID No: 110493
Sample Matrix: WATER
Data Release Authorized By: EBCCase No: _____
QC Report No: _____
Contract No: _____
Date Sample Received: 08/10/90

METHOD 8240

Concentration: LOW
Date Extracted/Prepared: _____
Date Analyzed: 08/21/90
Conc/Dil Factor: 1 pH _____
Percent Moisture: (Not Decanted) _____

IBS Number		ug/L	CAS Number		ug/L
74-84-3	Chloromethane	10 U	124-48-1	Dibromochloromethane . . .	5 U
74-83-9	Bromomethane	10 U	79-00-5	1,1,2-Trichloroethane . . .	5 U
75-01-4	Vinyl Chloride	10 U	71-43-2	Benzene	5 U
75-00-3	Chloroethane	10 U	10061-01-5	Cis-1,3-Dichloropropene . . .	5 U
75-09-2	Methylene Chloride	10 BU	75-25-2	Bromoform	5 U
57-14-1	Acetone	10 U	108-10-1	4-Methyl-2-Pentanone	10 U
5-0	Carbon Disulfide	5 U	591-78-6	2-Hexanone	10 U
5-35-4	1,1-Dichloroethene	5 U	127-18-4	Tetrachloroethene	5 U
75-35-3	1,1-Dichloroethane	6	108-88-3	Toluene	5 U
56-59-2	Cis 1,2-Dichloroethene . . .	5 U	79-34-5	1,1,2,2-Tetrachloroethane . . .	5 U
56-60-5	Trans-1,2-Dichloroethene . . .	5 U	108-90-7	Chlorobenzene	5 U
67-66-3	Chloroform	5 BU	100-41-4	Ethylbenzene	5 U
07-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene	5 U
78-93-3	2-Butanone	10 U	M & P Xylenes	5 U	
71-55-6	1,1,1-Trichloroethane . . .	18	95-47-5	O-Xylene	5 U
56-23-5	Carbon Tetrachloride	5 U	107-02-8	Acrolein	10 U
08-05-4	Vinyl Acetate	10 U	107-13-1	Acrylonitrile	10 U
75-27-4	Bromodichloromethane	5 U	110-75-8	2-Chloroethylvinylether	10 U
78-87-5	1,2-Dichloropropane	5 U	76-13-1	Trichlorofluoromethane	5 U
0061-02-6	Trans-1,3-Dichloropropene	5 U	75-71-8	Dichlorodifluoromethane	5 BU
9-01-6	Trichloroethene	5 U			

B - Compound was detected in the QC blank.

U - Compound analyzed for but not detected. The reported value is the minimum attainable quantitation limit for the sample.

Laboratory Name: ENV CONS INC
Case No:Sample Number
WELL-BW-1ORGANICS ANALYSIS DATA SHEET
SEMIVOLATILE COMPOUNDS
(Page 2)

METHOD 8270

Concentration: LOW
Date Extracted/Prepared: 08/14/90
Date Analyzed: 09/06/90
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) _____GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Ye

CAS Number		ug/L	CAS Number		ug/L	
108-95-2	Phenol	10	U	100-02-7	4-Nitrophenol	50
111-44-4	bis(2-Chloroethyl)Ether .	10	U	132-64-9	Dibenzofuran	10
95-57-8	2-Chlorophenol	10	U	121-14-2	2,4-Dinitrotoluene	10
541-73-1	1,3-Dichlorobenzene . . .	10	U	84-66-2	Diethylphthalate	10
106-46-7	1,4-Dichlorobenzene . . .	10	U	7005-72-3	4-Chlorophenyl-phenylether	10
100-51-6	Benzyl Alcohol	20	U	86-73-7	Fluorene	10
95-50-1	1,2-Dichlorobenzene . . .	10	U	100-10-6	4-Nitroaniline	50
95-48-7	2-Methylphenol	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-30-6	N-Nitrosodiphenylamine . .	10
106-44-5	4-Methylphenol	10	U	101-55-3	4-Bromophenyl-phenylether	10
121-64-7	N-Nitroso-Di-n-Propylamine	10	U	118-74-1	Hexachlorobenzene	10
7-72-1	Hexachloroethane	10	U	87-86-5	Pentachlorophenol	50
98-95-3	Nitrobenzene	10	U	85-01-8	Phenanthrone	10
78-59-1	Isophorone	10	U	120-12-7	Anthracene	10
88-75-5	2-Nitrophenol	10	U	84-74-2	Di-n-Butylphthalate	10
105-67-9	2,4-Dimethylphenol	10	U	206-44-0	Fluoranthene	10
65-85-0	Benzoic Acid	50	U	129-00-0	Pyrene	10
111-91-1	Bis (2-Chloroethoxy)Methane	10	U	85-68-7	Butylbenzylphthalate . . .	10
120-83-2	2,4-Dichlorophenol	10	U	91-94-1	3,3'-Dichlorobenzidine . .	20
120-82-1	1,2,4-Trichlorobenzene . .	10	U	56-55-3	Benzo(a)Anthracene	10
91-20-3	Naphthalene	10	U	218-01-9	Chrysene	10
106-47-8	4-Chloroaniline	20	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10
87-68-3	Hexachlorobutadiene . . .	10	U	117-84-0	Di-n-Octyl Phthalate . . .	10
59-50-7	4-Chloro-3-Methylphenol .	20	U	205-99-2	Benzo(b)Fluoranthene . . .	10
91-57-6	2-Methylnaphthalene . . .	10	U	92-87-5	Benzidine	50
77-47-4	Hexachlorocyclopentadiene	10	U	122-66-7	1,2-Diphenylhydrazine . .	10
88-06-2	2,4,6-Trichlorophenol . .	10	U	62-75-9	N-Nitrosodimethylamine . .	10
95-95-4	2,4,5-Trichlorophenol . .	50	U	62-53-3	Aniline	10
91-58-7	2-Chloronaphthalene . . .	10	U	109-06-8	2-Picoline	50
88-74-4	2-Nitroaniline	50	U	95-94-3	1,2,4,5-Tetrachlorobenzene	10
131-11-3	Dimethyl Phthalate	10	U	207-08-9	Benzo(k)Fluoranthene . . .	10
308-96-8	Acenaphthylene	10	U	50-32-8	Benzo(a)Pyrene	10
806-20-2	2,6-Dinitrotoluene	10	U	193-39-5	Indeno(1,2,3-cd)Pyrene . .	10
99-09-2	3-Nitroaniline	50	U	53-70-3	Dibenzo(a,h)Anthracene . .	10
83-32-9	Acenaphthene	10	U	191-24-2	Benzo(g,h,i)Perylene . . .	10
51-28-5	2,4-Dinitrophenol	50	U			

U - Compound analyzed for but not detected. The reported

value is the minimum attainable quantitation limit



Site Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/14/90

Page 1

of 6

Lab Control No

10,494

P.O. Number

0609

Job No.

007357

To:

As above

Sample Description
Well WaterDate Collected
08-09-90Date Received
08/10/90Sample Type
GRABLocation
Monitoring Well BW-4Collected By
ClientTime of Collection
00:00

Parameter

Cyanide, total (CN)

Results

(0.02 mg/l)

Date Analyzed

08/16/90

Analyst

Hoover

Method of Analysis

Distillation/
Colorimetric

Phenols, total

(0.005 mg/l)

08/11/90

Rogers

Distillation

Chloroform extraction

Acid/Base/Neutral Extract.

PERFORMED

08/14/90

Davis

Priority Pollutant Vol.

Detected

08/21/90

Wilson

Gas Chromatography
Mass Spectrometry

Priority Pollutant Semi-Vol

None Detected

08/06/90

Wilson

Gas chromatography
Mass Spectrometry

Chloroethane

15. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

1,1-Dichloroethane

160. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

1,1,1-Trichloroethane

190. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

1,1-Dichloroethene

6. ug/l

08/21/90

Wilson

Gas Chromatography
Mass Spectrometry

Marks

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis reviewed
By
ORIGINAL



Laboratory

Date

09/14/90

Lab Control No

10,494

P.O. Number

0609

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Bill To:

As above

Sample Description	Date Received	Sample Type	Location	Time of Collection	Method of
Well Water	08/10/90	GRAB	Monitoring Well BW-4	00:00	
		Collected By			
		Client			
Parameter	Results	Date Analyzed	Analyst		
Antimony, total	(0.003 mg/l)	08/21/90	Isler		Atomic Graph
Arsenic, total	0.005 mg/l	08/17/90	Hostettler		Atomic Graph
Beryllium, total	(0.005 mg/l)	08/16/90	Isler		Flame
Cadmium, total	(0.002 mg/l)	08/15/90	Isler		Flame
Chromium, total	0.008 mg/l	08/15/90	Isler		Atom Grap
Copper, total	0.02 mg/l	08/16/90	Hostettler		Flam
Lead, total	0.011 mg/l	08/15/90	Hostettler		Atom Grap
Mercury, total	(0.0002 mg/l)	08/14/90	Hostettler		Atom Col
Nickel, total	(0.01 mg/l)	08/16/90	Hostettler		Fla

Remarks

See attached lists for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Well Water

Date Collected
08-09-90

Date Received

08/10/90

Sample Type
GRAB

Collected By
Client

Location
Monitoring Well BW-4

Time of Collection
00:00

P.O. Number
0609

Job No.
007357

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Selenium, total	0.003 mg/l	08/17/90	Hostettler	Atomic absorption Graphite furnace
Silver, total	0.003 mg/l	08/15/90	Isler	Flame atomic abs.
Thallium, total	(0.005 mg/l	08/15/90	Isler	Atomic absorption Graphite furnace
Zinc, total	0.045 mg/l	08/16/90	Hostettler	Flame atomic abs.
Pest./PCB Extraction	PERFORMED	08/14/90	Slider	
Aldrin	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
alpha-BHC	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
beta-BHC	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
gamma-BHC (Lindane)	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Remarks				

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/14/90

Page 3

Lab Control No

10,494

P.O. Number

0609

Job No.
007357Sample Description
Well WaterDate Collected
08-09-90

Date Received

08/10/90

Parameter

Selenium, total

Sample Type
GRABCollected By
ClientLocation
Monitoring Well BW-4Time of Collection
00:00

Results

Date Analyzed

Analyst

Method of Analysis

0.003 mg/l

08/17/90

Hostettler

Atomic absorption
Graphite furnace

0.003 mg/l

08/15/90

Isler

Flame atomic abs.

<0.005 mg/l

08/15/90

Isler

Atomic absorption
Graphite furnace

0.045 mg/l

08/16/90

Hostettler

Flame atomic abs.

Pest./PCB Extraction

PERFORMED

08/14/90

Slider

Aldrin

None Detected
DL = 0.25 ug/l

08/15/90

Peyton
Gas chromatography
Electron capture

alpha-BHC

None Detected
DL = 0.25 ug/l

08/15/90

Peyton
Gas chromatography
Electron capture

beta-BHC

None Detected
DL = 0.25 ug/l

08/15/90

Peyton
Gas chromatography
Electron capture

gamma-BHC (Lindane)

None Detected
DL = 0.25 ug/l

08/15/90

Peyton
Gas chromatography
Electron capture

Remarks

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1

 Analysis Reviewed
By
ORIGINAL



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description
Well Water

Date Collected
08-09-90

Parameter

delta-BHC

Chlordane

4, 4'-DDT

4, 4'-DDE

4, 4'-DDD

Dieldrin

alpha-Endosulfan

beta-Endosulfan

Endosulfan sulfate

Remarks

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis Reviewed
By
ORIGINAL

Laboratory Report

Date

09/14/90

Page 4

Lab Control No

10, 494

P.O. Number

0609

Job No.

007351

		Sample Type GRAB	Location Monitoring Well BW-4	
	Date Received	Collected By Client		Time of Collection 00:00
	08/10/90			
delta-BHC		None Detected DL = 0.25 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
Chlordane		None Detected DL = 2.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
4, 4'-DDT		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
4, 4'-DDE		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
4, 4'-DDD		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
Dieldrin		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
alpha-Endosulfan		None Detected DL = 0.25 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
beta-Endosulfan		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture
Endosulfan sulfate		None Detected DL = 0.5 ug/l	08/15/90 Peyton	Gas chromatography Electron capture

Paul Barding



Sample Source

Best Environmental
P. O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

Laboratory Report

Date

09/14/90

Page 5

Lab Control No

10,494

P.O. Number

0609

Job No
007351

To:

As above

Sample Description
Well WaterDate Collected
08-09-90Date Received
08/10/90Sample Type
GRABLocation
Monitoring Well BW-4Collected By
ClientTime of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Endrin

None Detected
DL = 0.5 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Endrin aldehyde

None Detected
DL = 0.5 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Heptachlor

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Heptachlor epoxide

None Detected
DL = 0.25 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1242

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1254

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1221

None Detected
DL = 25.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1232

None Detected
DL = 25.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1248

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

See attached lists for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Sent To:

As above

 Sample Description
 Well Water

 Date Collected
 08-09-90

 Date Received
 08/10/90

 Sample Type
 GRAB

 Collected By
 Client

 Location
 Monitoring Well BW-4

 Time of Collection
 00:00

Parameter

PCB-1260

Results

 None Detected
 DL = 5.0 ug/l

Data Analyzed

08/15/90

Analyst

Peyton

Method of Analysis

 Gas chromatography
 Electron capture

PCB-1016

 None Detected
 DL = 5.0 ug/l

08/15/90

Analyst

 Gas chromatography
 Electron capture

Toxaphene

 None Detected
 DL = 25.0 ug/l

08/15/90

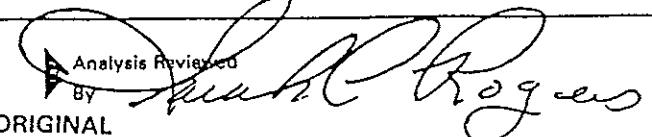
Analyst

 Gas chromatography
 Electron capture

Remarks

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1



Analysis Reviewed
BY
ORIGINAL

I Sample Number
I WELL-BW-4VOLATILE ORGANICS ANALYSIS DATA SHEET
VOLATILE COMPOUNDS

(Page 1)

Laboratory Name: ENV CONS INC

Case No:

Lab Sample ID No: 110494

QC Report No:

Sample Matrix: WATER

Contract No:

Data Release Authorized By: /MC

Date Sample Received: 08/10/90

METHOD 8240

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 08/21/90
Conc/Dil Factor: 1, pH
Percent Moisture: (Not Decanted)

CAS Number		ug/L	CAS Number		ug/L
74-84-3	Chloromethane	10 U	124-48-1	Dibromochloromethane . . .	5 L
74-83-9	Bromomethane	10 U	79-00-5	1,1,2-Trichloroethane . . .	5 L
75-01-4	Vinyl Chloride	10 U	71-43-2	Benzene	5 L
75-00-3	Chloroethane	15	10061-01-5	Cis-1,3-Dichloropropene . . .	5 L
75-09-2	Methylene Chloride	10 BU	75-25-2	Bromoform	5 L
67-64-1	Acetone	10 U	108-10-1	4-Methyl-2-Pentanone	10 L
75-15-0	Carbon Disulfide	5 U	591-78-6	2-Hexanone	10 L
-35-4	1,1-Dichloroethene	6	127-18-4	Tetrachloroethene	5 L
75-35-3	1,1-Dichloroethane	160	108-88-3	Toluene	5 L
156-59-2	Cis 1,2-Dichloroethene . . .	5 U	79-34-5	1,1,2,2-Tetrachloroethane . . .	5 L
156-60-5	Trans-1,2-Dichloroethene . .	5 U	108-90-7	Chlorobenzene	5 L
57-66-3	Chloroform	5 BU	100-41-4	Ethylbenzene	5 L
107-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene	5 L
78-93-3	2-Butanone	10 U	M & P Xylenes	5 L	
71-55-6	1,1,1-Trichloroethane . . .	190	95-47-5	O-Xylene	5 L
56-23-5	Carbon Tetrachloride	5 U	107-02-8	Acrolein	10 L
108-05-4	Vinyl Acetate	10 U	107-13-1	Acrylonitrile	10 L
75-27-4	Bromodichloromethane	5 U	110-75-8	2-Chloroethylvinylether	10 L
78-87-5	1,2-Dichloropropane	5 U	76-13-1	Trichlorofluoromethane	5 L
10061-02-6	Trans-1,3-Dichloropropene	5 U	75-71-8	Dichlorodifluoromethane . . .	5 E
79-01-6	Trichloroethene	5 U			

B - Compound was detected in the QC blank.

U - Compound analyzed for but not detected. The reported value is the minimum attainable quantitation limit for the sample.

Laboratory Name: ENV CONS INC
Case No:Sample Number
WEIL-BW-4ORGANICS ANALYSIS DATA SHEET
SEMIVOLATILE COMPOUNDS
(Page 2)

METHOD 8270

Concentration: LOW
Date Extracted/Prepared: 08/14/90
Date Analyzed: 09/06/90
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) _____HPLC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number	ug/L	CAS Number	ug/L
108-95-2 Phenol	10 U	100-02-7 4-Nitrophenol	50
111-44-4 bis(2-Chloroethyl)Ether	10 U	132-64-9 Dibenzofuran	10
95-57-8 2-Chlorophenol	10 U	121-14-2 2,4-Dinitrotoluene	10
541-73-1 1,3-Dichlorobenzene	10 U	84-66-2 Diethylphthalate	10
106-46-7 1,4-Dichlorobenzene	10 U	7005-72-3 4-Chlorophenyl-phenylether	10
100-51-6 Benzyl Alcohol	20 U	86-73-7 Fluoréne	10
95-50-1 1,2-Dichlorobenzene	10 U	100-10-6 4-Nitroaniline	50
95-48-7 2-Methylphenol	10 U	534-52-1 4,6-Dinitro-2-Methylphenol	50
39638-32-9 bis(2-Chloroisopropyl)Ether	10 U	86-30-6 N-Nitrosodiphenylamine	10
106-44-5 4-Methylphenol	10 U	101-55-3 4-Bromophenyl-phenylether	10
521-64-7 N-Nitroso-Di-n-Propylamine	10 U	118-74-1 Hexachlorobenzene	10
7-72-1 Hexachloroethane	10 U	87-86-5 Pentachlorophenol	50
38-95-3 Nitrobenzene	10 U	85-01-8 Phenanthrene	10
78-59-1 Isophorone	10 U	120-12-7 Anthracene	10
38-75-5 2-Nitrophenol	10 U	84-74-2 Di-n-Butylphthalate	10
105-67-9 2,4-Dimethylphenol	10 U	206-44-0 Fluoranthene	10
65-85-0 Benzoic Acid	50 U	129-00-0 Pyrene	10
111-91-1 Bis (2-Chloroethoxy)Methane	10 U	85-68-7 Butylbenzylphthalate	10
120-83-2 2,4-Dichlorophenol	10 U	91-94-1 3,3'-Dichlorobenzidine	20
120-82-1 1,2,4-Trichlorobenzene	10 U	56-55-3 Benzo(a)Anthracene	10
91-20-3 Naphthalene	10 U	218-01-9 Chrysene	10
106-47-8 4-Chloroaniline	20 U	117-81-7 bis(2-Ethylhexyl)Phthalate	10
37-68-3 Hexachlorobutadiene	10 U	117-84-0 Di-n-Octyl Phthalate	10
59-50-7 4-Chloro-3-Methylphenol	20 U	205-99-2 Benzo(b)Fluoranthene	10
91-57-6 2-Methylnaphthalene	10 U	92-87-5 Benzidine	50
77-47-4 Hexachlorocyclopentadiene	10 U	122-66-7 1,2-Diphenylhydrazine	10
88-06-2 2,4,6-Trichlorophenol	10 U	62-75-9 N-Nitrosodimethylamine	10
95-95-4 2,4,5-Trichlorophenol	50 U	62-53-3 Aniline	10
91-58-7 2-Chloronaphthalene	10 U	109-06-8 2-Picoline	50
88-74-4 2-Nitroaniline	50 U	95-94-3 1,2,4,5-Tetrachlorobenzene	10
131-11-3 Dimethyl Phthalate	10 U	207-08-9 Benzo(k)Fluoranthene	10
208-96-8 Acenaphthylene	10 U	50-32-8 Benzo(a)Pyrene	10
506-20-2 2,6-Dinitrotoluene	10 U	193-39-5 Indeno(1,2,3-cd)Pyrene	10
99-09-2 3-Nitroaniline	50 U	53-70-3 Dibenzo(a,h)Anthracene	10
33-32-9 Acenaphthene	10 U	191-24-2 Benzo(g,h,i)Perylene	10
51-28-5 2,4-Dinitrophenol	50 U		

U - Compound analyzed for but not detected. The reported value is the minimum attainable quantitation limit



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Harding

To:

As above

Laboratory Report

Date

09/14/90

Page 1

Lab Control No

10,495

P.O. Number
0609Job No
007351Sample Description
Well WaterSample Type
GRABLocation
Monitoring Well BS-3Date Collected
08-09-90Date Received
08/10/90Collected By
ClientTime of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Cyanide, total (CN)

<0.02 mg/l

08/17/90

Hoover

Distillation/
Colorimetric

Phenols, total

<0.005 mg/l

08/16/90

Rogers

Distillation
Chloroform extraction

Acid/Base/Neutral Extract.

PERFORMED

08/14/90

Davis

Priority Pollutant Vol.

Detected

08/21/90

Wilson

Gas Chromatography
Mass Spectrometry

Priority Pollutant Semi-Vol

None Detected

09/06/90

Cropper

Gas chromatography
Mass Spectrometry

Chloroethane

110. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

1,1-Dichloroethane

1,600. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

Toluene

38. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

trans-1,2-Dichloroethylene

17. ug/l

08/21/90

Wilson

Gas chromatography
Mass spectrometry

See attached lists for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/14/90

Page 2

Lab Control No

▶ 10,495

P.O. Number

0609

Job No.

00735

 Sample Description
 Well Water

Date Collected 08-09-90	Date Received 08/10/90	Sample Type GRAB	Location Monitoring Well BS-3
Collected By Client			Time of Collection 00:00

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
1,1,1-Trichloroethane	5,600. ug/l	08/21/90	Wilson	Gas chromatography Mass spectrometry
Trichloroethylene	190. ug/l	08/21/90	Wilson	Gas chromatography Mass spectrometry
1,1-Dichloroethene	58. ug/l	08/21/90	Wilson	Gas Chromatography Mass Spectrometry
cis-1,2-Dichloroethene	3,400. ug/l	08/21/90	Wilson	Gas chromatography Mass spectrometry
Antimony, total	0.005 mg/l	08/21/90	Isler	Atomic absorption Graphite furnace
Arsenic, total	0.120 mg/l	08/16/90	Hostettler	Atomic absorption Graphite furnace
Beryllium, total	(0.005 mg/l	08/16/90	Isler	Flame atomic abs.
Cadmium, total	0.003 mg/l	08/15/90	Isler	Flame atomic abs.
Chromium, total	0.120 mg/l	08/15/90	Isler	Atomic absorption Graphite furnace

Marks

See attached lists for target compounds & respective detection limits.

State Certification No. M-10-1

Analysis Reviewed
By

SARAH D ROGERS



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Well Water

Sample Type
GRABLocation
Monitoring Well BS-3Date Collected
08-09-90Date Received
08/10/90Collected By
ClientTime of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Copper, total

0.47 mg/l

08/16/90

Hostettler

Flame atomic abs.

Lead, total

0.25 mg/l

08/16/90

Isler

Flame atomic abs.

Mercury, total

0.0005 mg/l

08/14/90

Hostettler

Atomic absorption
Cold vapor

Nickel, total

0.14 mg/l

08/16/90

Hostettler

Flame atomic abs.

Selenium, total

<0.002 mg/l

08/17/90

Hostettler

Atomic absorption
Graphite furnace

Silver, total

0.007 mg/l

08/15/90

Isler

Flame atomic abs.

Thallium, total

<0.005 mg/l

08/15/90

Isler

Atomic absorption
Graphite furnace

Zinc, total

0.814 mg/l

08/16/90

Hostettler

Flame atomic abs.

Pest./PCB Extraction

PERFORMED

08/14/90

Slider

arks

See attached lists for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/14/90

Page 4

Lab Control No

► 10,495

P.O. Number

0609

Job No.

007357

Sample Description
Well Water

Date Collected
08-09-90

Date Received
08/10/90

Sample Type
GRAB

Collected By
Client

Location
Monitoring Well BS-3

Time of Collection
00:00

Parameter

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Aldrin	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
alpha-BHC	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
beta-BHC	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
gamma-BHC (Lindane)	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
delta-BHC	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Chlordane	None Detected DL = 2.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
4,4'-DDT	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
4,4'-DDE	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
4,4'-DDD	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture

Remarks

See attached lists for target compounds & respective detection limits.



Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481

**Environmental
Consultants**

Environmental Testing Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

09/14/90

Page 5

of

Lab Control No

► 10,495

P.O. Number

0609

Job No

007357

Sample Description
Well Water

Date Collected
08-09-90

Date Received
08/10/90

Sample Type
GRAB

Collected By
Client

Location
Monitoring Well BS-3

Time of Collection
00:00

Parameter

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Dieldrin	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
alpha-Endosulfan	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
beta-Endosulfan	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endosulfan sulfate	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endrin	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Endrin aldehyde	None Detected DL = 0.5 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Heptachlor	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
Heptachlor epoxide	None Detected DL = 0.25 ug/l	08/15/90	Peyton	Gas chromatography Electron capture
PCB-1242	None Detected DL = 5.0 ug/l	08/15/90	Peyton	Gas chromatography Electron capture

Remarks

See attached lists for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Laboratory Report

Date

09/14/90

Page 6 of 6

Lab Control No

10,495

P.O. Number

0609

Job No
007357

To:

As above

Sample Description

Well Water

Date Collected
08-09-90

Date Received

08/10/90

Sample Type
GRABCollected By
ClientLocation
Monitoring Well BS-3Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

PCB-1254

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1221

None Detected
DL = 25.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1232

None Detected
DL = 25.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1248

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1260

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

PCB-1016

None Detected
DL = 5.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

Toxaphene

None Detected
DL = 25.0 ug/l

08/15/90

Peyton

Gas chromatography
Electron capture

See attached lists for target compounds & respective detection limits.



1 Sample Number
1 WELL-BG-3

VOLATILE ORGANICS ANALYSIS DATA SHEET
VOLATILE COMPOUNDS

(Page 1)

Laboratory Name: ENV CONS INC
Lab Sample ID No: 110495
Sample Matrix: WATER
Data Release Authorized By: (210C)

Case No: _____
QC Report No: _____
Contract No: _____
Date Sample Received: 08/10/90

METHOD 8240

Concentration: LOW
Date Extracted/Prepared: _____
Date Analyzed: 08/21/90
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted) _____

CAS Number		ug/L	CAS Number		ug/L
74-84-3	Chloromethane	10 U	124-48-1	Dibromochloromethane . . .	5 L
74-83-9	Bromomethane	10 U	79-00-5	1,1,2-Trichloroethane . . .	5 L
75-01-4	Vinyl Chloride	10 U	71-43-2	Benzene	5 L
75-00-3	Chloroethane	110	10061-01-5	Cis-1,3-Dichloropropene . . .	5 L
75-09-2	Methylene Chloride	7 BJ	75-25-2	Bromoform	5 L
7-64-1	Acetone	10 U	108-10-1	4-Methyl-2-Pentanone	10 L
-15-0	Carbon Disulfide	5 U	591-78-6	2-Hexanone	10 L
75-35-4	1,1-Dichloroethene	58	127-18-4	Tetrachloroethene	5 L
75-35-3	1,1-Dichloroethane	1600	108-88-3	Toluene	38
156-59-2	Cis 1,2-Dichloroethene . . .	3400	79-34-5	1,1,2,2-Tetrachloroethane . . .	5 L
156-60-5	Trans-1,2-Dichloroethene . . .	17	108-90-7	Chlorobenzene	5 L
57-66-3	Chloroform	5 BU	100-41-4	Ethylbenzene	5 L
107-06-2	1,2-Dichloroethane	5 U	100-42-5	Styrene	5 L
78-93-3	2-Butanone	10 U		M & P Xylenes	5 L
71-55-6	1,1,1-Trichloroethane . . .	5600	95-47-5	O-Xylene	5 L
56-23-5	Carbon Tetrachloride	5 U	107-02-8	Acrolein	10 L
108-05-4	Vinyl Acetate	10 U	107-13-1	Acrylonitrile	10 L
75-27-4	Bromodichloromethane	5 U	110-75-8	2-Chloroethylvinylether . . .	10 L
78-87-5	1,2-Dichloropropane	5 U	76-13-1	Trichlorofluoromethane . . .	5 L
10061-02-6	Trans-1,3-Dichloropropene	5 U	75-71-8	Dichlorodifluoromethane . . .	5 L
79-01-6	Trichloroethene	190			

B - Compound was detected in the QC blank.

J - Reported value is less than the detection limit.

U - Compound analyzed for but not detected. The reported value is the minimum attainable quantitation limit for the sample.

Laboratory Name: ENV CONS INC
Case No:Sample Number
WELL-KS-3ORGANICS ANALYSIS DATA SHEET
SEMI VOLATILE COMPOUNDS
(Page 2)

METHOD 8270

Concentration: LOW
Date Extracted/Prepared: 08/14/90
Date Analyzed: 09/06/90
Conc/Dil Factor: 1.
Percent Moisture: (Decanted)GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/L	CAS Number		ug/L		
108-95-2	Phenol	10	U	100-02-7	4-Nitrophenol	50	U
111-44-4	bis(2-Chloroethyl)Ether .	10	U	132-64-9	Dibenzofuran	10	U
95-57-8	2-Chlorophenol	10	U	121-14-2	2,4-Dinitrotoluene	10	U
541-73-1	1,3-Dichlorobenzene . . .	10	U	84-66-2	Diethylphthalate	10	U
106-46-7	1,4-Dichlorobenzene . . .	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
100-51-6	Benzyl Alcohol	20	U	86-73-7	Fluorene	10	U
95-50-1	1,2-Dichlorobenzene . . .	10	U	100-10-6	4-Nitroaniline	50	U
95-48-7	2-Methylphenol	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-30-6	N-Nitrosodiphenylamine . .	10	U
36-44-5	4-Methylphenol	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
11-64-7	N-Nitroso-Di-n-Propylamine	10	U	118-74-1	Hexachlorobenzene	10	U
11-72-1	Hexachloroethane	10	U	87-86-5	Pentachlorophenol	50	U
98-95-3	Nitrobenzene	10	U	85-01-8	Phenanthrene	10	U
78-59-1	Isophorone	10	U	120-12-7	Anthracene	10	U
88-75-5	2-Nitrophenol	10	U	84-74-2	Di-n-Butylphthalate . . .	10	U
105-67-9	2,4-Dimethylphenol . . .	10	U	206-44-0	Fluoranthene	10	U
65-85-0	Benzoic Acid	50	U	129-00-0	Pyrene	10	U
111-91-1	Bis (2-Chloroethoxy)Methane	10	U	85-68-7	Butylbenzylphthalate . . .	10	U
120-83-2	2,4-Dichlorophenol	10	U	91-94-1	3,3'-Dichlorobenzidine . .	20	U
120-82-1	1,2,4-Trichlorobenzene .	10	U	56-55-3	Benzo(a)Anthracene	10	L
91-20-3	Naphthalene	10	U	218-01-9	Chrysene	10	L
106-47-8	4-Chloroaniline	20	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	L
87-68-3	Hexachlorobutadiene . . .	10	U	117-84-0	Di-n-Octyl Phthalate . . .	10	L
59-50-7	4-Chloro-3-Methylphenol .	20	U	205-99-2	Benzo(b)Fluoranthene . . .	10	L
91-57-6	2-Methylnaphthalene . . .	10	U	92-87-5	Benizidine	50	L
77-47-4	Hexachlorocyclopentadiene	10	U	122-66-7	1,2-Diphenylhydrazine . .	10	L
88-06-2	2,4,6-Trichlorophenol . .	10	U	62-75-9	N-Nitrosodimethylamine . .	10	L
95-95-4	2,4,5-Trichlorophenol . .	50	U	62-53-3	Aniline	10	L
91-58-7	2-Chloronaphthalene . . .	10	U	109-06-8	2-Picoline	50	L
88-74-4	2-Nitroaniline	50	U	95-94-3	1,2,4,5-Tetrachlorobenzene	10	L
131-11-3	Dimethyl Phthalate	10	U	207-08-9	Benzo(k)Fluoranthene . . .	10	L
208-96-8	Acenaphthylene	10	U	50-32-8	Benzo(a)Pyrene	10	L
606-20-2	2,6-Dinitrotoluene	10	U	193-39-5	Indero(1,2,3-cd)Pyrene . .	10	L
99-09-2	3-Nitroaniline	50	U	53-70-3	Dibenzo(a,h)Anthracene . .	10	L
43-32-9	Acenaphthene	10	U	191-24-2	Benzo(g,h,i)Perylene . . .	10	L
1-28-5	2,4-Dinitrophenol	50	U				

U - Compound analyzed for but not detected. The reported

value is the minimum attainable quantitation limit

OCT 15 1990

ENVIRONMENTAL CONSULTANTS INC.

61 Newman Avenue • Clarksville, Indiana 47130 • Phone (812) 282-8481


**Environmental
Consultants**

Professional Laboratory Services

Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahom, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

10/09/90

Page 1

of 5

Lab Control No

11,653

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Date Collected Date Received
09-10-90 09/11/90

Sample Type

GRAB

Location

BW-1

Collected By
Client

Time of Collection

00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Cyanide, total (CN)	(0.02 mg/l)	09/14/90	Hoover	Distillation/ Colorimetric
Phenols, total	(0.005 mg/l)	09/13/90	Rogers	Distillation Chloroform extraction
Acid/Base/Neutral Extract.	PERFORMED	09/13/90	Clark, R.	
PP Volatiles (1)	None Detected	09/21/90	Wilson	Gas Chromatography Mass Spectrometry
PP Semi-Volatiles (2)	None Detected	09/18/90	Cropper	Gas chromatography Mass Spectrometry
Antimony, total	(0.003 mg/l)	09/24/90	Isler	Atomic absorption Graphite furnace
Arsenic, total	0.003 mg/l	09/20/90	Isler	Atomic absorption Graphite furnace
Beryllium, total	(0.01 mg/l)	09/21/90	Isler	Flame atomic abs.
Cadmium, total	0.003 mg/l	09/18/90	Isler	Flame atomic abs.

Remarks

- (1) See attached list for target compounds & respective detection limits.
 (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

10/09/90

Page 2

Lab Control No.

11,653

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Date Collected Date Received
09-10-90 09/11/90

, 00000-0000
Sample Type Location
GRAB BW-1

Collected By Client

Time of Collection
00:00

Parameter

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Chromium, total	0.001 mg/l	09/19/90	Isler	Atomic absorption Graphite furnace
Copper, total	<0.01 mg/l	09/18/90	Isler	Flame atomic abs.
Lead, total	<0.001 mg/l	09/17/90	Isler	Atomic absorption Graphite furnace
Mercury, total	<0.0002 mg/l	09/13/90	Hostettler	Atomic absorption Cold vapor
Nickel, total	<0.01 mg/l	09/18/90	Isler	Flame atomic abs.
Selenium, total	<0.005 mg/l	09/14/90	Isler	Atomic absorption Graphite furnace
Silver, total	<0.002 mg/l	09/18/90	Isler	Flame atomic abs.
Thallium, total	<0.005 mg/l	09/24/90	Isler	Atomic absorption Graphite furnace
Zinc, total	0.019 mg/l	09/19/90	Isler	Flame atomic abs.

Remarks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Date Collected

09-10-90

Date Received

09/11/90

Parameter

Pest./PCB Extraction

Aldrin

alpha-BHC

beta-BHC

gamma-BHC (Lindane)

delta-BHC

Chlordane

4,4'-DDT

4,4'-DDE

Remarks

Sample Type
GRAB
Collected By

Location
BW-1

Time of Collection
00:00

Client

Date Analyzed

Analyst

Method of Analysis

RESULTS

None Detected
DL = 0.25 ug/l

None Detected
DL = 2.5 ug/l

None Detected
DL = 0.50 ug/l

None Detected
DL = 0.50 ug/l

Clark, R.

Peyton

Gas chromatography
Electron capture



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:
As above

Laboratory Report

Date

10/09/90

Page 4

of

Lab Control No

11,653

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Date Collected

09-10-90

Parameter

4,4'-DDD

Dieldrin

Alpha-Endosulfan

beta-Endosulfan

Endosulfan sulfate

Endrin

Endrin aldehyde

Heptachlor

Heptachlor epoxide

marks

00000-0000

Sample Type
GRAB

Location
BW-1

Collected By

Client

Time of Collection

00:00

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
4,4'-DDD	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Dieldrin	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Alpha-Endosulfan	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
beta-Endosulfan	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endosulfan sulfate	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin aldehyde	None Detected DL = 0.50 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Heptachlor	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Heptachlor epoxide	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Collected

09-10-90

meter

Date Received

09/11/90

Sample Type

GRAB

Collected By

Client

00000-0000

Location

BW-1

Time of Collection

00:00

PCB-1242

Results

None Detected
DL = 5.0 ug/l

Date Analyzed

09/17/90 Peyton

Method of Analysis

Gas chromatography
Electron capture

PCB-1254

None Detected
DL = 5.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

-1221

None Detected
DL = 25.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

PCB-1232

None Detected
DL = 25.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

PCB-1248

None Detected
DL = 5.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

PCB-1260

None Detected
DL = 5.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

PCB-1016

None Detected
DL = 5.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

Toxaphene

None Detected
DL = 25.0 ug/l

09/17/90 Peyton

Gas chromatography
Electron capture

works

Laboratory Report

Date

10/09/90

Page 5 of 5

Lab Control No

11,653

P.O. Number

0609

Job No.

007357



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

10/09/90

Page 1

of 6

Lab Control No

11,654

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Collected

09-10-90

Date Received

09/11/90

Sample Type

GRAB

Collected By

00000-0000

Location

BS-3

Client

Time of Collection

00:00

meter

	Results	Date Analyzed	Analyst	Method of Analysis
Cyanide, total (CN)	(0.02 mg/l	09/14/90	Hoover	Distillation/ Colorimetric
Phenols, total	(0.005 mg/l	09/13/90	Rogers	Distillation Chloroform extraction
/Base/Neutral Extract.	PERFORMED	09/13/90	Clark, R.	
PP Volatiles (1)	Detected	09/21/90	Wilson	Gas Chromatography Mass Spectrometry
PP Semi-Volatiles (2)	None Detected	09/18/90	Cropper	Gas chromatography Mass Spectrometry
Chloroethane	140. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
1, 1-Dichloroethane	1,200. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
Toluene	39. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
trans-1, 2-Dichloroethylene	16. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry

Works

- (1) See attached list for target compounds & respective detection limits.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
P.O. Box 576
ISS & R6 Frontage Road N.W.
Charmahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Date Collected Date Received
09-10-90 09/11/90

00000-0000

Sample Type Location
GRAB BS-3

Collected By Client

Time of Collection
00:00

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

1,1,1-Trichloroethane	3,600. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
Trichloroethylene	580. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
1-Dichloroethene	29. ug/l	09/21/90	Wilson	Gas Chromatography Mass Spectrometry
cis-1,2-Dichloroethene,	5,500. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
Antimony, total	(0.003 mg/l	09/24/90	Isler	Atomic absorption Graphite furnace
Arsenic, total	(0.002 mg/l	09/20/90	Isler	Atomic absorption Graphite furnace
Beryllium, total	(0.01 mg/l	09/21/90	Isler	Flame atomic abs.
Cadmium, total	(0.002 mg/l	09/18/90	Isler	Flame atomic abs.
Chromium, total	0.001 mg/l	09/19/90	Isler	Atomic absorption Graphite furnace

Remarks



Best Environmental
P.O. Box 576,
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

As above

Laboratory Report

Date

10/09/90

Page 3

Lab Control No

11,654

P.O. Number

0609

Job No

007357

Sample Description	Date Received	Sample Type	Location	Time of Collection	
Monitoring wells	09/11/90	GRAB	BS-3	00:00	
Copper, total		(0.01 mg/l)	09/18/90	Isler	Flame atomic abs.
Lead, total		(0.001 mg/l)	09/17/90	Isler	Atomic absorption Graphite furnace
Manganese, total		(0.0002 mg/l)	09/13/90	Hostettler	Atomic absorption Cold vapor
Nickel, total		(0.01 mg/l)	09/18/90	Isler	Flame atomic abs.
Selenium		(0.005 mg/l)	09/14/90	Isler	Atomic absorption Graphite furnace
Silver, total		(0.002 mg/l)	09/18/90	Isler	Flame atomic abs.
Titanium, total		(0.005 mg/l)	09/24/90	Isler	Atomic absorption Graphite furnace
Zinc, total		0.017 mg/l	09/19/90	Isler	Flame atomic abs.
PCB Extraction		PERFORMED	09/14/90	Clark, R.	



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Laboratory Report

Date

10/09/90

Page 4

Lab Control No.

11,654

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Sample Type

Location

GRAB

BS-3

Collected By

Client

Time of Collection

00:00

Date Collected

09-10-90

Date Received

09/11/90

Parameter

Results

Date Analyzed

Analyst

Method of Analysis

Aldrin

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

alpha-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

eta-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

gamma-BHC (Lindane)

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

delta-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Chlordane

None Detected
DL = 2.5 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

4, 4'-DDT

None Detected
DL = 0.5 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

4, 4'-DDE

None Detected
DL = 0.5 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

4, 4'-DDD

None Detected
DL = 0.5 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Remarks



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date

10/09/90

Page 5

Lab Control No

11,654

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

00000-0000

Sample Type

Location

GRAB

BS-3

Date Collected Date Received

09-10-90

09/11/90

Collected By

Client

Time of Collection

00:00

Parameter

Results Date Analyzed Analyst Method of Analysis

Dieldrin	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
alpha-Endosulfan	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
beta-Endosulfan	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endosulfan sulfate	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin aldehyde	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Heptachlor	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Heptachlor epoxide	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
PCB-1242	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture

Marks



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

As above

Sample Description

Monitoring wells

Site Collected Date Received

09-10-90

09/11/90

Sample Type

GRAB

Collected By

00000-0000

Location

BS-3

Client

Time of Collection

00:00

Parameter

PCB-1254

Results

None Detected
DL = 5.0 ug/l

Date Analyzed

09/17/90

Analyst

Peyton

Method of Analysis

Gas chromatography
Electron capture

PCB-1221

None Detected
DL = 25.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

-1232

None Detected
DL = 25.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

PCB-1248

None Detected
DL = 5.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

PCB-1260

None Detected
DL = 5.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

PCB-1016

None Detected
DL = 5.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Toxaphene

None Detected
DL = 25.0 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Marks

State Certification No. M-10-1

 Analysis Reviewed
By *Rod Curran*



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

I To:

As above

Laboratory Report

Date

10/09/90

Page 1 of

Lab Control No

11,655

P.O. Number

0609

Job No.

007357

Sample Description

Monitoring wells

Date Collected

09-10-90

Date Received

09/11/90

Sample Type

GRAB

Location

BW-4

Collected By

Client

Time of Collection

00:00

Parameter

Results

Date Analyzed

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Cyanide, total (CN)	(0.02 mg/l)	09/14/90	Hoover	Distillation/ Calorimetric
Phenols, total	(0.005 mg/l)	09/13/90	Rogers	Distillation Chloroform extraction
acid/Base/Neutral Extract.	PERFORMED	09/13/90	Clark, R.	
PP Volatiles (1)	Detected	09/21/90	Wilson	Gas Chromatography Mass Spectrometry
PP Semi-Volatiles (2)	None Detected	09/18/90	Cropper	Gas chromatography Mass Spectrometry
1,1-Dichloroethane	26. ug/l	09/21/90	Wilson	Gas chromatography Mass spectrometry
1,1,1-Trichloroethane	81. ug/l	09/21/90	Wilson	Gas chromatography, Mass spectrometry
Antimony, total	(0.003 mg/l)	09/24/90	Isler	Atomic absorption Graphite furnace
Arsenic, total	0.002 mg/l	09/20/90	Isler	Atomic absorption Graphite furnace

Remarks

- (1) See attached list for target compounds & respective detection limits.
- (2) See attached list for target compounds & respective detection limits.



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As Above

Sample Description

Monitoring Wells

Date Collected

09-10-90

Parameter

Beryllium, total

Cadmium, total

Chromium, total

Copper, total

Lead, total

Mercury, total

Nickel, total

Selenium, total

Silver, total

Marks

Sample Type

GRAB

Collected By

Client

00000-0000

Location

BW-4

Time of Collection

00:00

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Beryllium, total	<0.01 mg/l	09/21/90	Isler	Flame atomic abs.
Cadmium, total	0.002 mg/l	09/18/90	Isler	Flame atomic abs.
Chromium, total	0.007 mg/l	09/19/90	Isler	Atomic absorption Graphite furnace
Copper, total	<0.01 mg/l	09/18/90	Isler	Flame atomic abs.
Lead, total	<0.001 mg/l	09/17/90	Isler	Atomic absorption Graphite furnace
Mercury, total	<0.0002 mg/l	09/13/90	Hostettler	Atomic absorption Cold vapor
Nickel, total	<0.01 mg/l	09/18/90	Isler	Flame atomic abs.
Selenium, total	<0.005 mg/l	09/14/90	Isler	Atomic absorption Graphite furnace
Silver, total	0.002 mg/l	09/18/90	Isler	Flame atomic abs.



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Date Collected
09-10-90

Date Received
09/11/90

Sample Type

GRAB

Collected By

Client

Location

BW-4

Time of Collection

00:00

Parameter

Thallium, total

Results

<0.005 mg/l

Date Analyzed

09/24/90

Analyst

Isler

Method of Analysis

Atomic absorption
Graphite furnace

Zinc, total

0.011 mg/l

09/19/90

Isler

Flame atomic abs.

pest./PCB Extraction

PERFORMED

09/14/90

Clark, R.

Aldrin

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

alpha-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

beta-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

gamma-BHC (Lindane)

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

delta-BHC

None Detected
DL = 0.25 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Chlordane

None Detected
DL = 2.5 ug/l

09/17/90

Peyton

Gas chromatography
Electron capture

Remarks



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Date Collected	Date Received
09-10-90	09/11/90

Parameter

4, 4'-DDT

4, 4'-DDE

. 4'-DDD

Dieldrin

alpha-Endosulfan

beta-Endosulfan

Endosulfan sulfate

Endrin

Endrin aldehyde

Remarks

Sample Type	00000-0000
GRAB	Location
Collected By	BW-4

Client	Time of Collection
	00:00

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
4, 4'-DDT	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
4, 4'-DDE	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
. 4'-DDD	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Dieldrin	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
alpha-Endosulfan	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
beta-Endosulfan	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endosulfan sulfate	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
Endrin aldehyde	None Detected DL = 0.5 ug/l	09/17/90	Peyton	Gas chromatography Electron capture



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

I To:

As above

Sample Description

Monitoring wells

Date Collected

09-10-90

Date Received

09/11/90

Sample Type

GRAB

Collected By

Client

00000-0000

Location

BW-4

Time of Collection

00:00

Diameter

Heptachlor

	Results	Date Analyzed	Analyst	Method of Analysis
Heptachlor	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture

Heptachlor epoxide

Heptachlor epoxide	None Detected DL = 0.25 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
--------------------	---------------------------------	----------	--------	----------------------------------------

PCB-1242

PCB-1242	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	--------------------------------	----------	--------	----------------------------------------

PCB-1254

PCB-1254	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	--------------------------------	----------	--------	----------------------------------------

PCB-1221

PCB-1221	None Detected DL = 25.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	---------------------------------	----------	--------	----------------------------------------

PCB-1232

PCB-1232	None Detected DL = 25.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	---------------------------------	----------	--------	----------------------------------------

PCB-1248

PCB-1248	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	--------------------------------	----------	--------	----------------------------------------

FPCB-1260

FPCB-1260	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
-----------	--------------------------------	----------	--------	----------------------------------------

PCB-1016

PCB-1016	None Detected DL = 5.0 ug/l	09/17/90	Peyton	Gas chromatography Electron capture
----------	--------------------------------	----------	--------	----------------------------------------

marks

Laboratory Report

Date

10/09/90

Page 5

Lab Control No

11,655

P.O. Number

0609

Job No.

007357



Sample Source

Best Environmental
P.O. Box 576
155 & R6 Frontage Road N.W.
Channahon, IL 60410-
Attn: Mr. Paul Barding

To:

As above

Sample Description

Monitoring wells

Date Collected

09-10-90

Date Received

09/11/90

Sample Type

GRAB

Collected By

00000-0000

Location

BW-4

Time of Collection

00:00

Client

Parameter

Toxaphene

Results

None Detected
DL = 25.0 ug/l

Date Analyzed

09/17/90

Analyst

Peyton

Method of Analysis

Gas chromatography
Electron capture

Works



Sample Source

Best Environmental
 P.O. Box 576
 155 & R6 Frontage Road N.W.
 Channahon, IL 60410-
 Attn: Mr. Paul Barding

Bill To:

As above

Laboratory Report

Date

10/22/90

Page 1

Lab Control No

12,825

P.O. Number

Job No.

007

Sample Description

Well Water

Date Collected

10-11-90

Date Received

10/12/90

Sample Type

GRAB

Collected By

Client

00000-0000

Location

Monitor Well W-8

Time of Collection

09:00 am

Parameter

Parameter	Results	Date Analyzed	Analyst	Method of Analysis
Acid/Base/Neutral Extract.	PERFORMED	10/16/90	Rector	
PP Volatiles (1)	None Detected	10/17/90	Wilson	Gas Chromatography Mass Spectrometry
PP Semi-Volatiles (2)	None Detected	10/16/90	Cropper	Gas chromatography Mass Spectrometry

Whis metal??

Remarks

- (1) See attached list for target compounds & respective detection limits.
- (2) See attached list for target compounds & respective detection limits.



Environmental
Consultants

| Sample Number |
| WELL-W-8 |

VOLATILE ORGANICS ANALYSIS DATA SHEET
VOLATILE COMPOUNDS
(Page 1)

Laboratory Name: ENV CONS INC
Lab Sample ID No: 112825
Sample Matrix: WATER
Data Release Authorized By: *Bkt*

Case No:
QC Report No:
Contract No:
Date Sample Received: 10/12/90

METHOD 8240

Concentration: LOW
Date Extracted/Prepared:
Date Analyzed: 10/17/90
Conc/Dil Factor: 1. pH
Percent Moisture: (Not Decanted)

CAS Number		ug/L	CAS Number		ug/L		
74-84-3	Chloromethane	10	U	124-48-1	Dibromochloromethane . . .	5	U
74-83-9	Bromomethane	10	U	79-00-5	1,1,2-Trichloroethane . . .	5	U
501-4	Vinyl Chloride	10	U	71-43-2	Benzene	5	U
75-00-3	Chloroethane	10	U	10061-01-5	Cis-1,3-Dichloropropene . . .	5	U
75-09-2	Methylene Chloride	23	B	75-25-2	Bromoform	5	U
77-14-1	Acetone	10	U	108-10-1	4-Methyl-2-Pentanone . . .	10	U
100	Carbon Disulfide	5	U	591-78-6	2-Hexanone	10	U
503-4	1,1-Dichloroethene	5	U	127-18-4	Tetrachloroethene	5	U
5035-3	1,1-Dichloroethane	5	U	108-88-3	Toluene	5	U
56-59-2	Cis 1,2-Dichloroethene . . .	5	U	79-34-5	1,1,2,2-Tetrachloroethane . . .	5	U
56-60-5	Trans-1,2-Dichloroethene . . .	5	U	108-90-7	Chlorobenzene	5	U
77-66-3	Chloroform	5	U	100-41-4	Ethylbenzene	5	U
07-06-2	1,2-Dichloroethane	5	U	100-42-5	Styrene	5	U
88-93-3	2-Butanone	5	U		M & P Xylenes	5	U
1155-6	1,1,1-Trichloroethane . . .	10	U	95-47-5	O-Xylene	5	U
623-5	Carbon Tetrachloride . . .	5	U	107-02-8	Acrolein	10	U
08-05-4	Vinyl Acetate	10	U	107-13-1	Acrylonitrile	10	U
527-4	Bromodichloromethane . . .	5	U	110-75-8	2-Chloroethylvinylether . . .	10	U
387-5	1,2-Dichloropropane . . .	5	U	76-13-1	Trichlorofluoromethane . . .	5	U
0061-02-6	Trans-1,3-Dichloropropene	5	U	75-71-8	Dichlorodifluoromethane . . .	5	U
901-6	Trichloroethene	5	U				

B - Compound was detected in the QC blank.

U - Compound analyzed for but not detected. The reported value is the minimum attainable detection limit for the sample.

Laboratory Name: ENV CONS INC
No:Sample Number
WELL-W-8ORGANICS ANALYSIS DATA SHEET
SEMICVOLATILE COMPOUNDS
(Page 2)

METHOD 8270

Concentration: LOW
Date Extracted/Prepared: 10/16/90
Date Analyzed: 10/16/90
Conc/Dil Factor: 1.
Percent Moisture: (Decanted) GPC Cleanup Yes X No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/L	CAS Number		ug/L
108-95-2	Phenol	10 U	100-02-7	4-Nitrophenol	50 U
111-44-4	bis(2-Chloroethyl)Ether .	10 U	132-64-9	Dibenzofuran	10 U
95-57-8	2-Chlorophenol	10 U	121-14-2	2,4-Dinitrotoluene	10 U
541-73-1	1,3-Dichlorobenzene . . .	10 U	84-66-2	Diethylphthalate	10 U
106-46-7	1,4-Dichlorobenzene . . .	10 U	7005-72-3	4-Chlorophenyl-phenylether	10 U
100-51-6	Benzyl Alcohol	20 U	86-73-7	Fluorene	10 U
95-50-1	1,2-Dichlorobenzene . . .	10 U	100-10-6	4-Nitroaniline	50 U
95-48-7	2-Methylphenol	10 U	534-52-1	4,6-Dinitro-2-Methylphenol	50 U
39638-32-9	bis(2-Chloroisopropyl)Ether	10 U	86-30-6	N-Nitrosodiphenylamine . .	10 U
5-44-5	4-Methylphenol	10 U	101-55-3	4-Bromophenyl-phenylether	10 U
-64-7	N-Nitroso-Di-n-Propylamine	10 U	118-74-1	Hexachlorobenzene	10 U
6 /2-1	Hexachloroethane	10 U	87-86-5	Pentachlorophenol	50 U
98-95-3	Nitrobenzene	10 U	85-01-8	Phenanthrene	10 U
78-59-1	Isophorone	10 U	120-12-7	Anthracene	10 U
88-75-5	2-Nitrophenol'	10 U	84-74-2	Di-n-Butylphthalate	10 U
105-67-9	2,4-Dimethylphenol . . .	10 U	206-44-0	Fluoranthene	10 U
65-85-0	Benzoic Acid	50 U	129-00-0	Pyrene	10 U
111-91-1	Bis (2-Chloroethoxy)Methane	10 U	85-68-7	Butylbenzylphthalate . . .	10 U
120-83-2	2,4-Dichlorophenol . . .	10 U	91-94-1	3,3'-Dichlorobenzidine . .	20 U
120-82-1	1,2,4-Trichlorobenzene .	10 U	56-55-3	Benzo(a)Anthracene	10 U
91-20-3	Naphthalene	10 U	218-01-9	Chrysene	10 U
106-47-8	4-Chloroaniline	20 U	117-81-7	bis(2-Ethylhexyl)Phthalate	10 U
87-68-3	Hexachlorobutadiene . . .	10 U	117-84-0	Di-n-Octyl Phthalate . . .	10 U
59-50-7	4-Chloro-3-Methylphenol .	20 U	205-99-2	Benzo(b)Fluoranthene . . .	10 U
31-57-6	2-Methylnaphthalene . . .	10 U	92-87-5	Benzidine	50 U
77-47-4	Hexachlorocyclopentadiene	10 U	122-66-7	1,2-Diphenylhydrazine . .	10 U
88-06-2	2,4,6-Trichlorophenol . .	10 U	62-75-9	N-Nitrosodimethylamine . . .	10 U
95-95-4	2,4,5-Trichlorophenol . .	50 U	62-53-3	Aniline	10 U
91-58-7	2-Chloronaphthalene . . .	10 U	109-06-8	2-Picoline	50 U
88-74-4	2-Nitroaniline	50 U	95-94-3	1,2,4,5-Tetrachlorobenzene	10 U
131-11-3	Dimethyl Phthalate	10 U	207-08-9	Benzo(k)Fluoranthene . . .	10 U
208-96-8	Acenaphthylene	10 U	50-32-8	Benzo(a)Pyrene	10 U
506-20-2	2,6-Dinitrotoluene	10 U	193-39-5	Indeno(1,2,3-cd)Pyrene . .	10 U
99-09-2	3-Nitroaniline	50 U	53-70-3	Dibenzo(a,h)Anthracene . .	10 U
23-32-9	Acenaphthene	10 U	191-24-2	Benzo(g,h,i)Perylene . . .	10 U
-28-5	2,4-Dinitrophenol	50 U			

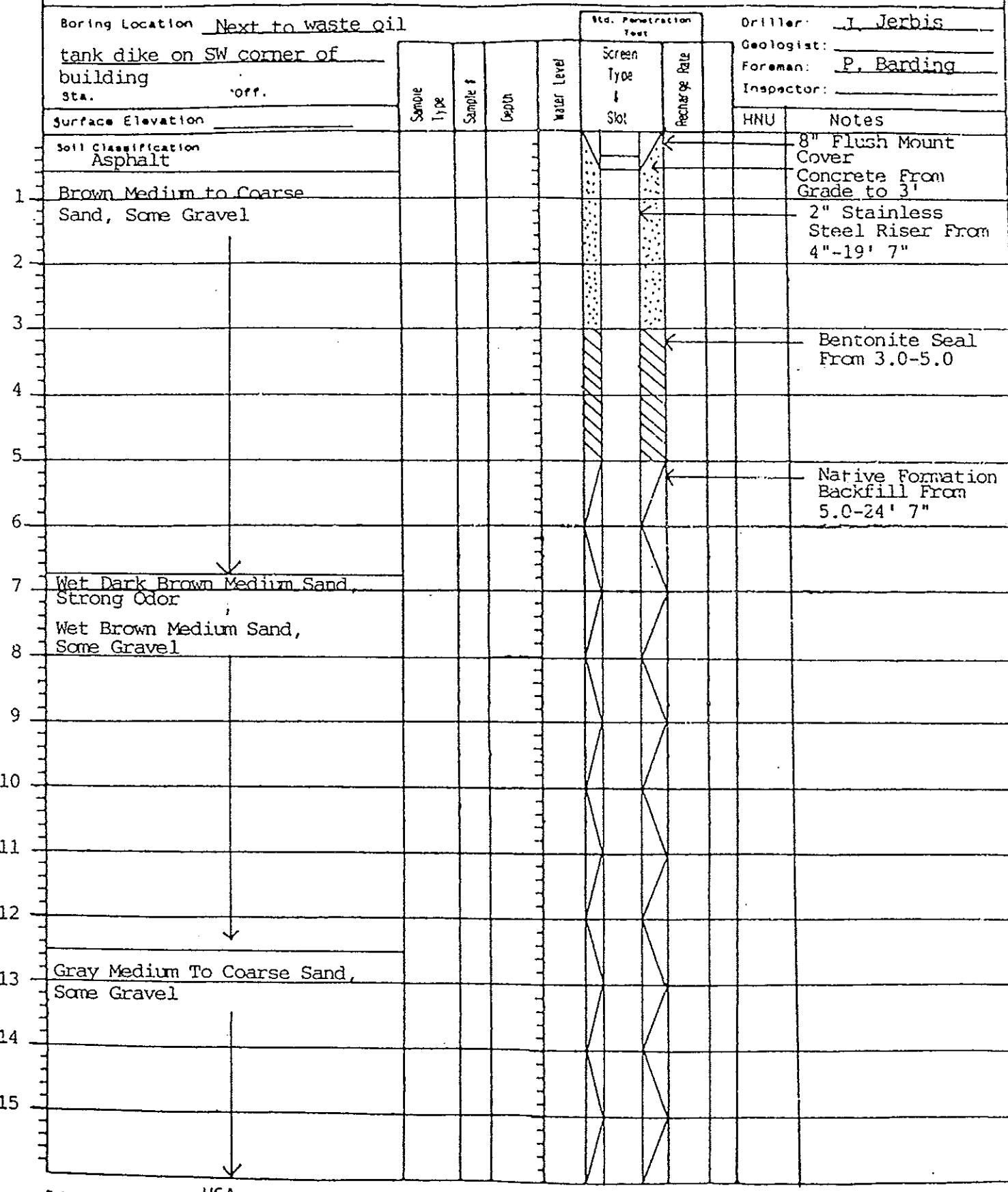
U - Compound analyzed for but not detected. The reported

value is the minimum attainable quantitation limit

APPENDIX C

LOG OF BORING BS-3

BEST Environmental, Inc.

Project: Torrington Bearing Site
Location: Sample St., South Bend, INDate: 8-6-90 19
Sheet No. 1 of 2

LOG OF BORING BS-3

BEST Environmental, Inc.

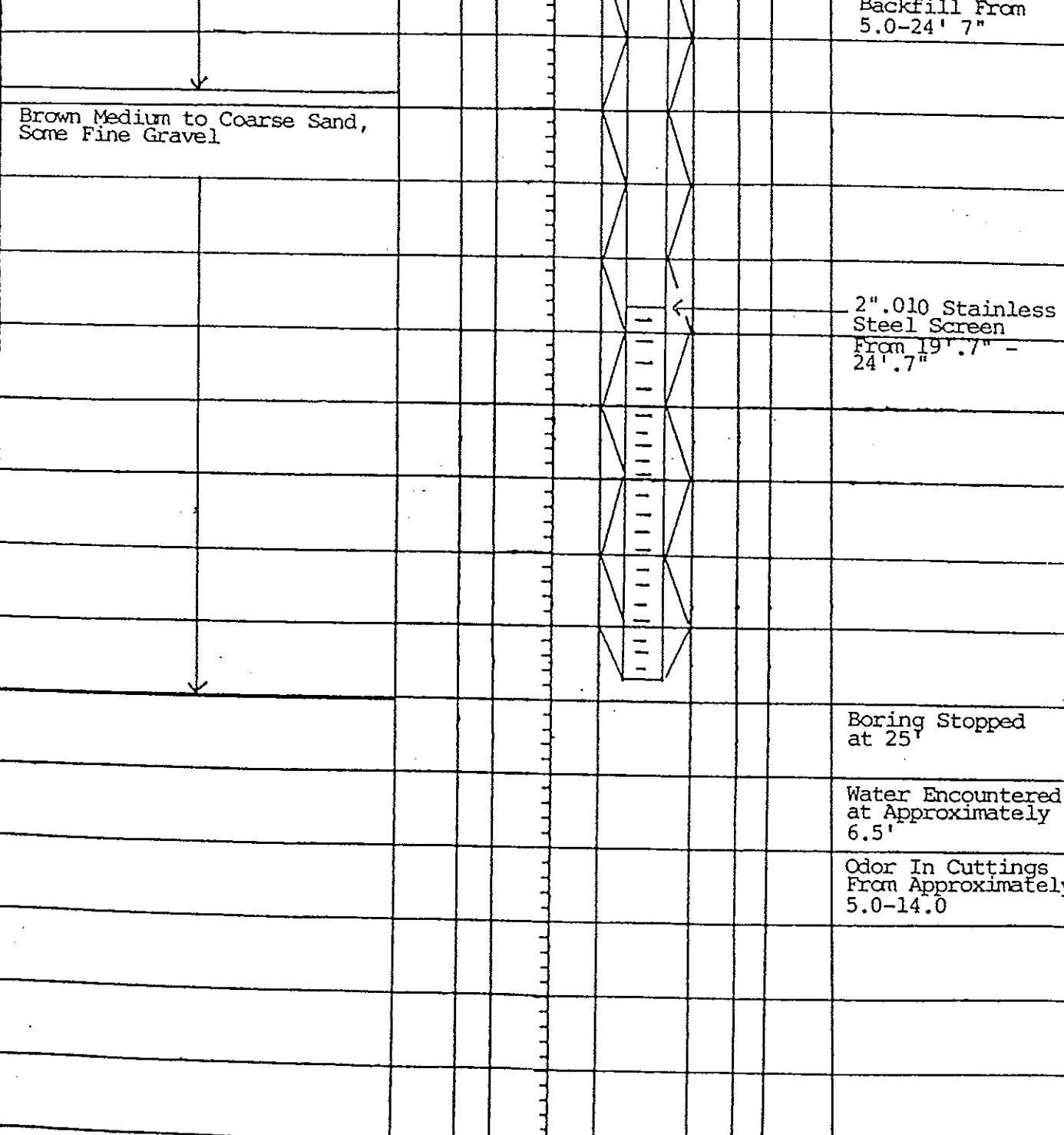
Project: Torrington Bearing SiteLocation: Sample St., South Bend, INDate: 8-6-90

19

Sheet No. 2 of 2Boring Location Next to waste oiltank dike on SW corner of
buildingsta. off.

Surface Elevation

Soil Classification



Boring Method: HSA

Water Observations:

On tools
Completion

F1

After

Cove