July 27, 1994

Mr. Jim Reyburn
State of Wisconsin
Department of Natural Resources
Emergency & Remedial Response Program
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448

Re: Preliminary Assessment Report, Arsenic Spill Site, Kewaunee Marsh, Kewaunee County, Wisconsin -- STS Project No. 20716XF

Dear Mr. Reyburn:

STS Consultants, Ltd., (STS) is pleased to submit three (3) copies of the enclosed Preliminary Assessment Report for the above referenced site. The report includes an overview of the work conducted, a summary of the results and conclusions, and a list of potential remedial options. Sampling has indicated that arsenic contamination has occurred in the soil with concentrations ranging from 85.9 mg/kg to 15,900 mg/kg in the stressed area. We recommend that a feasibility study be conducted to evaluate alternatives for remediating the impacted area.

If you have any questions, please call Mark Bergeon at 414-468-1978.

Sincerely,
STS CONSULTANTS LTD.

Michael T. Berger
Assistant Project Scientist

Mark A. Bergeon, CPG
Associate

James A. Senger, CPG
Principal Geologist

MTB/lld

STS Consultants Ltd.
Consulting Engineers

1035 Kepler Drive
Green Bay, Wisconsin 54311
414.468.1978/Fax 414.468.3312

Copies to:

Mr. Robert E. Dowdy (1 copy)
ITEL Rail Corp.
2 North Riverside Plaza, 19th Floor
Chicago, Illinois 60606

Mr. Geoffrey C. Nokes (3 copies)
Fox Valley & Western Ltd.
P.O. Box 5062
Rosemont, Illinois 60017-5062

Report

PROJECT

PRELIMINARY ASSESSMENT REPORT ARSENIC SPILL SITE KEWAUNEE MARSH KEWAUNEE COUNTY, WISCONSIN

CLIENT

FOX VALLEY & WESTERN LTD.
P.O. BOX 5062
ROSEMONT, ILLINOIS 60017-5062

Project No.	20716XF
Date	JULY 1994

STS Consultants Ltd.
Consulting Engineers
1035 Kepler Drive
Green Bay, Wisconsin 54311
414.468.1978/Fax 414.468.3312

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PRELIMINARY
ASSESSMENT REPORT
ARSENIC SPILL SITE
KEWAUNEE MARSH
KEWAUNEE COUNTY, WISCONSIN

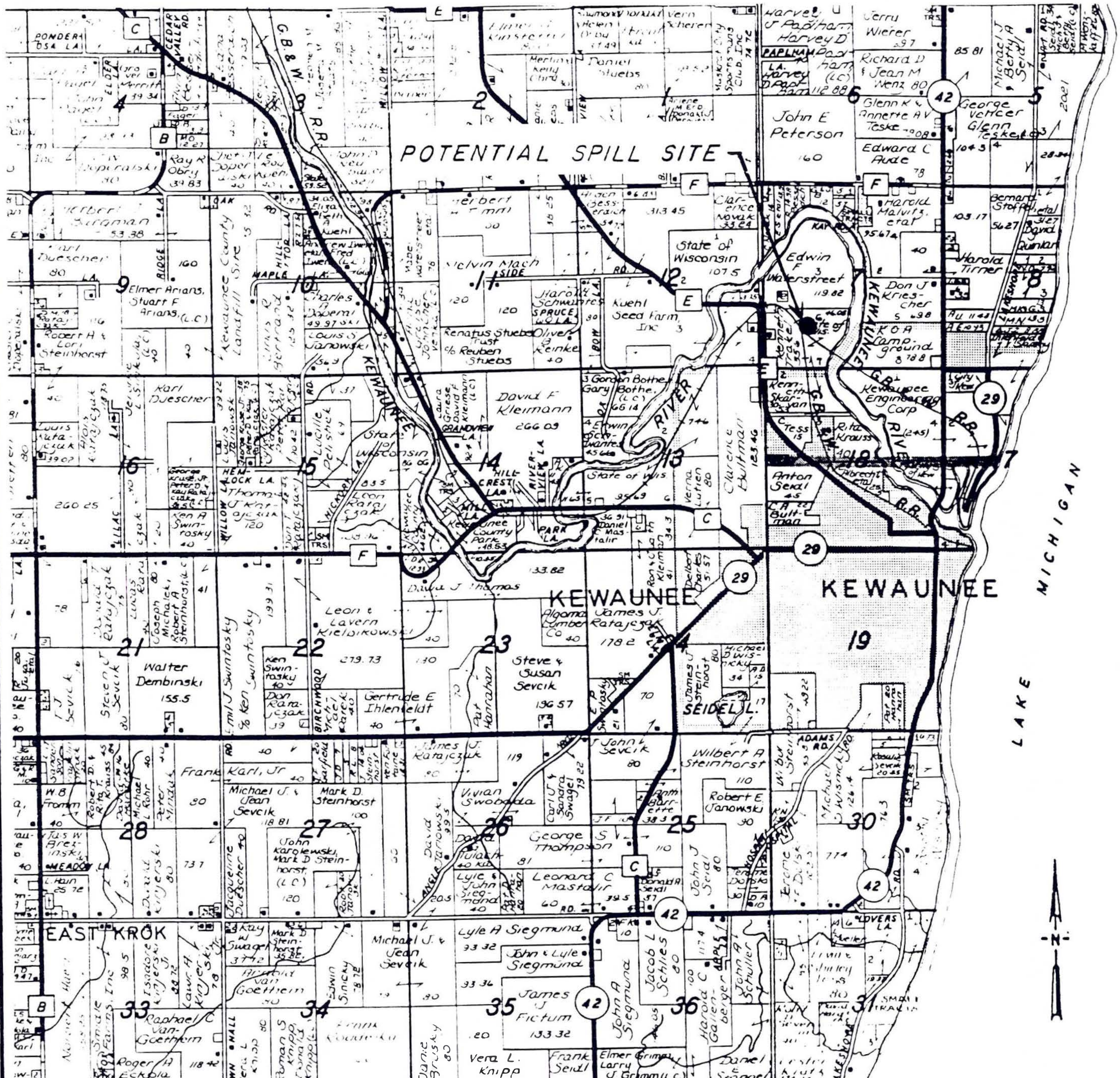
1.0 INTRODUCTION

1.1 Location

The Wisconsin Department of Natural Resources (WDNR) was notified in August 1993 of a potential spill site adjacent to railroad tracks that pass through the C.D. Besadny Wildlife Area. The spill site extends into wetlands in the State Wildlife Area and is under investigation by the WDNR. The site is located in the Southwest 1/4, Section 7, Township 23 North, Range 25 East, Township of Pierce, Kewaunee County, Wisconsin. It is located approximately 1 mile northwest of State Highway 42 along trackage previously known as the "ferry yard lead." The site is located approximately 1,000 feet northwest of the Kewaunee River. The approximate location is indicated on Figure 1.

1.2 Background Information

Photographs that presumably document the spill event were obtained by the WDNR from Mr. Don Kuehl of Manitowoc, Wisconsin. Copies of these photographs are presented in Appendix A. Mr. Kuehl believes that the year of the spill event was 1943. While working with WDNR personnel, Mr. Kuehl was able to place the location of the spill site on a map without assistance. Mr. Ray Sauvey at the National Railroad Museum identified the cars in the



MAP SOURCE IS KEWAUNEE COUNTY WISCONSIN PLAT BOOK DATED 1989.

STS Consultants Ltd.
Consulting Engineers

PROJECT/CLIENT			
SITE LOCATION DIAGRAM FOX VALLEY & WESTERN LTD. POTENTIAL SPILL SITE KEWAUNEE MARSH KEWAUNEE, WISCONSIN	DRAWN BY	D.J.M.	2-10-94
	CHECKED BY	MAB	2-10-94
	APPROVED BY		
	SCALE 1-1/4" = 1 MILE	FIGURE NO. 1	
	STS DRAWING NO. 20716XF		

C:\DJM\20716XF\SITE.DWG

photographs to be covered hoppers which would be used to carry a powder or granular freight. The white powder leaking from the cars visible in the photographs is presumably the source of arsenic contamination at the site.

The spill site was visited by WDNR personnel in October 1993. At that time, the site was devoid of vegetation and visibly stressed. Soil samples were collected on railroad property and submitted to the State Laboratory of Hygiene. The results received by the WDNR in January 1994 indicated arsenic concentrations of 6,600 mg/kg and 68,000 mg/kg.

On January 23, 1994, WDNR personnel, accompanied by representatives from Fox Valley & Western Ltd. and STS, returned to the site. The WDNR collected two soil samples from a hand auger boring on WDNR property just beyond the railroad right-of-way. This sample was submitted to the State Laboratory of Hygiene for analysis. During this site visit, the area of stressed vegetation was measured. The stressed area extends approximately 100 to 120 feet along the railroad right-of-way in a southwest to northeast line. The stressed area extends approximately 110 feet into the marsh from the southwest end of the line and 200 feet into the marsh from the northeast end of the line. The stressed area appears to be approximately 1/2 acre in size. The approximate extent of stressed vegetation is illustrated on Figure 2.

2.0 PROCEDURES

STS was retained by Fox Valley & Western Ltd. to conduct a preliminary assessment of the spill site. STS proposed to determine the extent and nature of degradation at this site by: 1) completing 17 soil borings, 2) collecting 24 soil samples, and 3) submitting soil samples to a state certified analytical laboratory for analysis.

2.1 Drilling and Sampling Methods

In March 1994, STS mobilized a 2-man auger crew to complete 17 soil borings. Soil boring locations are depicted on Figure 2. Fifteen (15) soil borings were advanced in or near the stressed area. Two (2) background borings were advanced southeast of the tracks. Soil borings were advanced through the ice-covered marsh using power auger and hand auger sampling devices. Fifteen of the soil borings were advanced to a depth of approximately 6 inches. The other two borings were advanced to a depth of approximately 18 inches.

Soil samples were collected from a depth of 0 to 6 inches in shallow borings and from 0 to 6 inches and 12 to 18 inches in deeper borings. The shallow samples were collected from auger cuttings because of frozen conditions. Samples from 12 to 18 inches were collected using a hand auger sampling device. Boring depths were limited by the presence of water. Representative portions of soil samples were transferred to 4-ounce sample jars with teflon septa. The sample jars were placed in an ice-filled cooler for submission to a state certified analytical laboratory for chemical testing. Analytical services were provided by Hazleton Environmental Services, Inc., (HES) Madison, Wisconsin.

2.2 Laboratory Analysis

Soil samples collected from a depth of 0 to 6 inches in the 15 shallow borings were analyzed for arsenic. Soil samples collected from the deep borings from 0 to 6 inches were analyzed for arsenic, lead, sodium and semi-volatile organic compounds. Arsenic, lead and sodium analysis were conducted per EPA Methods (3030, 3040, or 3050), 6010 and 7060 respectively. Semi-volatile organic compound analysis was conducted per EPA Method 8270. Lead and sodium analysis were conducted to determine the possible identity of the original spill (e.g. lead arsenate, or sodium arsenite). The soil samples collected from 12 to 18 inches in the deep borings were analyzed for arsenic only. Soil samples collected from 0 to 6 inches in the background borings BG-1 and BG-2 were analyzed for arsenic and semi-volatile organic compounds.

2.3 Decontamination Procedures

Drilling and sampling devices were rinsed and washed between the collection of each sample. A phosphate and additive-free soap and clean potable water were used for washing all equipment.

2.4 Exploration-Derived Waste

Soil cuttings and rinse water were not contained. All rinsing was done within the stressed area.

3.0 RESULTS/CONCLUSIONS

The results of arsenic, sodium and lead analyses are presented in Table 1. Arsenic was detected in all samples collected. The highest arsenic concentration of 15,900 mg/kg was detected at Boring B-5. The lowest arsenic concentration of 85.9 mg/kg was detected at Boring B-1. Arsenic concentrations in background Borings BG-1 and BG-2 were 93.4 and 112 mg/kg, respectively. No sodium or lead was detected.

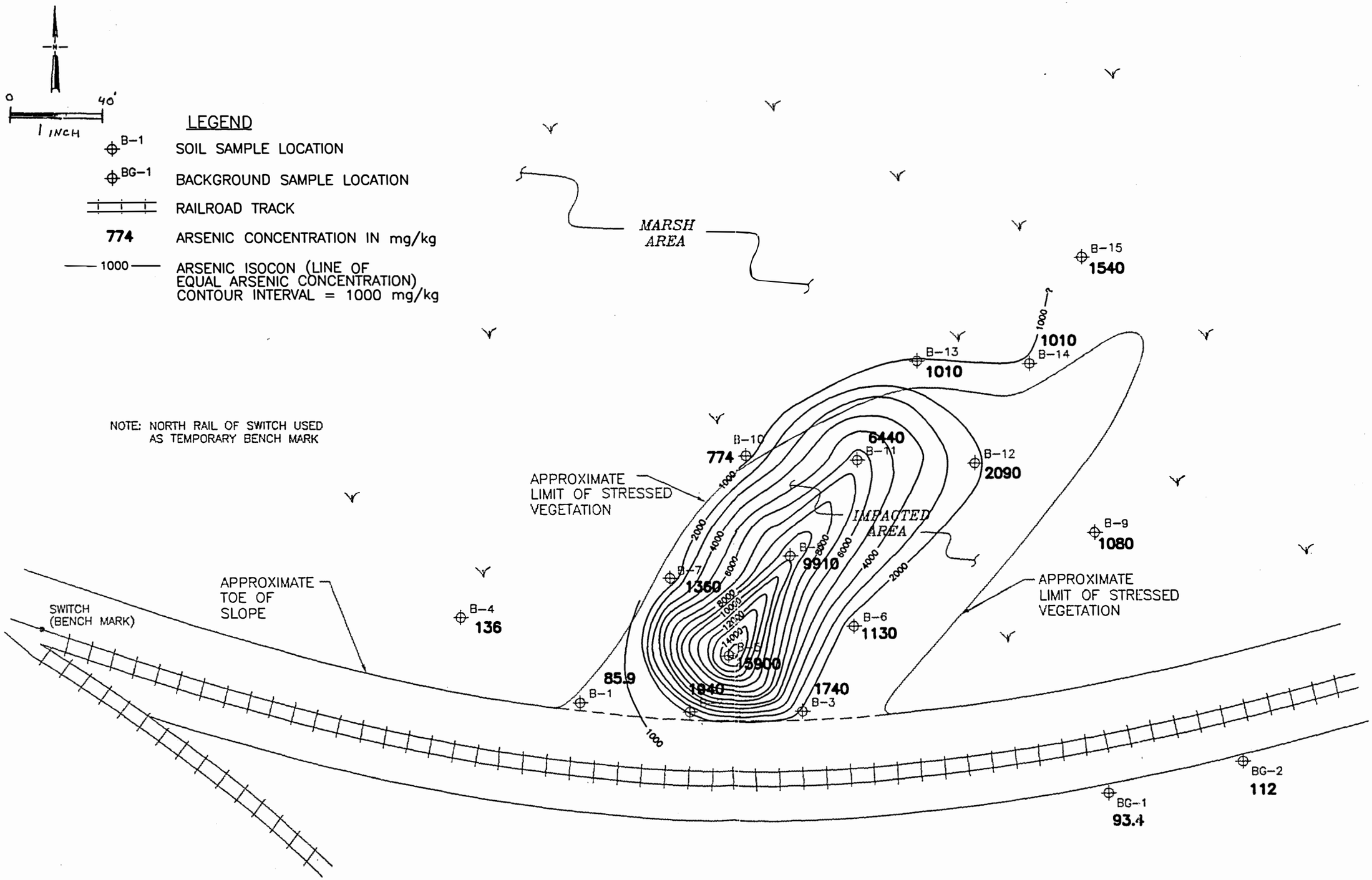
Borings B-2 Sample 1, B-8 Sample 1, background Borings BG-1 and BG-2 were analyzed for semi-volatile organic compounds. No semi-volatile organic compounds were found in Borings B-2 Sample 1 or B-8 Sample 1 at concentrations significantly greater than detected in the background borings. Results of semi-volatile compound analysis are included in Appendix B.

Fox Valley and Western LTD
Kewaunee Marsh Spill Site
Soil Arsenic Concentrations

A:\arsenic

Boring Number	Sample Number	Depth (ft)	Arsenic (mg/kg)	Lead (mg/kg)	Sodium (mg/kg)
B-1	S-1	0-0.5	85.9	--	--
B-2	S-1	0-0.5	1940	--	--
	S-2	1.0-1.5	3000	--	--
B-3	S-1	0-0.5	1740	--	--
B-4	S-1	0-0.5	136	--	--
B-5	S-1	0-0.5	15900	ND	ND
B-6	S-1	0-0.5	1130	--	--
B-7	S-1	0-0.5	1360	--	--
B-8	S-1	0-0.5	9910	ND	ND
	S-2	1.0-1.5	8210	--	--
B-9	S-1	0-0.5	1080	--	--
B-10	S-1	0-0.5	774	--	--
B-11	S-1	0-0.5	6440	ND	ND
B-12	S-1	0-0.5	2090	--	--
B-13	S-1	0-0.5	1010	--	--
B-14	S-1	0-0.5	1010	--	--
B-15	S-1	0-0.5	1540	--	--
BG-1	S-1	0-0.5	93.4	--	--
BG-2	S-1	0-0.5	112	--	--

Notes:
-- = Not Analyzed
ND = Analyzed but Not Detected



DRAWN BY D.J.M. DATE 3-20-94
CHECKED BY DATE
APPROVED BY DATE
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ARSENIC CONCENTRATIONS (0-0.5 FEET)
FOX VALLEY & WESTERN LTD.
KEWAUNEE MARSH SPILL SITE
KEWAUNEE, WISCONSIN

STS Consultants Ltd.
Consulting Engineers

STS PROJECT NO. 20716XF
STS PROJECT FILE
SCALE 1" = 40'
FIGURE NO. 2

4.0 RECOMMENDATIONS

4.1 Feasibility Study/Corrective Action Plan

We recommend that a feasibility study (FS) be conducted to determine the appropriate remedial option for site decontamination. The FS should also evaluate exposure pathways and propose cleanup levels. Upon completion of the FS, we recommend that a Corrective Action Plan (CAP) be prepared that describes the chosen remedial option and establishes a schedule for implementation. Before a feasibility study (FS) is initiated, additional site characterization must be conducted to determine both the background concentrations of arsenic and the extent of arsenic impacted surface water, sediments and subsoils.

4.2 Possible Remedial Options

We recommend that the following remedial options be considered in the feasibility study.

4.2.1 Leave Impacted Material In Place (No Action) - Considering the similarity of arsenic and phosphorus in elemental properties and plant uptake mechanisms, it is conceivable that both have similar cycling pathways between sediment, plants and water. Although arsenic can be accumulated in the tissue of growing higher plants, it has been suggested that seasonal dieback or perennial aquatic plants may be a mechanism by which organically bound arsenic can be released and returned to overlaying waters and to sediments. In addition, arsenic associated with organic matter at the sediment surface can be resuspended by wave action and transported throughout an aquatic system.

Speciation of arsenic ultimately dictates the fate of arsenic in aquatic systems. The most important characteristic of wetlands is that their soils are waterlogged for extensive periods of time, which affects the redox status of the soil. Redox and pH affect the solubility and speciation of arsenic, with low solubility under oxidized conditions. Solubility increases with increasingly reducing conditions and mobile As(III) becomes the dominant form. Although dissolution and precipitation of arsenic in porewaters may be the direct result of redox reactions involving the As(V)-As(III) couple, adsorption onto and/or coprecipitation with iron (oxy)hydroxides appear to be the most important factor in determining porewater arsenic. Dissolution of iron owing to the reduction of Fe(III) to Fe(II) in the anaerobic zone in the sediment may release As(V), which in turn may be reduced to As(III). Arsenite, As(III), released into the sediments can become methylated by microbial processes to form methylarsines. Methylation and demethylation can strongly affect the geochemical characteristic of arsenic and in addition, volatile arsenic compounds may be formed. The black crust observed covering portions of the impacted site may have been formed by the deposition of volatile arsine compounds caused by exposure to light. Due to the hazards associated with the arsenic impacted surface water and sediments, leaving the material in place does not appear to be a realistic option.

4.2.2 Fixation by Adsorptive Precipitation with Iron or Aluminum Hydroxides - Aluminum and ferric salts are commonly used in the treatment of drinking water for precipitation of particles and colloids in water. Arsenic removal by adsorptive precipitation is the best-known and most frequently applied technique for the removal of arsenic from drinking water.

By mixing impacted waters and sediments with ferric or aluminum chloride (and calcium carbonate as a neutralizing agent), metal hydroxide formation will occur and adsorptively precipitate arsenic. The presence of arsenite, As(III), may require oxidation of the impacted

material before adsorptive precipitation will proceed. Reported bench scale fixation studies indicated that samples treated with this method could achieve a 99% decrease in TCLP leachate. Bulking due to treatment by ferric or aluminum hydroxides is reported to be approximately 20%.

4.2.3 Fixation by Solidification in Portland Type 1 Cement and Fly Ash - Solidification of impacted material into a matrix decreases the exposed surface area and therefore the leachability. Treatment by solidification of the impacted material would include excavation of soils and sediments, and extraction of contaminated water. Impacted material would be blended in with a mixture of 45% fly ash/cement and compacted. Excess impacted water would require treatment through adsorptive precipitation with metal hydroxides before release. Reported bench scale studies indicated that samples treated with this method could achieve a 99% decrease in TCLP leachate. Bulking due to solidification in a cement/ash mixture is approximately 200%. Total weight of material after treatment increases by approximately 100%.

4.2.4 Soil Washing - Based on results of additional soil and water analysis, soil washing may prove to be an option for site remediation. For soil washing, impacted materials could be excavated and dewatered. Impacted water would be collected for co-treatment with the impacted wash water. By altering the redox potential of the impacted material, reduction and mobilization of arsenic would occur. The mobilized arsenic could then be removed from the impacted material through several rounds of soil washing. The impacted wash water would be collected and treated. By altering the redox potential of the arsenic impacted water, oxidation and decrease in arsenic mobility would occur. At this point, arsenic in the impacted wash water could be removed through adsorptive precipitation with metal hydroxides before release.

5.0 REFERENCES

Arsenic in the Environment, Part I: Cycling and Characterization, ed. by Nriagu, J.O., published by John Wiley & Sons, Inc., New York, 1994.

Emerging Technologies in Waste Management II, "Comparison of Fixation Techniques for Soil Containing Arsenic," Chu, P., et. al., American Chemical Society, 1991.

APPENDIX A

Photographs

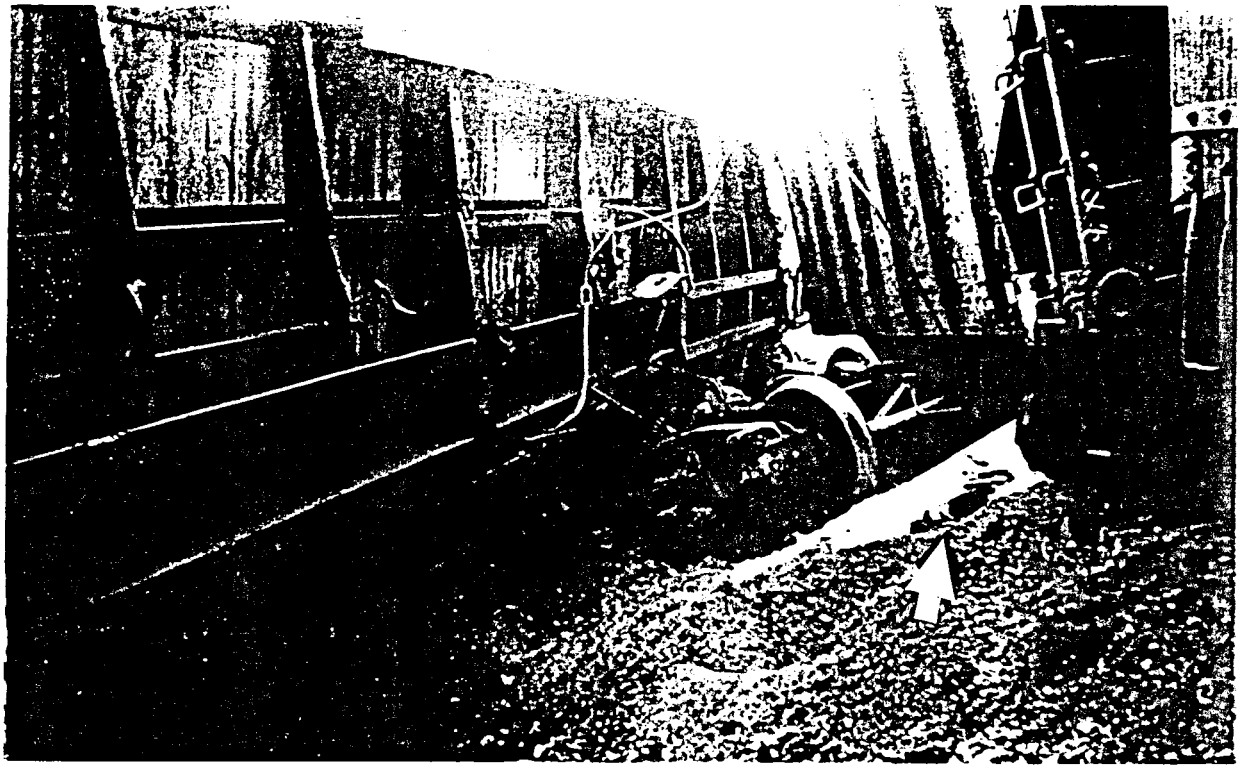

Photo 1: Copy of photograph taken by Mr. Don Kuehl. Potential arsenic release is evident as white powder spilling from the railcar on the right.

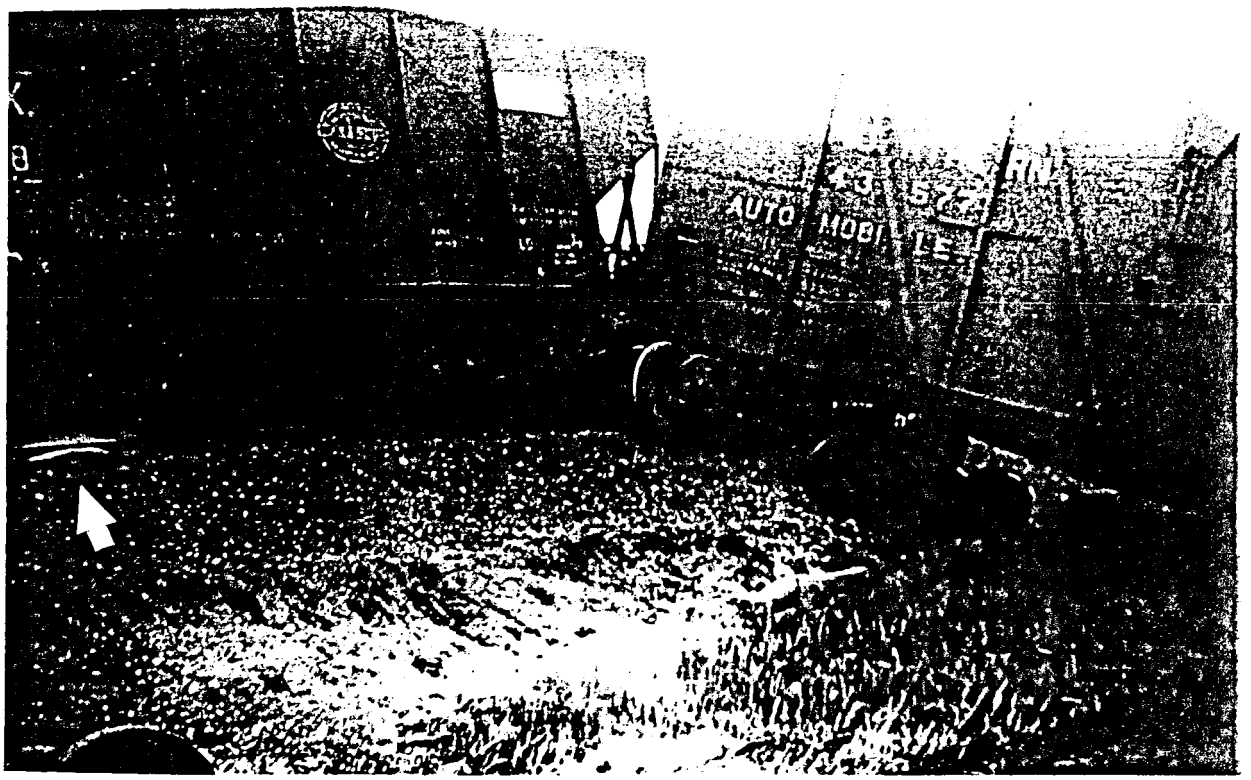

Photo 2: Copy of photograph taken by Mr. Don Kuehl. Potential arsenic release is evident as white powder spilling from the railcar on the left.

APPENDIX B

Laboratory Data Sheets

Hazleton
Environmental
Services, Inc.

525 SCIENCE DRIVE • MADISON, WISCONSIN 53711

HES, Inc.

March 31, 1994

Mark A. Bergeon
STS Consultants, Ltd.
1035 Kepler Drive
Green Bay, WI 54311

Re: STS Project No. 20716XF
HES, Inc. Batch No. 40300231

Dear Mr. Bergeon:

Enclosed are the analytical results for the soil samples received by HES, Inc. on March 11, 1994 (HES sample numbers 40300231-40300249, and 40300699-40300700), associated with STS Project No. 20716XF. The original Chain-of-Custody for these samples has been included with this report.

As requested, samples B-5,S#1, B-8,S#1, and B-11,S#1 (HES sample numbers 40300238/40300699, 40300241, and 40300245/40300700) have been analyzed for lead and sodium in addition to compounds originally requested.

If you have any questions regarding these results, or if I can be of assistance in any way, please call me at (608) 232-3335.

Sincerely,

Peggy

Peggy Popp
Account Executive

Wisconsin Laboratory Certification Number: 113172950

cc: Central File

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
35 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300231
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: BG-1; 3-9
ROJECT NUMBER: 20716XF
URCHASE ORDER NUMBER: 20716XF

BAY	ANALYSIS	UNITS
BENIC	93.4	MG/KG

C/MS SEMI-VOLATILE FRACTION

SEMIVOLATILE COMPOUNDS

COMPOUND NAME	UG/KG
PHENOL	91 J
BIS(-2-CHLOROETHYL)ETHER	< 580
2-CHLOROPHENOL	< 580
1,3-DICHLOROBENZENE	< 580
1,4-DICHLOROBENZENE	< 580
1,2-DICHLOROBENZENE	< 580
2-METHYLPHENOL	< 580
2,2'-OXYBIS(1-CHLOROPROPANE)	< 580
4-METHYLPHENOL	76 J
N-NITROSO-DI-N-PROPYLAMINE	< 580
HEXACHLOROETHANE	< 580
NITROBENZENE	< 580
ISOPHORONE	< 580
2-NITROPHENOL	< 580
2,4-DIMETHYLPHENOL	< 580
BIS(2-CHLOROETHOXY)METHANE	< 580
2,4-DICHLOROPHENOL	< 580
1,2,4-TRICHLOROBENZENE	< 580
NAPHTHALENE	16 J
4-CHLOROANILINE	< 580
HEXACHLOROBUTADIENE	< 580
4-CHLORO-3-METHYLPHENOL	< 580
2-METHYLNAPHTHALENE	23 J
HEXACHLOROCYCLOPENTADIENE	< 580
2,4,6-TRICHLOROPHENOL	< 580
2,4,5-TRICHLOROPHENOL	<1400
2-CHLORONAPHTHALENE	< 580

L: BG-1; 3-9
ROJECT NUMBER: 20716XF

- MS SEMI-VOLATILE FRACTION (CONTINUED)

2-NITROANILINE	<1400
DIMETHYL PHTHALATE	< 580
ACENAPHTHYLENE	29 J
2,6-DINITROTOLUENE	< 580
3-NITROANILINE	<1400
ACENAPHTHENE	< 580
2,4-DINITROPHENOL	<1400
4-NITROPHENOL	<1400
DIBENZOFURAN	< 580
2,4-DINITROTOLUENE	< 580
DIETHYLPHTHALATE	< 580
4-CHLOROPHENYL-PHENYLETHER	< 580
FLUORENE	< 580
4-NITROANILINE	<1400
4,6-DINITRO-2-METHYLPHENOL	<1400
N-NITROSODIPHENYLAMINE*(1)	< 580
4-BROMOPHENYL-PHENYLETHER	< 580
HEXACHLOROBENZENE	< 580
PENTACHLOROPHENOL	<1400
PHENANTHRENE	93 J
ANTHRACENE	24 J
CARBAZOLE	< 580
DI-N-BUTYLPHTHALATE	320 BJ (110J)
FLUORANTHENE	230 J
PYRENE	230 J
BUTYLBENZYLPHTHALATE	110 J
3,3'-DICHLOROBENZIDINE	< 580
BENZO(A)ANTHRACENE	170 J
CHRYSENE	150 J
BIS(2-ETHYLHEXYL)PHTHALATE	< 580
DI-N-OCTYL PHTHALATE	710
BENZO(B)FLUORANTHENE	320 J
BENZO(K)FLUORANTHENE	< 580
BENZO(A)PYRENE	120 J
INDENO(1,2,3-CD)PYRENE	100 J
DIBENZO(A,H)ANTHRACENE	< 580
BENZO(G,H,I)PERYLENE	< 580

-) CANNOT BE SEPARATED FROM DIPHENYLAMINE.
J INDICATES AN ESTIMATED VALUE. MASS SPECTRAL DATA INDICATED THE PRESENCE OF A COMPOUND THAT MEETS THE IDENTIFICATION CRITERIA BUT THE RESULT IS LESS THAN THE SPECIFIED DETECTION LIMIT BUT GREATER THAN ZERO.

B INDICATES THE ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE. THE CONCENTRATION SHOWN IN PARENTHESIS WAS DETECTED IN THE METHOD BLANK.

HOD REFERENCES

ENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
DITION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C.
EVISED APRIL 1984).
TRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M,
S. EPA, WASHINGTON, D. C. (JULY 1985).

MS SEMI-VOLATILE FRACTION
S. EPA METHOD 625 (FEDERAL REGISTER, VOLUME 49, NO. 209, PG. 43385-43406,
CTOBER 26, 1984).
ST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
TION, METHOD 8270, U.S. EPA, WASHINGTON, DC (REVISED APRIL 1984).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
ES CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300232
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: BG-2; 3-9
JECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

	ANALYSIS	UNITS
AY		
ENIC	112.	MG/KG

MS SEMI-VOLATILE FRACTION

SEMIVOLATILE COMPOUNDS

COMPOUND NAME	UG/KG
PHENOL	1100 J
BIS(-2-CHLOROETHYL)ETHER	< 4100
2-CHLOROPHENOL	< 4100
1,3-DICHLOROBENZENE	< 4100
1,4-DICHLOROBENZENE	< 4100
1,2-DICHLOROBENZENE	< 4100
2-METHYLPHENOL	< 4100
2,2'-OXYBIS(1-CHLOROPROPANE)	< 4100
4-METHYLPHENOL	850 J
N-NITROSO-DI-N-PROPYLAMINE	< 4100
HEXACHLOROETHANE	< 4100
NITROBENZENE	< 4100
ISOPHORONE	< 4100
2-NITROPHENOL	< 4100
2,4-DIMETHYLPHENOL	< 4100
BIS(2-CHLOROETHOXY)METHANE	< 4100
2,4-DICHLOROPHENOL	< 4100
1,2,4-TRICHLOROBENZENE	< 4100
NAPHTHALENE	< 4100
4-CHLOROANILINE	< 4100
HEXACHLOROBUTADIENE	< 4100
4-CHLORO-3-METHYLPHENOL	< 4100
2-METHYLNAPHTHALENE	< 4100
HEXACHLOROCYCLOPENTADIENE	< 4100
2,4,6-TRICHLOROPHENOL	< 4100
2,4,5-TRICHLOROPHENOL	<10000
2-CHLORONAPHTHALENE	< 4100

:L: BG-2; 3-9
ROJECT NUMBER: 20716XF

MS SEMI-VOLATILE FRACTION (CONTINUED)

2-NITROANILINE	<10000
DIMETHYL PHTHALATE	< 4100
ACENAPHTHYLENE	< 4100
2,6-DINITROTOLUENE	< 4100
3-NITROANILINE	<10000
ACENAPHTHENE	< 4100
2,4-DINITROPHENOL	<10000
4-NITROPHENOL	<10000
DIBENZOFURAN	< 4100
2,4-DINITROTOLUENE	< 4100
DIETHYLPHTHALATE	< 4100
4-CHLOROPHENYL-PHENYLETHER	< 4100
FLUORENE	< 4100
4-NITROANILINE	<10000
4,6-DINITRO-2-METHYLPHENOL	<10000
N-NITROSODIPHENYLAMINE*(1)	< 4100
4-BROMOPHENYL-PHENYLETHER	< 4100
HEXACHLOROBENZENE	< 4100
PENTACHLOROPHENOL	<10000
PHENANTHRENE	< 4100
ANTHRACENE	< 4100
CARBAZOLE	< 4100
DI-N-BUTYLPHTHALATE	2000 BJ (110J)
FLUORANTHENE	< 4100
PYRENE	< 4100
BUTYLBENZYLPHTHALATE	450 J
3,3'-DICHLOROBENZIDINE	< 4100
BENZO(A)ANTHRACENE	< 4100
CHRYSENE	< 4100
BIS(2-ETHYLHEXYL)PHTHALATE	< 4100
DI-N-OCTYL PHTHALATE	4100 J
BENZO(B)FLUORANTHENE	< 4100
BENZO(K)FLUORANTHENE	< 4100
BENZO(A)PYRENE	< 4100
INDENO(1,2,3-CD)PYRENE	< 4100
DIBENZO(A,H)ANTHRACENE	< 4100
BENZO(G,H,I)PERYLENE	< 4100

1) CANNOT BE SEPARATED FROM DIPHENYLAMINE.

J INDICATES AN ESTIMATED VALUE. MASS SPECTRAL DATA INDICATED THE PRESENCE OF A COMPOUND THAT MEETS THE IDENTIFICATION CRITERIA BUT THE RESULT IS LESS THAN THE SPECIFIED DETECTION LIMIT BUT GREATER THAN ZERO.

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Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

[redacted]ARK BERGEON
[redacted]TS CONSULTANTS, LTD
[redacted]5 KEPLER DRIVE
[redacted]EN BAY, WI 54311

SAMPLE NUMBER: 40300233
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

[redacted]L: B-1 S#1; 3-9
[redacted]ROJECT NUMBER: 20716XF
[redacted]URCHASE ORDER NUMBER: 20716XF

[redacted]SAY	ANALYSIS	UNITS
[redacted]SENIC	85.9	MG/KG

[redacted]HOD REFERENCES

[redacted]RSENIC
[redacted]ST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND [redacted]TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
[redacted]NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, [redacted]. EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
[illegible]5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300241
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-8 S#1; 3-10
JECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

[illegible]AY	ANALYSIS	UNITS
UENIC	9910.	MG/KG

-ACID EXTRACTION

ELEMENTS	PPM
LEAD	< 56.4
SODIUM	<1130.

C/MS SEMI-VOLATILE FRACTION

SEMIVOLATILE COMPOUNDS

COMPOUND NAME	UG/KG
PHENOL	< 1400
BIS(-2-CHLOROETHYL)ETHER	< 1400
2-CHLOROPHENOL	< 1400
1,3-DICHLOROBENZENE	< 1400
1,4-DICHLOROBENZENE	< 1400
1,2-DICHLOROBENZENE	< 1400
2-METHYLPHENOL	< 1400
2,2'-OXYBIS(1-CHLOROPROPANE)	< 1400
4-METHYLPHENOL	1500
N-NITROSO-DI-N-PROPYLAMINE	< 1400
HEXACHLOROETHANE	< 1400
NITROBENZENE	< 1400
ISOPHORONE	< 1400
2-NITROPHENOL	< 1400
2,4-DIMETHYLPHENOL	< 1400
BIS(2-CHLOROETHOXY)METHANE	< 1400
2,4-DICHLOROPHENOL	< 1400
1,2,4-TRICHLOROBENZENE	< 1400
NAPHTHALENE	190 J
4-CHLOROANILINE	< 1400
HEXACHLOROBUTADIENE	< 1400

L: B-8 S#1; 3-10
OJECT NUMBER: 20716XF

MS SEMI-VOLATILE FRACTION (CONTINUED)

4-CHLORO-3-METHYLPHENOL	< 1400
2-METHYLNAPHTHALENE	290 J
HEXACHLOROCYCLOPENTADIENE	< 1400
2,4,6-TRICHLOROPHENOL	< 1400
2,4,5-TRICHLOROPHENOL	< 3500
2-CHLORONAPHTHALENE	< 1400
2-NITROANILINE	< 3500
DIMETHYL PHTHALATE	< 1400
ACENAPHTHYLENE	< 1400
2,6-DINITROTOLUENE	< 1400
3-NITROANILINE	< 3500
ACENAPHTHENE	< 1400
2,4-DINITROPHENOL	< 3500
4-NITROPHENOL	< 3500
DIBENZOFURAN	67 J
2,4-DINITROTOLUENE	< 1400
DIETHYLPHTHALATE	< 1400
4-CHLOROPHENYL-PHENYLETHER	< 1400
FLUORENE	< 1400
4-NITROANILINE	< 3500
4,6-DINITRO-2-METHYLPHENOL	< 3500
N-NITROSODIPHENYLAMINE*(1)	< 1400
4-BROMOPHENYL-PHENYLETHER	< 1400
HEXACHLOROBENZENE	< 1400
PENTACHLOROPHENOL	< 3500
PHENANTHRENE	180 J
ANTHRACENE	< 1400
CARBAZOLE	< 1400
DI-N-BUTYLPHTHALATE	700 BJ (110J)
FLUORANTHENE	100 J
PYRENE	99 J
BUTYLBENZYLPHTHALATE	170 J
3,3'-DICHLOROBENZIDINE	< 1400
BENZO(A)ANTHRACENE	< 1400
CHRYSENE	< 1400
BIS(2-ETHYLHEXYL)PHTHALATE	< 1400
DI-N-OCTYL PHTHALATE	< 1400
BENZO(B)FLUORANTHENE	120 J
BENZO(K)FLUORANTHENE	< 1400
BENZO(A)PYRENE	< 1400
INDENO(1,2,3-CD)PYRENE	< 1400
DIBENZO(A,H)ANTHRACENE	< 1400
BENZO(G,H,I)PERYLENE	< 1400

(1) CANNOT BE SEPARATED FROM DIPHENYLAMINE.
INDICATES AN ESTIMATED VALUE. MASS SPECTRAL DATA INDICATED THE PRESENCE

OF A COMPOUND THAT MEETS THE IDENTIFICATION CRITERIA BUT THE RESULT IS LESS THAN THE SPECIFIED DETECTION LIMIT BUT GREATER THAN ZERO.

B' INDICATES THE ANALYTE WAS FOUND IN THE BLANK AS well AS THE SAMPLE. THE CONCENTRATION SHOWN IN PARENTHESIS WAS DETECTED IN THE METHOD BLANK.

ETHOD REFERENCES

ENIC
EST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND ITION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. EVISED APRIL 1984).
ONTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, S. EPA, WASHINGTON, D. C. (JULY 1985).

P-ACID EXTRACTION
EST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND ITION, METHODS (3030, 3040 OR 3050) AND 6010, U.S. EPA, WASHINGTON, DC EVISED APRIL 1984)

C/MS SEMI-VOLATILE FRACTION
S. EPA METHOD 625 (FEDERAL REGISTER, VOLUME 49, NO. 209, PG. 43385-43406, CTOBER 26, 1984).
EST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHOD 8270, U.S. EPA, WASHINGTON, DC (REVISED APRIL 1984).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300235
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-2 S#2; 3-9
OJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

	ANALYSIS	UNITS
AY		
ENIC	3000.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C.
REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M,
S. EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EEN BAY, WI 54311

SAMPLE NUMBER: 40300236
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

UIL: B-3 S#1; 3-9
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
SENIC	1740.	MG/KG

HOD REFERENCES

RSENIC
ST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
ONTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, S. EPA, WASHINGTON, D. C. (JULY 1985).

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Services, Inc.

REPORT OF ANALYSIS

MARK BERGEON
STS CONSULTANTS, LTD
[illegible]5 KEPLER DRIVE
GREEN BAY, WI 54311

SAMPLE NUMBER: 40300237
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

SOIL: B-4 S#1; 3-9
PROJECT NUMBER: 20716XF

PURCHASE ORDER NUMBER: 20716XF

[illegible]SAY	ANALYSIS	UNITS
[illegible]RSENIC	136.	MG/KG

METHOD REFERENCES

ARSENIC
[illegible]T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND [illegible]TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
[illegible]NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, [illegible]. EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300238
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-5 S#1; 3-10
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

SAY	ANALYSIS	UNITS
RSENIC	15900.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
TRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

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Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300699
DATE ENTERED: 03/29/94
REPORT PRINTED: 03/31/94

E-ENTRY OF LIMS #40300238; SOIL: B-5 S#1; 3/10
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

-ACID EXTRACTION

ELEMENTS	PPM
LEAD	44.0
SODIUM	< 850.

IOD REFERENCES

CP-ACID EXTRACTION
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
TION, METHODS (3030, 3040 OR 3050) AND 6010, U.S. EPA, WASHINGTON, DC
REVISED APRIL 1984)

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Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EN BAY, WI 54311

SAMPLE NUMBER: 40300239
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-6 S#1; 3-10
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

	ANALYSIS	UNITS
AY		
ENIC	1130.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C.
REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M,
. EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

[redacted]

[redacted]K BERGEON
TS CONSULTANTS, LTD
[redacted]5 KEPLER DRIVE
[redacted]EN BAY, WI 54311

SAMPLE NUMBER: 40300240
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

[redacted]
OIL: B-7 S#1; 3-9
ROJECT NUMBER: 20716XF

[redacted]
URCHASE ORDER NUMBER: 20716XF

[redacted]

[redacted]AY	ANALYSIS	UNITS
[redacted]ENIC	1360.	MG/KG

[redacted]

[redacted]HOD REFERENCES

RSENIC
[redacted]T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND [redacted]TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
ONTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, [redacted]. EPA, WASHINGTON, D. C. (JULY 1985).

[redacted]

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REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300234
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-2 S#1; 3-9
JECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
SENIC	1940.	MG/KG

MS SEMI-VOLATILE FRACTION

SEMIVOLATILE COMPOUNDS

COMPOUND NAME	UG/KG
PHENOL	< 660
BIS(-2-CHLOROETHYL)ETHER	< 660
2-CHLOROPHENOL	< 660
1,3-DICHLOROBENZENE	< 660
1,4-DICHLOROBENZENE	< 660
1,2-DICHLOROBENZENE	< 660
2-METHYLPHENOL	< 660
2,2'-OXYBIS(1-CHLOROPROPANE)	< 660
4-METHYLPHENOL	340 J
N-NITROSO-DI-N-PROPYLAMINE	< 660
HEXACHLOROETHANE	< 660
NITROBENZENE	< 660
ISOPHORONE	< 660
2-NITROPHENOL	< 660
2,4-DIMETHYLPHENOL	< 660
BIS(2-CHLOROETHOXY)METHANE	< 660
2,4-DICHLOROPHENOL	< 660
1,2,4-TRICHLOROBENZENE	< 660
NAPHTHALENE	16 J
4-CHLOROANILINE	< 660
HEX CHLOROBUTADIENE	< 660
4-CHLORO-3-METHYLPHENOL	< 660
2-METHYLNAPHTHALENE	< 660
HEXACHLOROCYCLOPENTADIENE	< 660
2,4,6-TRICHLOROPHENOL	< 660
2,4,5-TRICHLOROPHENOL	<1600
2-CHLORONAPHTHALENE	< 660

AMPLE NUMBER: 40300234 PAGE 2

L: B-2 S#1; 3-9
ROJECT NUMBER: 20716XF

MS SEMI-VOLATILE FRACTION (CONTINUED)

2-NITROANILINE	<1600
DIMETHYL PHTHALATE	< 660
ACENAPHTHYLENE	< 660
2,6-DINITROTOLUENE	< 660
3-NITROANILINE	<1600
ACENAPHTHENE	< 660
2,4-DINITROPHENOL	<1600
4-NITROPHENOL	<1600
DIBENZOFURAN	< 660
2,4-DINITROTOLUENE	< 660
DIETHYLPHTHALATE	23 J
4-CHLOROPHENYL-PHENYLETHER	< 660
FLUORENE	< 660
4-NITROANILINE	<1600
4,6-DINITRO-2-METHYLPHENOL	<1600
N-NITROSODIPHENYLAMINE*(1)	< 660
4-BROMOPHENYL-PHENYLETHER	< 660
HEXACHLOROBENZENE	< 660
PENTACHLOROPHENOL	<1600
PHENANTHRENE	93 J
ANTHRACENE	< 660
CARBAZOLE	< 660
DI-N-BUTYLPHTHALATE	290 BJ (110J)
FLUORANTHENE	48 J
PYRENE	40 J
BUTYLBENZYLPHTHALATE	90 J
3,3'-DICHLOROBENZIDINE	< 660
BENZO(A)ANTHRACENE	< 660
CHRYSENE	66 J
BIS(2-ETHYLHEXYL)PHTHALATE	900 B (46J)
DI-N-OCTYL PHTHALATE	< 660
BENZO(B)FLUORANTHENE	150 J
BENZO(K)FLUORANTHENE	< 660
BENZO(A)PYRENE	< 660
INDENO(1,2,3-CD)PYRENE	< 660
DIBENZO(A,H)ANTHRACENE	< 660
BENZO(G,H,I)PERYLENE	< 660

) CANNOT BE SEPARATED FROM DIPHENYLAMINE.

J INDICATES AN ESTIMATED VALUE. MASS SPECTRAL DATA INDICATED THE PRESENCE OF A COMPOUND THAT MEETS THE IDENTIFICATION CRITERIA BUT THE RESULT IS LESS THAN THE SPECIFIED DETECTION LIMIT BUT GREATER THAN ZERO.

B INDICATES THE ANALYTE WAS FOUND IN THE BLANK AS WELL AS THE SAMPLE. THE CONCENTRATION SHOWN IN PARENTHESIS WAS DETECTED IN THE METHOD BLANK.

THOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
TRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

C/MS SEMI-VOLATILE FRACTION
. EPA METHOD 625 (FEDERAL REGISTER, VOLUME 49, NO. 209, PG. 43385-43406, CTOBER 26, 1984).
EST METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHOD 8270, U.S. EPA, WASHINGTON, DC (REVISED APRIL 1984).

OISTURE
ICIAL METHODS OF ANALYSIS (1984) 14TH EDITION, METHOD 16.259, 14.002, 03, AOAC, ARLINGTON, VA. (MODIFIED).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EN BAY, WI 54311

SAMPLE NUMBER: 40300242
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-8 S#2; 3-10
JECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
SENIC	8210.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
TRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EEN BAY, WI 54311

SAMPLE NUMBER: 40300243
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

GIL: B-9 S#1; 3-9
ROJECT NUMBER: 20716XF

RCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
SENIC	1080.	MG/KG

THOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
0 5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300244
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

L: B-10 S#1; 3-9
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

	ANALYSIS	UNITS
S AY		
R ENIC	774.	MG/KG

E HOD REFERENCES

RSENIC
E T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND D CION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
ONTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
S CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300245
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-11 S#1; 3-10
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

	ANALYSIS	UNITS
SAY		
RSENIC	6440.	MG/KG

THOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND
TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C.
REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M,
. EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton
Environmental
Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TC CONSULTANTS, LTD
[illegible]5 KEPLER DRIVE
[illegible]REEN BAY, WI 54311

SAMPLE NUMBER: 40300700
DATE ENTERED: 03/29/94
REPORT PRINTED: 03/31/94

E-ENTRY OF LIMS #40300245; SOIL: B-11 S#1; 3/10
[illegible]OJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

[illegible]-ACID EXTRACTION

ELEMENTS	PPM
LEAD	< 61.5
SODIUM	<1230.

[illegible]HOD REFERENCES

CP-ACID EXTRACTION
[illegible]T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND [illegible]TION, METHODS (3030, 3040 OR 3050) AND 6010, U.S. EPA, WASHINGTON, DC REVISED APRIL 1984)

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
REEN BAY, WI 54311

SAMPLE NUMBER: 40300246
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-12 S#1; 3-10
OJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

SAY	ANALYSIS	UNITS
RSENIC	2090.	MG/KG

THOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND ITION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EN BAY, WI 54311

SAMPLE NUMBER: 40300247
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-13 S#1; 3-9
JECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
ENIC	1010.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
5 KEPLER DRIVE
EN BAY, WI 54311

SAMPLE NUMBER: 40300248
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-14 S#1; 3-9
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

AY	ANALYSIS	UNITS
ENIC	1010.	MG/KG

HOD REFERENCES

RSENIC
T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
TRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, . EPA, WASHINGTON, D. C. (JULY 1985).

Hazleton Environmental Services, Inc.

REPORT OF ANALYSIS

ARK BERGEON
TS CONSULTANTS, LTD
[illegible]5 KEPLER DRIVE
[illegible]EEN BAY, WI 54311

SAMPLE NUMBER: 40300249
DATE ENTERED: 03/11/94
REPORT PRINTED: 03/31/94

OIL: B-15 S#1; 3-9
ROJECT NUMBER: 20716XF

URCHASE ORDER NUMBER: 20716XF

[illegible]AY	ANALYSIS	UNITS
[illegible]ENIC	1540.	MG/KG

[illegible]HOD REFERENCES

RSENIC
[illegible]T METHODS FOR EVALUATING SOLID WASTE, EPA PUBLICATION NO. SW-846, SECOND [illegible]TION, METHODS (3030, 3040, OR 3050) AND 7060, U.S. EPA, WASHINGTON, D.C. REVISED APRIL 1984).
[illegible]NTRACT LABORATORY PROGRAM STATEMENT OF WORK NO. 785, METHOD 206.2 CLP-M, [illegible]. EPA, WASHINGTON, D. C. (JULY 1985).

STS CHAIN OF CUSTODY RECORD

№ 17522 RECORD NO. _____ THROUGH _____

Contact Person Mark Bergeon
Phone No. 414 468 1988
Project No. 20716XF PO No. 20716XF
STS Office Green Bay

SPECIAL HANDLING REQUEST
☐ RUSH
☐ VERBAL
☐ OTHER

Laboratory Hazleton
Contact Person Peggy Popp
Phone No. 608 232 3335
Results Due _____

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Spec. Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
B-1 S#1 (403002333)	3-9		X		1	Soil		X					Arsenic	
B-2 S#1 (403002334)	3-9		|		2	|		|				Arsenic + Semi VOCs (8270)	Arsenic may be present in concentrations as high as 68,000 mg/kg
B-2 S#2 (403002335)	3-9		|		1	|		|				Arsenic	
B3 S#1 (403002336)	3-9		|		1	|		|				|	
B-4 S#1 (403002337)	3-9		|		1	|		|				|	
B-5 S#1 (403002338)	3-10		|		1	|		|				+ Pb. Na ①	
B-6 S#1 (403002339)	3-10		↓		1	↓			↓				↓	
B-7 S#1 (403002340)	3-9		X		1	Soil		X					Arsenic	
TOV														

Collected by: [signature]	Date 3-9, 3-10-94	Time	Delivery by:	Date	Time
Received by: [signature]	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by: Lynn Kibler	Date 3-11-94	Time 1000H	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt ☐ Yes ☐ No ☐ N/A

Final disposition:

Comments (Weather Conditions, Precautions, Hazards):

① Add Pb + Na per conversation with M. Bergeon 3/29/94 PMP

Distribution: Original and Green – Laboratory Yellow – As needed Pink – Transporter Goldenrod – STS Project File

Instruction to Laboratory: Forward completed original to STS with analytical results. Retain green copy.

1/90 FORM 038

STS CHAIN OF CUSTODY RECORD

№ 17525 RECORD NO. _____ THROUGH _____

Contact Person Mark Bergeon
Phone No. 414 468 1978
Project No. 20716XF PO No. 20716XF
STS Office Green Bay

SPECIAL HANDLING REQUEST
☐ RUSH
☐ VERBAL
☐ OTHER

Laboratory Hazleton
Contact Person Peggy Popp
Phone No. 608 232 3335
Results Due _____

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Spec. Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
BG-1 403000231	3-9			X	2	Soil		X					Arsenic + Semi VOCs (8270)	
BG-2 403000232	3-9			X	2	Soil		X					Arsenic + Semi VOCs (8270)	

Condition Cold Storage WR
Acct. # 9520 Abbrev. STS
Smpl Rec'd _____ Init. _____
Date Entered 3-11-94
LIMS # 403000231 232

Collected by: [illegible]	Date 3-9-94	Time 9:00 A.M.	Delivery by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by: Lynn Kistler	Date 3-11-94	Time 1000A	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt ☐ Yes ☐ No ☐ N/A

Final disposition:

Comments (Weather Conditions, Precautions, Hazards):
Rec'd with ice - UMK

Distribution: Original and Green – Laboratory Yellow – As needed Pink – Transporter Goldenrod – STS Project File

Instruction to Laboratory: Forward completed original to STS with analytical results. Retain green copy.

11/90 FORM 038

STS CHAIN OF CUSTODY RECORD

№ 17523 RECORD NO. _____ THROUGH _____

Contact Person Mark Bergeon
Phone No. 414 468 1978
Project No. 20716XF PO No. 20716XF
STS Office Green Bay

SPECIAL HANDLING REQUEST
☐ RUSH
☐ VERBAL
☐ OTHER

Laboratory Hazleton
Contact Person Peggy Popp
Phone No. 608 232 3335
Results Due _____

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Spec. Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
B-8 S#1 (403000241)	3-10		X		2	soil		X					Arsenic + Semi VOCs (8270) + Pb, Na ①	
B-8 S#2 (403000242)	3-10		|		1	|		|				Arsenic	
B-9 S#1 (403000243)	3-9		|		1	|		|				|	Arsenic may be present in concentrations as high as 68,000 mg/kg
B-10 S-1 (403000244)	3-9		|		1	|		|				|	
B-11 S-1 (403000245)	3-10		|		1	|		|				+ Pb, Na ①	
B-12 S-1 (403000246)	3-10		|		1	|		|				|	
B-13 S-1 (403000247)	3-9		|		1	|		|				|	
B-14 S-1 (403000248)	3-9		|		1	|		|				↓	
B-15 S-1 (403000249)	3-9		|		1	↓		X					Arsenic	

Collected by: [illegible] Anderstrom	Date 3-9, 3-10-94	Time	Delivery by:	Date / Time
Received by: [illegible]	Date	Time	Relinquished by:	Date / Time
Received by:	Date	Time	Relinquished by:	Date / Time
Received by:	Date	Time	Relinquished by:	Date / Time
Received for lab by: Lynn Keller	Date 3-11-94	Time 1000H	Relinquished by:	Date / Time

Laboratory Comments Only: Seals Intact Upon Receipt ☐ Yes ☐ No ☐ N/A

Final disposition:

Comments (Weather Conditions, Precautions, Hazards):

① Add lead + sodium per conversation w/ M Bergeon 3/29/94 PMP

Distribution: Original and Green – Laboratory Yellow – As needed Pink – Transporter Goldenrod – STS Project File

Instruction to Laboratory: Forward completed original to STS with analytical results. Retain green copy.

11/90 FORM 038