

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
Case Summary and Close out Form

update 5/3/96

UID # 02-16-120590

Responsible Party Name/Full Address: Fraser Shipyards, Inc.

Third St. & Clough Ave.

Superior, WI 54880

Site Name/Full Address: Fraser Shipyards, Inc., AOC #5 - Paint Waste Staging Area, Third St. & Clough Ave., Superior, WI

Legal Description: \_\_\_ 1/4, \_\_\_ 1/4, Sec 11 T 49 N, R14 (E/W) DNR Case No. NWD-93-11 County: Douglas

Contaminant Type(s) Lead in soils and groundwater Quantity Released unknown

Incident Type: (amount released if known): Paint waste staging area -Lead found in soil and groundwater samples

Date of Incident/Discovered: 1-11-94 If Incident = LUST: Form 4 Pending? \_\_\_ Yes  No

Depth to Groundwater/Flow Direction: 6.5 ft. bgs/north, northeast Perched Water? \_\_\_ Y  N Depth: N/A

Soil Type fill (0-5'), clay/silty sand layers (5-8'), clay (8-15') Depth to Bedrock approx. 270 ft. bgs

Potential Receptors: Howard's Bay

Site Assessment Consultant: N/A.

Investigation/Remediation Consultant: SEH INC.

Certified Lab Testing Soils/Water: U.S.Filter (Enviroscan Corp.), Rothschild, WI - WI Lab Cert. No. 737053130

Status of water supply wells within 1200 feet of the site? Area receives City water.

Date Closure Submitted to DNR: November 26, 1997 Enforcement Actions or Permits Closed Out? \_\_\_ Yes \_\_\_ No

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**CLOSEOUT COMMITTEE SIGN OFF:**

**Date:** \_\_\_\_\_

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

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Attach Case Summary and Justification for Closure

**SOIL  
PRE-REMEDATION OR INVESTIGATION ANALYTICAL RESULTS**

Extent Defined?  Y  N

Attach Table of Pre-remedial Soil Samples

**SOIL  
POST REMEDIATION ANALYTICAL RESULTS**

Attach the Table for Post Remedial Soil Results

Remedial Action Completed?  Y  N N/A 720.19 analysis  Y  N (if Y attach supporting documentation)

Final Confirmation Sampling Methods: 3 hand auger borings

Description of remedial action taken: Remedial investigation revealed remedial action not necessary.

Were Soils Excavated?  Y  N Quantity: N/A Disposal Method: N/A

Soil Disposal Form Attached?  Y  N Final Disposal Location: N/A

**GROUNDWATER ANALYTICAL RESULTS**

Extent Defined?  Y  N  NA

Remedial Action Completed?  Y  N N/A

Field Analyses?  Y  N Lab Analyses?  Y  N No. of Sampling Points: 7

Number of Sample Rounds: 3

#NR 141 Temporary Wells: 6 - hydraulic probes #Recovery Sumps: none

#Private Wells: none For private wells, Form 3300-67 completed: none

#Municipal Wells: none #NR141 Monitoring Wells: 1

Preventive Action Limit exceeded?  Y  N (If yes, location) \_\_\_\_\_

Enforcement Standard exceeded?  Y  N (If yes, location) \_\_\_\_\_

Attach Table of Groundwater Results

Description of remedial action taken: Remedial investigation revealed remedial action not necessary.

**Form completed by:**

I certify that, to the best of my knowledge, the information presented on and attached to this form are true and accurate. This recommendation for case closure is based upon all available data as of \_\_\_\_\_ (date). I have read the Case Summary and Close Out Form Instructions and all required information has been included.

Name: Gloria Chojnacki Firm Name: Short Elliott Hendrickson Inc.

Affiliation with Site Owner: consultant

Address: 421 Frenette Drive

City: Chippewa Falls State: WI Zip: 54729

Telephone Number: (608) 274-2020

*Gloria Chojnacki / owner*  
(Signature)

COMMITTEE RECOMMENDATION: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

Fraser Shipyards, Inc.  
Superior, Wisconsin  
DNR Case No. NWD-93-11  
UID # 02-16-120590  
RE: Close Out Case Summary Narrative - AOC #5

### **AOC #5 - Paint Waste Staging Area**

Fraser accumulated wastes from their painting operations in two portable aboveground storage tanks located in the west-central yard area. A number of tanks of varying sizes were also stored in this area to provide emergency storage capacity for oily wastes from ships. The wastes staged in this area of concern (AOC) included paint wastes potentially mixed with dirty solvents. Wastes staged in these tanks were disposed at Waste Research and Reclamation on July 2, 1993. Many of the tanks initially located at AOC #5 were cut up and removed for salvage.

### **Soil Samples**

Initial soil samples were collected from AOC #5 on January 11, 1994 at the surface and at the 2.0 to 2.5 foot depth interval. A grab sample from boring B-9 (2 - 2.5 feet) indicated a total lead concentration of 685 mg/kg and B-10 (2 - 2.5 feet) indicated a total chromium concentration of 274 mg/kg. Both of these analytical results exceeded the ch. NR 720 Wisconsin Administrative Code industrial cleanup standards of 500 mg/kg for lead and 200 mg/kg for hexavalent chromium.

A TCLP as well as an ASTM water leach procedure was performed on the soil sample from B-9, the sample with the highest total lead concentration. A TCLP was also performed on B-10, the soil sample with the highest chromium concentration. No detectable concentrations of lead or chromium were noted in either of the leach procedures indicating that the lead and chromium in the subsurface are not leachable.

Additional surface soil samples were collected on August 16, 1997 in order to determine if surface soil concentrations of select heavy metals pose a significant threat. Laboratory results of the surface samples (B-11, HA-1, HA-2, HA-3) ranged from 20.4 mg/kg to 66.1 mg/kg for total lead and 16.1 mg/kg to 22.2 mg/kg for total chromium. Neither lead nor chromium surface soil concentrations exceed NR 720 industrial cleanup standards based on risk from direct contact. Soil analytical results are summarized on Table 1, "Field and Soil Analytical Results."

### **Groundwater Samples**

Groundwater monitoring well, MW-2, was installed on August 16, 1996. Two rounds of groundwater samples were collected using a bailer, filtered and submitted for laboratory analysis of total lead and chromium. A third groundwater sample was collected from MW-2 using a peristaltic pump, filtered and submitted for total lead analysis. The soil boring log, monitoring well construction form and well development form are included as an attachment to this form.

Results of the initial rounds of sampling indicated no concentrations of chromium above the laboratory detection limit. Initial samples collected with a bailer indicated lead concentrations of 48.8  $\mu\text{g/l}$  and 34.2  $\mu\text{g/l}$ , exceeding the NR 140 Enforcement Standard (ES) of 15  $\mu\text{g/l}$  for lead. The third groundwater sample collected with a peristaltic pump from MW-2 indicated no detection of lead.

In an effort to further investigate the potential of dissolved lead contamination in groundwater at AOC #5, six hydropunch groundwater samples were collected on October 1, 1997. Groundwater samples were brought to the surface with a peristaltic pump, filtered and submitted for laboratory analysis of total lead. Results indicate dissolved lead concentrations ranging from none detected to 1.06  $\mu\text{g/l}$ . The NR 140 Preventive Action Limit (PAL) for lead is 1.5  $\mu\text{g/l}$ . Groundwater analytical results are summarized in Table 2, "Groundwater Analytical Results."

Discrepancies between lead concentrations in the initial rounds of groundwater monitoring and the final round are most likely due to the methods of collection. The vigorous action of a bailer allowed for extraction of a greater concentration of fine soil particles to which lead is adsorbed. Some of these particles likely passed through the filter, accounting for increased total lead results. The final round of groundwater monitoring indicates that lead does not exceed the NR 140 groundwater standard demonstrating that groundwater has not been adversely impacted by lead concentrations in the soil at AOC #5.

TABLE 1  
FRASER SHIPYARDS, INC.  
FIELD AND SOIL ANALYTICAL RESULTS

AOC #	SAMPLE ID	DEPTH	DATE	FIELD SCREEN			ANALYTICAL PARAMETERS & METHODS					
				FID units	PID units	DRO* mg/kg	VOC (8010/8020 or 8021) mg/kg	PVOC (8021a) mg/kg	Pb (6010) mg/kg	Cd (6010) mg/kg	Cr (6010) mg/kg	Hg (7471) mg/kg
5 Paint Waste Staging Area	B-9	(2-2.5')	1-11-94	1000+	42	--	ND	--	<b>685**</b>	0.18	22.7	0.083
	B-10	(0-6")	1-11-94	0	36	--	--	--	--	--	--	--
	B-10	(2-2.5')	1-11-94	--	--	--	ND	--	270	0.28	<b>274***</b>	0.25
	B-11	(0-6")	1-11-94	0	34	--	--	--	66.1	0.64	22.2	ND
	B-12	(0-6")	1-11-94	1.4	34	--	--	--	--	--	--	--
	B-12	(2-2.5')	1-11-94	1000+	50	--	ND	--	177	0.38	23.1	ND
	HA-1	(0-6")	8-16-96	--	--	--	--	--	38.5	--	16.1	--
	HA-2	(0-6")	8-16-96	--	--	--	--	--	20.4	--	14.9	--
	HA-3	(0-6")	8-16-96	--	--	--	--	--	48.3	--	17.4	--
ch. NR 720 soil cleanup std.^									500	510	200	NSE

-- indicates parameter not analyzed

ND indicates parameter was not detected above laboratory detection level

NSE indicates no standard established

**685 - Bold designation indicates value exceeds NR 720 cleanup standard**

\* WDNR Modified DRO

\*\* TCLP - Pb, B-9 (2-2.5') = none detected

ASTM - Pb, B-9 (2-2.5') = none detected

\*\*\*TCLP - Cr, B-10 (2-2.5') = none detected

^ NR 720 Industrial Site cleanup standard specified

prepared by: ggc

checked by: jjt

**TABLE 2  
FRASER SHIPYARDS, INC.  
GROUNDWATER ANALYTICAL RESULTS**

AOC #	SAMPLE ID	ANALYTICAL PARAMETERS & METHODS					
		DATE	VOC (8021) ug/l	PAH (8310) ug/l	Cr (218.2) ug/l	Cd (213.2) ug/l	Pb (239.2) ug/l
<b>5</b> Paint Waste Staging Area	MW-2	8-29-96	--	--	ND	--	<b>48.8</b>
		11-21-96	--	--	ND	--	<b>34.2</b>
	MW-2	10-1-97	--	--	--	--	ND
	HP-1	10-1-97	--	--	--	--	ND
	HP-2	10-1-97	--	--	--	--	1.06
	HP-3	10-1-97	--	--	--	--	ND
	HP-4	10-1-97	--	--	--	--	ND
	HP-5	10-1-97	--	--	--	--	ND
	HP-6	10-1-97	--	--	--	--	ND
<b>ES</b>					100	5	15
<b>PAL</b>					10	0.5	1.5

ND = analyzed but not detected

-- indicated parameter not analyzed

**1.42 - Bold designation indicates value exceeds NR 140 Enforcement Standard (ES)**

compiled by: GGC      checked by JJT



Route To:

- Solid Waste  
 Emergency Response  
 Wastewater  
 Haz. Waste  
 Underground Tanks  
 Water Resources  
 Other

Facility/Project Name <b>FRASER SHIPYARD</b>		License/Permit/Monitoring Number		Boring Number <b>MW-2</b>	
Boring Drilled By (Firm name and name of crew chief) <b>MES - Erik Schoenberg</b>		Date Drilling Started <b>8/16/96</b>		Date Drilling Completed <b>8/16/96</b>	
DNR Facility Well No.		WI Unique Well No.		Common Well Name <b>MW-2</b>	
Boring Location State Plane		Final Static Water Level Feet MSL		Surface Elevation Feet MSL	
1/4 of		1/4 of Section		Borehole Diameter <b>8.2 Inches</b>	
County <b>DOUGLAS</b>		DNR County Code		Civil Town/City/ or Village <b>SUPERIOR</b>	
N, E		Lat 0' "		Local Grid Location (If applicable)	
T N.R		Long 0' "		<input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	

Sample Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	
1	9	3-3-6-9	0-2	FILL: Brown Silty SAND and Gravel, Occasional Concrete Pieces				ND	9					
2	12	10-19-9-4	2-4					ND	28					
3	20	3-3-4-3	4-6	Probable FILL: Alternating Layers of Brown Lean Clay and Brown Silty Sand, Little Gravel				ND	7					
4	20	6-4-2-4	6-8	Brown Organic CLAY				ND	6					
5	24	3-4-6-9	8-10	Stiff Reddish-Brown Lean CLAY, Little Sand and Gravel	OL CL				10					
6	24	3-6-6-8	10-14					ND	12					
				End of Boring at 15.0 feet										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

*John E. Guff*

Firm



SEH 421 Frenette Drive  
Chippewa Falls, WI. 54729  
Tel: 715-720-6200, Fax: 715-720-6300

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Facility/Project Name <b>FRASER SHIPYARD</b>	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name <b>MW-2</b>
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ " Long. _____ " or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location of Waste/Source _____ 1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. _____ <input type="checkbox"/> E. <input type="checkbox"/> W.	Date Well Installed <b>8/16/96</b>
Distance Well Is From Waste/Source Boundary _____ ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Well Installed By: (Person's Name and Firm) <b>Erik Schoenberg</b> <b>MES</b>
Is Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>4.0</u> in. b. Length: <u>5.0</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 0 Other <input type="checkbox"/>
C. Land surface elevation _____ ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or <u>2.2</u> ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/>
12. USC classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 3 0 Annular space seal <input type="checkbox"/> Other <input type="checkbox"/>
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: a. <u>Chipped Granular</u> Bentonite <input checked="" type="checkbox"/> 3 3 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry 3 5 c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3 1 d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5 0 e. _____ Ft <sup>3</sup> volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input checked="" type="checkbox"/> 0 8
14. Drilling method used: Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input checked="" type="checkbox"/> 4 1 Other <input type="checkbox"/>	6. Bentonite seal: a. Bentonite <u>chips</u> <input checked="" type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input type="checkbox"/> 3 2 c. _____ Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9	7. Fine sand material: Manufacturer, product name and mesh size a. <u>Red Flint Filter Sand #45 - #55</u> b. Volume added <u>1/2 bag</u> ft <sup>3</sup>
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe <u>NA</u>	8. Filter pack material: Manufacturer, product name and mesh size a. <u>Red Flint Filter Sand #30 mesh</u> b. Volume added <u>7 bags</u> ft <sup>3</sup>
17. Source of water (attach analysis): <u>NA</u>	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or <u>2.2</u> ft.	10. Screen material: <u>Flush thread PVC sch. 40</u> a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or <u>4.0</u> ft.	b. Manufacturer <u>Diedrich</u>
G. Filter pack, top _____ ft. MSL or <u>4.5</u> ft.	c. Slot size: <u>0.010</u> in.
H. Screen joint, top _____ ft. MSL or <u>5.0</u> ft.	d. Slotted length: <u>10.0</u> ft.
I. Well bottom _____ ft. MSL or <u>15.0</u> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4 Other <input type="checkbox"/>
J. Filter pack, bottom _____ ft. MSL or <u>15.0</u> ft.	
K. Borehole, bottom _____ ft. MSL or <u>15.0</u> ft.	
L. Borehole, diameter <u>8.2</u> in.	
M. O.D. well casing <u>2.40</u> in.	
N. I.D. well casing <u>2.00</u> in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature John E. Gull Firm **SEH** Short Elliott Hendrickson, Inc. Tel: (715) 720-6200  
421 Frenette Drive, Chippewa Falls, WI 54729 Fax: (715) 720-6300

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141. Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Route to: Solid Waste  Haz. Waste  Wastewater   
Env. Response & Repair  Underground Tanks  Other  \_\_\_\_\_

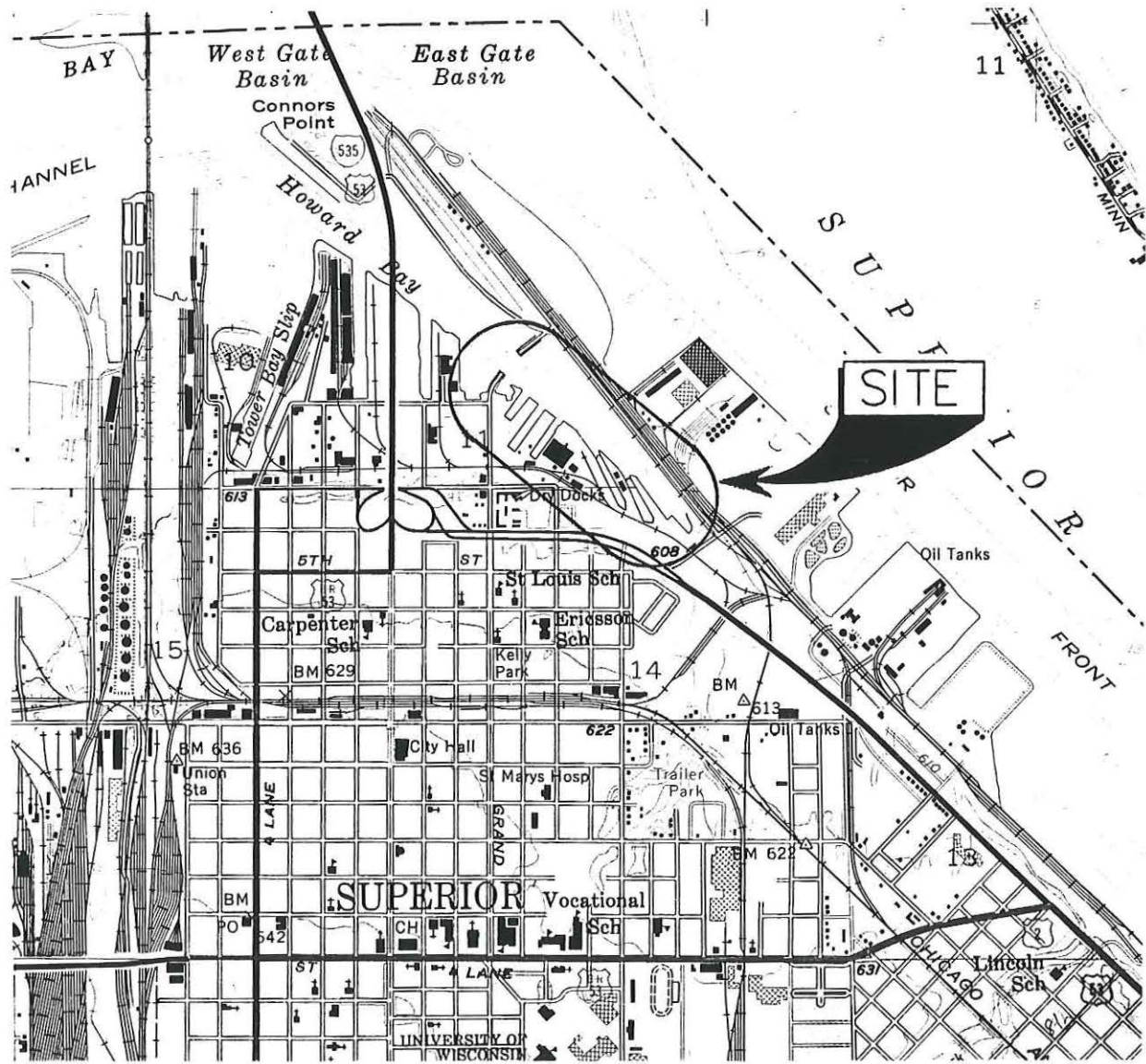
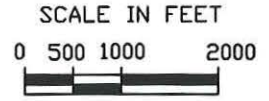
Facility/Project Name <b>FRASER SHIPYARD</b>	County <b>DOUGLAS</b>	Well Name <b>MW-2</b>
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number
		DNR Well Number

		Before Development	After Development
1. Can this well be purged dry?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
2. Well development method:			
surged with bailer and bailed	<input type="checkbox"/> 4 1		
surged with bailer and pumped	<input type="checkbox"/> 6 1		
surged with block and bailed	<input type="checkbox"/> 4 2		
surged with block and pumped	<input checked="" type="checkbox"/> 6 2		
surged with block, bailed, and pumped	<input type="checkbox"/> 7 0		
compressed air	<input type="checkbox"/> 2 0		
bailed only	<input type="checkbox"/> 1 0		
pumped only	<input type="checkbox"/> 5 1		
pumped slowly	<input type="checkbox"/> 5 0		
other _____	<input type="checkbox"/>		
3. Time spent developing well	10 min.		
4. Depth of well (from top of well casing)	17.6 ft.		
5. Inside diameter of well	2.07 in.		
6. Volume of water in filter pack and well casing	9.7 gal.		
7. Volume of water removed from well	8.0 gal.		
8. Volume of water added (if any)	0.0 gal.		
9. Source of water added _____			
10. Analysis performed on water added?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, attach results)		
11. Depth to Water (from top of well casing)		a. 6.58 ft.	16.46 ft.
Date		b. 8/29/96	8/29/96
Time		c. 12:35 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	12:50 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom		0.0 inches	0.0 inches
13. Water clarity		Clear <input type="checkbox"/> 1 0 Turbid <input checked="" type="checkbox"/> 1 5 (Describe) <u>slightly turbid</u>	Clear <input type="checkbox"/> 2 0 Turbid <input checked="" type="checkbox"/> 2 5 (Describe) <u>Slightly turbid</u>
Fill in if drilling fluids were used and well is at solid waste facility:			
14. Total suspended solids		mg/l	mg/l
15. COD		mg/l	mg/l

16. Additional comments on development:  
Well purged dry after pumping 8 gallons; slow to recharge

Well developed by: Person's Name and Firm	I hereby certify that the above information is true and correct to the best of my knowledge.
Name: <u>Trevor Bauer</u>	Signature: <u></u>
Firm: <u>SEH Inc.</u>	Print Initials: <u>TJB</u>
	Firm: <u> Short Elliott Hendrickson Inc.</u>

REPRODUCED FROM  
**USGS SUPERIOR QUADRANGLE**  
 WISCONSIN - DOUGLAS CO. 7.5 MINUTE SERIES



F:\WASTE\FRASER\9401\PLAN\FUA2

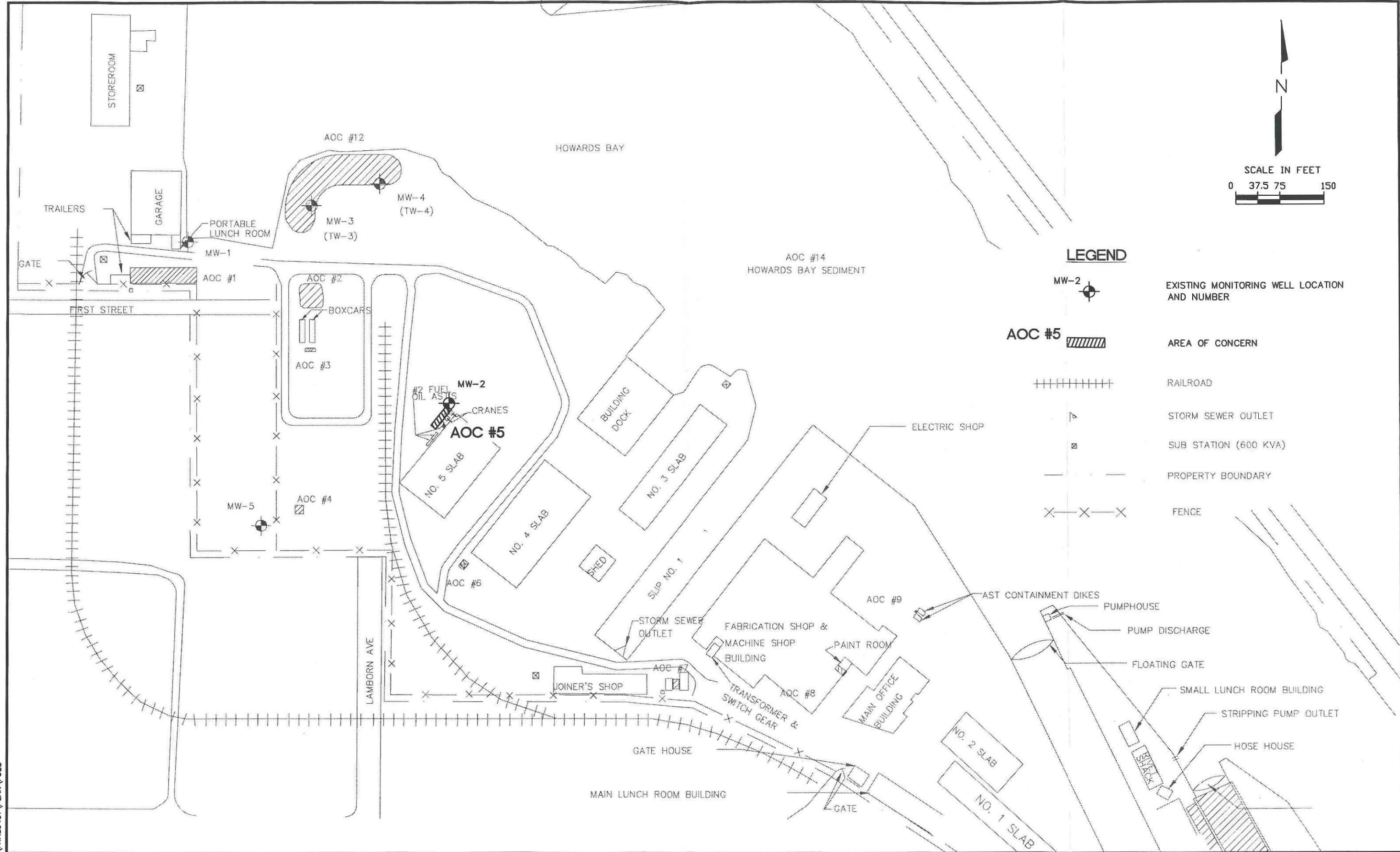
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NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK		



**FRASER SHIPYARDS, INC.**  
 AOC #5

**FIGURE 1**  
**SITE LOCATION**

PROJ. NO. FRAS9401	<b>1</b>
DATE 11/07/97	
<b>4</b>	



F:\WASTE\FRAS9401\PLAN\FUE2

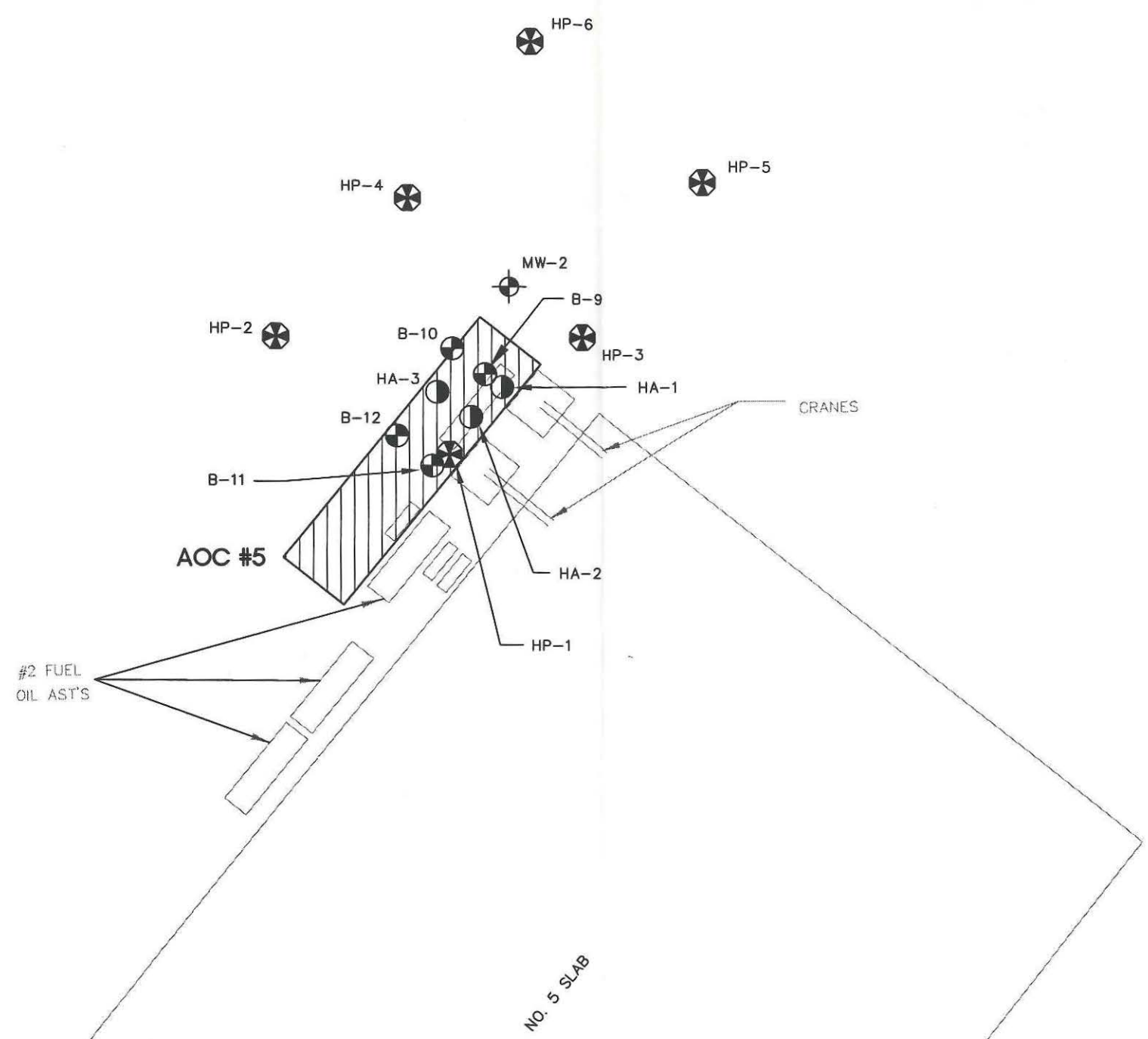
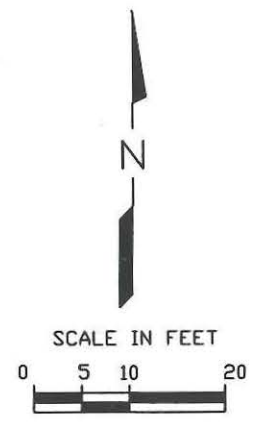
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NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK				













**FRASER SHIPYARDS, INC.**  
**AOC #5**

**FIGURE 2**  
**SITE PLAN**

PROJ. NO. FRAS9401	<b>2</b> <b>4</b>
DATE 11/07/97	



**LEGEND**

- MW-2  EXISTING MONITORING WELL LOCATION AND NUMBER
- B-12  SOIL BORING LOCATION AND NUMBER
- HP-1  HYDRAULIC PROBE GROUNDWATER SAMPLE LOCATION
- HA-1  HAND AUGER LOCATION
- AOC #5**  
 AREA OF CONCERN
-  RAILROAD
-  STORM SEWER OUTLET
-  SUB STATION (600 KVA)
-  PROPERTY BOUNDARY
-  FENCE

F:\WASTE\FRAS9401\PLAN\FUD1

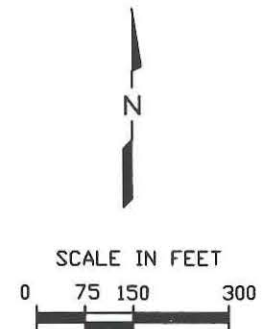
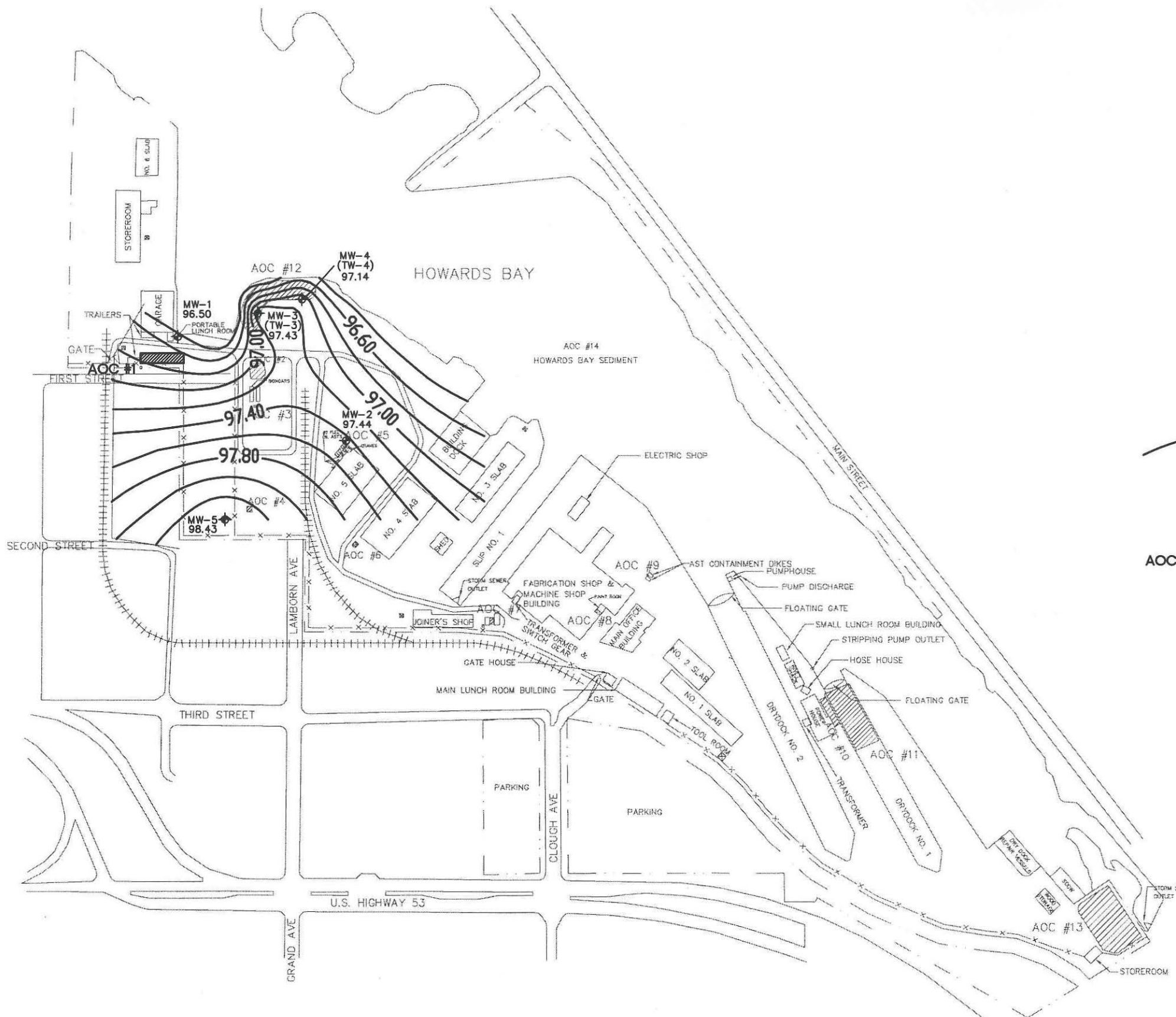
1	08/27/97	-----	JLE	08/97	JEG	08/97				
NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK				






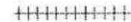




**FRASER SHIPYARDS, INC.**  
**AOC #5**

**FIGURE 3**  
**HYDRAULIC PROBE**  
**SAMPLING LOCATION**

PROJ. NO.	<b>3</b>
FRAS9401	
DATE	<b>4</b>
08/27/97	



**LEGEND**

-  97.80 — STATIC GROUNDWATER ELEVATION CONTOURS  
CONTOUR INTERVAL=0.20 FT
-  MW-1 96.50 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND NUMBER WITH STATIC WATER ELEVATION AS OF 08/29/96.
-  AOC #1 — AREAS OF CONCERN
-  — RAILROAD
-  — STORM SEWER OUTLET
-  — SUB STATION (600 KVA)
-  — PROPERTY BOUNDARY
-  — FENCE

**NOTES:**

1. GROUNDWATER ELEVATIONS MEASURED BY SEH ON AUGUST 29, 1996.
2. LAKE SURFACE ELEVATION MEASURED BY SEH ON NOVEMBER 21, 1996.
3. ELEVATIONS (IN FEET) REFERENCED TO ARBITRARY SITE DATUM.
4. GROUNDWATER ELEVATION CONTOURS GENERATED USING SURFER® (KRIGING METHOD)

F:\WASTE\DWG2\WASTE\FRAS9401\PLAN\FUW1

1	11/07/97	-----	JLE	11/97	GC	11/97			
NO.	DATE	ISSUE/REVISIONS	DRAWN BY	DESIGN	FIELD REVIEW	QC CHECK			



**FRASER SHIPYARDS, INC.**  
**AOC #5**

**FIGURE 4**  
**GROUNDWATER CONTOURS**

PROJ. NO.	FRAS9401	<b>4</b>
DATE	11/07/97	

# ENVIROSCAN

August 30, 1996

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

ENVIRONMENTAL AND  
ANALYTICAL SERVICES

SEP 3 1996

Attn: John Guhl

Re: FRASE9401.00

Please find enclosed the analytical results for the samples received August 20, 1996.

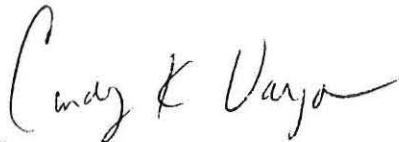
All analyses were completed in accordance with appropriate EPA and Wisconsin methodologies. Methods and dates of analysis are included in the report tables.

The chain of custody document is enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.

Sincerely,

US Filter/Enviroscan



Cindy K. Varga  
Senior Analytical Chemist



# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

Attn: John Guhl

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKVCKU  
REVIEWED BY: SPM

Client Sample HAX-3, Enviroscan Analytical # 74862, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date	
				Wet	Dry			
Benzene	0.012	0.025	0.060	<	0.025	<	0.032	08/26/96
Bromobenzene	0.007	0.025	0.060	<	0.025	<	0.032	08/26/96
Bromodichloromethane	0.005	0.025	0.060	<	0.025	<	0.032	08/26/96
n-Butylbenzene	0.007	0.025	0.060	<	0.025	<	0.032	08/26/96
sec-Butylbenzene	0.006	0.025	0.060	<	0.025	<	0.032	08/26/96
tert-Butylbenzene	0.004	0.025	0.060	<	0.025	<	0.032	08/26/96
Carbon Tetrachloride	0.008	0.025	0.060	<	0.025	<	0.032	08/26/96
Chlorobenzene	0.003	0.025	0.060	<	0.025	<	0.032	08/26/96
Chlorodibromomethane	0.005	0.025	0.060	<	0.025	<	0.032	08/26/96
Chloroethane	0.006	0.025	0.060	<	0.025	<	0.032	CSH SPH 08/26/96
Chloroform	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
Chloromethane	0.012	0.025	0.060	<	0.025	<	0.032	CSH SPL DUP 08/26/96
o-Chlorotoluene	0.003	0.025	0.060	<	0.025	<	0.032	08/26/96
p-Chlorotoluene	0.005	0.025	0.060	<	0.025	<	0.032	SPH 08/26/96
1,2-Dibromo-3-chloropropane	0.018	0.025	0.060	<	0.025	<	0.032	08/26/96
1,2-Dibromoethane	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
1,2-Dichlorobenzene	0.014	0.025	0.060	<	0.025	<	0.032	08/26/96
1,3-Dichlorobenzene	0.003	0.025	0.060	<	0.025	<	0.032	08/26/96
1,4-Dichlorobenzene	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
Dichlorodifluoromethane	0.005	0.025	0.060	<	0.025	<	0.032	SPL 08/26/96
1,1-Dichloroethane	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
1,2-Dichloroethane	0.001	0.025	0.060	<	0.025	<	0.032	08/26/96
1,1-Dichloroethylene	0.006	0.025	0.060	<	0.025	<	0.032	CSH 08/26/96
cis-1,2-Dichloroethylene	0.008	0.025	0.060	<	0.025	<	0.032	CSL SPL 08/26/96
trans-1,2-Dichloroethylene	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
1,2-Dichloropropane	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
1,3-Dichloropropane	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
2,2-Dichloropropane	0.008	0.025	0.060	<	0.025	<	0.032	CSL SPL 08/26/96
Ethylbenzene	0.006	0.025	0.060	<	0.025	<	0.032	08/26/96
Hexachlorobutadiene	0.003	0.025	0.060	<	0.025	<	0.032	SPH 08/26/96
Isopropylbenzene	0.006	0.025	0.060	<	0.025	<	0.032	08/26/96
p-Isopropyltoluene	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
Methyl tert Butyl Ether	0.017	0.025	0.060	<	0.025	<	0.032	CSL SPL DUP 08/26/96
Methylene Chloride	0.009	0.025	0.060	<	0.025	<	0.032	CSH 08/26/96
Naphthalene	0.017	0.025	0.060	<	0.026	<	0.033	SPH 08/26/96
n-Propylbenzene	0.007	0.025	0.060	<	0.025	<	0.032	08/26/96
Tetrachloroethylene	0.002	0.025	0.060	<	0.025	<	0.032	08/26/96
1,1,2,2-Tetrachloroethane	0.002	0.025	0.060	<	0.025	<	0.032	DUP 08/26/96
Toluene	0.004	0.025	0.060	<	0.025	<	0.032	08/26/96
1,2,3-Trichlorobenzene	0.003	0.025	0.060	<	0.025	<	0.032	SPH 08/26/96
1,2,4-Trichlorobenzene	0.002	0.025	0.060	<	0.025	<	0.032	SPH 08/26/96
Trichloroethylene	0.002	0.025	0.060	<	0.025	<	0.032	CSH 08/26/96
Trichlorofluoromethane	0.002	0.025	0.060	<	0.025	<	0.032	CSH 08/26/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	<	0.025	<	0.032	08/26/96
1,3,5-Trimethylbenzene	0.020	0.025	0.060	<	0.025	<	0.032	08/26/96
Vinyl Chloride	0.002	0.025	0.060	<	0.025	<	0.032	SPL 08/26/96
m- & p-Xylene	0.011	0.025	0.060	<	0.025	<	0.032	08/26/96
o-Xylene & Styrene	0.011	0.025	0.060	<	0.036	<	0.046	08/26/96

\* = Regulatory Limit based on total Xylene.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.

Enviroscan Corp., 303 West Military Rd., Rothschild, WI 54474 1/800/338-SCAN Wisconsin Lab Certification No. 737053130

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV/CJ  
REVIEWED BY: ZM

Attn: John Guhl

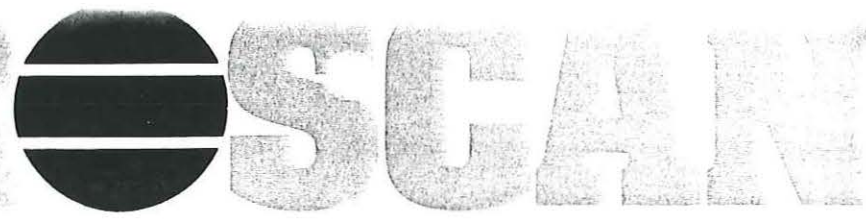
Client Sample HAX-4, Enviroscan Analytical # 74863, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST		RESULT		Quality Control Qualifiers	Analysis Date
		LOD	LOQ	Wet	Dry		
Benzene	0.015	0.025	0.060	< 0.025	< 0.027		08/26/96
Bromobenzene	0.009	0.025	0.060	< 0.025	< 0.027		08/26/96
Bromodichloromethane	0.006	0.025	0.060	< 0.025	< 0.027		08/26/96
n-Butylbenzene	0.008	0.025	0.060	< 0.025	< 0.027		08/26/96
sec-Butylbenzene	0.008	0.025	0.060	< 0.025	< 0.027		08/26/96
tert-Butylbenzene	0.005	0.025	0.060	< 0.025	< 0.027		08/26/96
Carbon Tetrachloride	0.010	0.025	0.060	< 0.025	< 0.027		08/26/96
Chlorobenzene	0.004	0.025	0.060	< 0.025	< 0.027		08/26/96
Chlorodibromomethane	0.006	0.025	0.060	< 0.025	< 0.027		08/26/96
Chloroethane	0.007	0.025	0.060	< 0.025	< 0.027	CSH SPH	08/26/96
Chloroform	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
Chloromethane	0.015	0.025	0.060	0.026	0.028	CSH SPL DUP	08/26/96
o-Chlorotoluene	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
p-Chlorotoluene	0.006	0.025	0.060	< 0.025	< 0.027	SPH	08/26/96
1,2-Dibromo-3-chloropropane	0.021	0.025	0.060	< 0.025	< 0.027		08/26/96
1,2-Dibromoethane	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
1,2-Dichlorobenzene	0.017	0.025	0.060	< 0.025	< 0.027		08/26/96
1,3-Dichlorobenzene	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
1,4-Dichlorobenzene	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
Dichlorodifluoromethane	0.005	0.025	0.060	< 0.025	< 0.027	SPL	08/26/96
1,1-Dichloroethane	0.002	0.025	0.060	< 0.025	< 0.027		08/26/96
1,2-Dichloroethane	0.002	0.025	0.060	< 0.025	< 0.027		08/26/96
1,1-Dichloroethylene	0.008	0.025	0.060	< 0.025	< 0.027	CSH	08/26/96
cis-1,2-Dichloroethylene	0.009	0.025	0.060	< 0.025	< 0.027	CSL SPL	08/26/96
trans-1,2-Dichloroethylene	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
1,2-Dichloropropane	0.002	0.025	0.060	< 0.025	< 0.027		08/26/96
1,3-Dichloropropane	0.002	0.025	0.060	< 0.025	< 0.027		08/26/96
2,2-Dichloropropane	0.009	0.025	0.060	< 0.025	< 0.027	CSL SPL	08/26/96
Ethylbenzene	0.008	0.025	0.060	< 0.025	< 0.027		08/26/96
Hexachlorobutadiene	0.004	0.025	0.060	< 0.025	< 0.027	SPH	08/26/96
Isopropylbenzene	0.008	0.025	0.060	< 0.025	< 0.027		08/26/96
p-Isopropyltoluene	0.003	0.025	0.060	< 0.025	< 0.027		08/26/96
Methyl tert Butyl Ether	0.020	0.025	0.060	< 0.025	< 0.027	CSL SPL DUP	08/26/96
Methylene Chloride	0.011	0.025	0.060	< 0.025	< 0.027	CSH	08/26/96
Naphthalene	0.020	0.025	0.060	< 0.025	< 0.027	SPH	08/26/96
n-Propylbenzene	0.008	0.025	0.060	< 0.025	< 0.027		08/26/96
Tetrachloroethylene	0.002	0.025	0.060	< 0.025	< 0.027		08/26/96
1,1,2,2-Tetrachloroethane	0.003	0.025	0.060	< 0.025	< 0.027	DUP	08/26/96
Toluene	0.004	0.025	0.060	< 0.025	< 0.027		08/26/96
1,2,3-Trichlorobenzene	0.004	0.025	0.060	< 0.025	< 0.027	SPH	08/26/96
1,2,4-Trichlorobenzene	0.003	0.025	0.060	< 0.025	< 0.027	SPH	08/26/96
Trichloroethylene	0.002	0.025	0.060	< 0.025	< 0.027	CSH	08/26/96
Trichlorofluoromethane	0.002	0.025	0.060	< 0.025	< 0.027	CSH	08/26/96
1,2,4-Trimethylbenzene	0.009	0.025	0.060	< 0.025	< 0.027		08/26/96
1,3,5-Trimethylbenzene	0.024	0.025	0.060	< 0.025	< 0.027		08/26/96
Vinyl Chloride	0.002	0.025	0.060	< 0.025	< 0.027	SPL	08/26/96
m- & p-Xylene	0.014	0.025	0.060	< 0.025	< 0.027		08/26/96
o-Xylene & Styrene	0.013	0.025	0.060	0.032	0.035		08/26/96

\* = Regulatory Limit based on total Xylene.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV/rev  
REVIEWED BY: sm

Attn: John Guhl

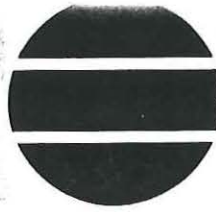
Client Sample HAX-5, Enviroscan Analytical # 74864, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST		RESULT		Quality Control Qualifiers	Analysis Date
		LOD	LOQ	Wet	Dry		
Benzene	0.014	0.025	0.060	< 0.025	< 0.031		08/26/96
Bromobenzene	0.008	0.025	0.060	< 0.025	< 0.031		08/26/96
Bromodichloromethane	0.006	0.025	0.060	< 0.025	< 0.031		08/26/96
n-Butylbenzene	0.007	0.025	0.060	< 0.025	< 0.031		08/26/96
sec-Butylbenzene	0.007	0.025	0.060	< 0.025	< 0.031		08/26/96
tert-Butylbenzene	0.004	0.025	0.060	< 0.025	< 0.031		08/26/96
Carbon Tetrachloride	0.009	0.025	0.060	< 0.025	< 0.031		08/26/96
Chlorobenzene	0.003	0.025	0.060	< 0.025	< 0.031		08/26/96
Chlorodibromomethane	0.005	0.025	0.060	< 0.025	< 0.031		08/26/96
Chloroethane	0.006	0.025	0.060	< 0.025	< 0.031	CSH SPH	08/26/96
Chloroform	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
Chloromethane	0.013	0.025	0.060	< 0.025	< 0.031	CSH SPL DUP	08/26/96
o-Chlorotoluene	0.003	0.025	0.060	< 0.025	< 0.031		08/26/96
p-Chlorotoluene	0.005	0.025	0.060	< 0.025	< 0.031	SPH	08/26/96
1,2-Dibromo-3-chloropropane	0.019	0.025	0.060	< 0.025	< 0.031		08/26/96
1,2-Dibromoethane	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
1,2-Dichlorobenzene	0.015	0.025	0.060	< 0.025	< 0.031		08/26/96
1,3-Dichlorobenzene	0.003	0.025	0.060	< 0.025	< 0.031		08/26/96
1,4-Dichlorobenzene	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
Dichlorodifluoromethane	0.005	0.025	0.060	< 0.025	< 0.031	SPL	08/26/96
1,1-Dichloroethane	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
1,2-Dichloroethane	0.001	0.025	0.060	< 0.025	< 0.031		08/26/96
1,1-Dichloroethylene	0.007	0.025	0.060	< 0.025	< 0.031	CSH	08/26/96
cis-1,2-Dichloroethylene	0.008	0.025	0.060	< 0.025	< 0.031	CSL SPL	08/26/96
trans-1,2-Dichloroethylene	0.003	0.025	0.060	< 0.025	< 0.031		08/26/96
1,2-Dichloropropane	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
1,3-Dichloropropane	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
2,2-Dichloropropane	0.008	0.025	0.060	< 0.025	< 0.031	CSL SPL	08/26/96
Ethylbenzene	0.007	0.025	0.060	< 0.025	< 0.031		08/26/96
Hexachlorobutadiene	0.004	0.025	0.060	< 0.025	< 0.031	SPH	08/26/96
Isopropylbenzene	0.007	0.025	0.060	< 0.025	< 0.031		08/26/96
p-Isopropyltoluene	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
Methyl tert Butyl Ether	0.019	0.025	0.060	< 0.025	< 0.031	CSL SPL DUP	08/26/96
Methylene Chloride	0.010	0.025	0.060	< 0.025	< 0.031	CSH	08/26/96
Naphthalene	0.018	0.025	0.060	< 0.025	< 0.031	SPH	08/26/96
n-Propylbenzene	0.008	0.025	0.060	< 0.025	< 0.031		08/26/96
Tetrachloroethylene	0.002	0.025	0.060	< 0.025	< 0.031		08/26/96
1,1,2,2-Tetrachloroethane	0.003	0.025	0.060	< 0.025	< 0.031	DUP	08/26/96
Toluene	0.004	0.025	0.060	< 0.025	< 0.031		08/26/96
1,2,3-Trichlorobenzene	0.003	0.025	0.060	< 0.025	< 0.031	SPH	08/26/96
1,2,4-Trichlorobenzene	0.002	0.025	0.060	< 0.025	< 0.031	SPH	08/26/96
Trichloroethylene	0.002	0.025	0.060	< 0.025	< 0.031	CSH	08/26/96
Trichlorofluoromethane	0.002	0.025	0.060	< 0.025	< 0.031	CSH	08/26/96
1,2,4-Trimethylbenzene	0.008	0.025	0.060	< 0.025	< 0.031		08/26/96
1,3,5-Trimethylbenzene	0.022	0.025	0.060	< 0.025	< 0.031		08/26/96
Vinyl Chloride	0.002	0.025	0.060	< 0.025	< 0.031	SPL	08/26/96
m- & p-Xylene	0.012	0.025	0.060	< 0.025	< 0.031		08/26/96
o-Xylene & Styrene	0.012	0.025	0.060	0.112	0.138		08/26/96

\* = Regulatory Limit based on total Xylene.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.

# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

Attn: John Guhl

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *ckv*  
REVIEWED BY: *SPM*

Client Sample HAX-6, Enviroscan Analytical # 74865, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST		RESULT		Quality Control Qualifiers	Analysis Date	
		LOD	LOQ	Wet	Dry			
Benzene	0.014	0.025	0.060	<	0.025	<	0.031	08/26/96
Bromobenzene	0.008	0.025	0.060	<	0.025	<	0.031	08/26/96
Bromodichloromethane	0.006	0.025	0.060	<	0.025	<	0.031	08/26/96
n-Butylbenzene	0.008	0.025	0.060	<	0.025	<	0.031	08/26/96
sec-Butylbenzene	0.007	0.025	0.060	<	0.025	<	0.031	08/26/96
tert-Butylbenzene	0.005	0.025	0.060	<	0.025	<	0.031	08/26/96
Carbon Tetrachloride	0.010	0.025	0.060	<	0.025	<	0.031	08/26/96
Chlorobenzene	0.003	0.025	0.060	<	0.025	<	0.031	08/26/96
Chlorodibromomethane	0.005	0.025	0.060	<	0.025	<	0.031	08/26/96
Chloroethane	0.007	0.025	0.060	<	0.025	<	0.031	CSH SPH 08/26/96
Chloroform	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
Chloromethane	0.014	0.025	0.060	<	0.025	<	0.031	CSH SPL DUP 08/26/96
o-Chlorotoluene	0.003	0.025	0.060	<	0.025	<	0.031	08/26/96
p-Chlorotoluene	0.006	0.025	0.060	<	0.025	<	0.031	SPH 08/26/96
1,2-Dibromo-3-chloropropane	0.020	0.025	0.060	<	0.025	<	0.031	08/26/96
1,2-Dibromoethane	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
1,2-Dichlorobenzene	0.016	0.025	0.060	<	0.025	<	0.031	08/26/96
1,3-Dichlorobenzene	0.003	0.025	0.060	<	0.025	<	0.031	08/26/96
1,4-Dichlorobenzene	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
Dichlorodifluoromethane	0.005	0.025	0.060	<	0.025	<	0.031	SPL 08/26/96
1,1-Dichloroethane	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
1,2-Dichloroethane	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
1,1-Dichloroethylene	0.007	0.025	0.060	<	0.025	<	0.031	CSH 08/26/96
cis-1,2-Dichloroethylene	0.009	0.025	0.060	<	0.025	<	0.031	CSL SPL 08/26/96
trans-1,2-Dichloroethylene	0.003	0.025	0.060	<	0.025	<	0.031	08/26/96
1,2-Dichloropropane	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
1,3-Dichloropropane	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
2,2-Dichloropropane	0.009	0.025	0.060	<	0.025	<	0.031	CSL SPL 08/26/96
Ethylbenzene	0.007	0.025	0.060	<	0.025	<	0.031	08/26/96
Hexachlorobutadiene	0.004	0.025	0.060	<	0.025	<	0.031	SPH 08/26/96
Isopropylbenzene	0.007	0.025	0.060	<	0.025	<	0.031	08/26/96
p-Isopropyltoluene	0.003	0.025	0.060	<	0.025	<	0.031	08/26/96
Methyl tert Butyl Ether	0.019	0.025	0.060	<	0.025	<	0.031	CSL SPL DUP 08/26/96
Methylene Chloride	0.011	0.025	0.060	<	0.025	<	0.031	CSH 08/26/96
Naphthalene	0.019	0.025	0.060	<	0.025	<	0.031	SPH 08/26/96
n-Propylbenzene	0.008	0.025	0.060	<	0.025	<	0.031	08/26/96
Tetrachloroethylene	0.002	0.025	0.060	<	0.025	<	0.031	08/26/96
1,1,2,2-Tetrachloroethane	0.003	0.025	0.060	<	0.025	<	0.031	DUP 08/26/96
Toluene	0.004	0.025	0.060	<	0.025	<	0.031	08/26/96
1,2,3-Trichlorobenzene	0.003	0.025	0.060	<	0.025	<	0.031	SPH 08/26/96
1,2,4-Trichlorobenzene	0.002	0.025	0.060	<	0.025	<	0.031	SPH 08/26/96
Trichloroethylene	0.002	0.025	0.060	<	0.025	<	0.031	CSH 08/26/96
Trichlorofluoromethane	0.002	0.025	0.060	<	0.025	<	0.031	CSH 08/26/96
1,2,4-Trimethylbenzene	0.008	0.025	0.060	<	0.025	<	0.031	08/26/96
1,3,5-Trimethylbenzene	0.023	0.025	0.060	<	0.025	<	0.031	08/26/96
Vinyl Chloride	0.002	0.025	0.060	<	0.025	<	0.031	SPL 08/26/96
m- & p-Xylene	0.013	0.025	0.060	<	0.025	<	0.031	08/26/96
o-Xylene & Styrene	0.012	0.025	0.060		0.098		0.122	08/26/96

\* = Regulatory Limit based on total Xylene.

# ANALYTICAL REPORT ENVIROSCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *CKV*  
REVIEWED BY: *SPM*

Attn: John Guhl

Client Sample MW-1,5-7' , Enviroscan Analytical # 74871, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date
				Wet	Dry		
Benzene	0.012	0.025	0.060	< 0.025	< 0.025		08/23/96
Ethylbenzene	0.006	0.025	0.060	< 0.025	< 0.025		08/23/96
Methyl tert Butyl Ether	0.016	0.025	0.060	< 0.025	< 0.025		08/23/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	< 0.025	< 0.025		08/23/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	< 0.025	< 0.025		08/23/96
m- & p-Xylene	0.011	0.025	0.060	0.041	0.041		08/23/96
o-Xylene & Styrene	0.010	0.025	0.060	< 0.025	< 0.025		08/23/96
Toluene	0.003	0.025	0.060	0.035	0.035		08/23/96

Client Sample MW-3, 12.5-14.5 , Enviroscan Analytical # 74872, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date
				Wet	Dry		
Benzene	0.012	0.025	0.060	0.045	0.045		08/23/96
Ethylbenzene	0.006	0.025	0.060	0.032	0.032		08/23/96
Methyl tert Butyl Ether	0.016	0.025	0.060	< 0.025	< 0.025		08/23/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	0.063	0.063		08/23/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	< 0.025	< 0.025		08/23/96
m- & p-Xylene	0.011	0.025	0.060	0.135	0.135		08/23/96
o-Xylene & Styrene	0.010	0.025	0.060	0.045	0.045		08/23/96
Toluene	0.003	0.025	0.060	0.126	0.126		08/23/96

Client Sample MW-4, 7.5-9.5' , Enviroscan Analytical # 74873, Results are in Units of mg/kg

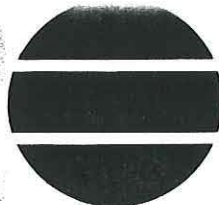
Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date
				Wet	Dry		
Benzene	0.012	0.025	0.060	< 0.025	< 0.025		08/28/96
Ethylbenzene	0.006	0.025	0.060	< 0.025	< 0.025		08/28/96
Methyl tert Butyl Ether	0.016	0.025	0.060	< 0.025	< 0.025		08/28/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	< 0.025	< 0.025		08/28/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	< 0.025	< 0.025		08/28/96
m- & p-Xylene	0.011	0.025	0.060	< 0.025	< 0.025		08/28/96
o-Xylene & Styrene	0.010	0.025	0.060	< 0.025	< 0.025		08/28/96
Toluene	0.003	0.025	0.060	0.026	0.026		08/28/96

Client Sample MW-5, 2.5-4.5' , Enviroscan Analytical # 74874, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date
				Wet	Dry		
Benzene	0.012	0.025	0.060	< 0.025	< 0.025		08/23/96
Ethylbenzene	0.006	0.025	0.060	< 0.025	< 0.025		08/23/96
Methyl tert Butyl Ether	0.016	0.025	0.060	< 0.025	< 0.025		08/23/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	< 0.025	< 0.025		08/23/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	< 0.025	< 0.025		08/23/96
m- & p-Xylene	0.011	0.025	0.060	0.041	0.041		08/23/96
o-Xylene & Styrene	0.010	0.025	0.060	< 0.025	< 0.025		08/23/96
Toluene	0.003	0.025	0.060	0.037	0.037		08/23/96

\* = Regulatory Limit based on total Xylene.

# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

Attn: John Guhl

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *CKV*  
REVIEWED BY: *SPM*

Client Sample B-1, 2.5-4.5' , Enviroscan Analytical # 74875, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date	
				Wet	Dry			
Benzene	0.012	0.025	0.060	<	0.025	<	0.025	08/23/96
Ethylbenzene	0.006	0.025	0.060	<	0.025	<	0.025	08/23/96
Methyl tert Butyl Ether	0.016	0.025	0.060	<	0.025	<	0.025	08/23/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	<	0.025	<	0.025	08/23/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	<	0.025	<	0.025	08/23/96
m- & p-Xylene	0.011	0.025	0.060		0.038		0.038	08/23/96
o-Xylene & Styrene	0.010	0.025	0.060	<	0.025	<	0.025	08/23/96
Toluene	0.003	0.025	0.060		0.034		0.034	08/23/96

Client Sample B-1, 7.5-9.5' , Enviroscan Analytical # 74876, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date	
				Wet	Dry			
Benzene	0.012	0.025	0.060	<	0.025	<	0.025	08/23/96
Ethylbenzene	0.006	0.025	0.060	<	0.025	<	0.025	08/23/96
Methyl tert Butyl Ether	0.016	0.025	0.060	<	0.025	<	0.025	08/23/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	<	0.025	<	0.025	08/23/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	<	0.025	<	0.025	08/23/96
m- & p-Xylene	0.011	0.025	0.060		0.100		0.100	08/23/96
o-Xylene & Styrene	0.010	0.025	0.060	<	0.025	<	0.025	08/23/96
Toluene	0.003	0.025	0.060		0.101		0.101	08/23/96

Client Sample B-2, 2.5-4.5' , Enviroscan Analytical # 74877, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date	
				Wet	Dry			
Benzene	0.012	0.025	0.060	<	0.025	<	0.025	08/22/96
Ethylbenzene	0.006	0.025	0.060	<	0.025	<	0.025	08/22/96
Methyl tert Butyl Ether	0.016	0.025	0.060	<	0.025	<	0.025	08/22/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060		0.027		0.027	08/22/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	<	0.025	<	0.025	08/22/96
m- & p-Xylene	0.011	0.025	0.060		0.095		0.095	08/22/96
o-Xylene & Styrene	0.010	0.025	0.060		0.027		0.027	08/22/96
Toluene	0.003	0.025	0.060		0.090		0.090	08/22/96

Client Sample B-2, 5-7' , Enviroscan Analytical # 74878, Results are in Units of mg/kg

Method EPA 8021	MDL	LUST LOD	LUST LOQ	RESULT		Quality Control Qualifiers	Analysis Date	
				Wet	Dry			
Benzene	0.012	0.025	0.060	<	0.025	<	0.025	08/22/96
Ethylbenzene	0.006	0.025	0.060	<	0.025	<	0.025	08/22/96
Methyl tert Butyl Ether	0.016	0.025	0.060	<	0.025	<	0.025	08/22/96
1,2,4-Trimethylbenzene	0.007	0.025	0.060	<	0.025	<	0.025	08/22/96
1,3,5-Trimethylbenzene	0.019	0.025	0.060	<	0.025	<	0.025	08/22/96
m- & p-Xylene	0.011	0.025	0.060		0.048		0.048	08/22/96
o-Xylene & Styrene	0.010	0.025	0.060	<	0.025	<	0.025	08/22/96
Toluene	0.003	0.025	0.060		0.038		0.038	08/22/96

\* = Regulatory Limit based on total Xylene.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/20/96  
 REPORT DATE: 08/30/96  
 PREPARED BY: CKV *ckv*  
 REVIEWED BY: *elm*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>HAX-3 08/15/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	78.6		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	1.1	10.5		08/27/96
Lead	mg/kg	5.1	33.3		08/27/96

Analytical No.: 74862

	<u>Units</u>	<u>Reporting Limit</u>	<u>HAX-4 08/15/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	92.4		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	0.9	3.35		08/27/96
Lead	mg/kg	4.3	X		08/27/96

Analytical No.: 74863

	<u>Units</u>	<u>Reporting Limit</u>	<u>HAX-5 08/15/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	81.2		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	1.0	2.92		08/27/96
Lead	mg/kg	4.9	X		08/27/96

Analytical No.: 74864

	<u>Units</u>	<u>Reporting Limit</u>	<u>HAX-6 08/15/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	80.1		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	1.0	2.80		08/27/96
Lead	mg/kg	5.0	X		08/27/96

Analytical No.: 74865

X = Analyzed but not detected.  
 Results calculated on a dry weight basis.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/20/96  
 REPORT DATE: 08/30/96  
 PREPARED BY: CKV *aw*  
 REVIEWED BY: *SM*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>AOC 5, HA-1</u> <u>08/16/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	92.0		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	0.9	16.1		08/27/96
Lead	mg/kg	4.3	38.5		08/27/96
Analytical No.:			74866		

	<u>Units</u>	<u>Reporting Limit</u>	<u>AOC 5, HA-2</u> <u>08/16/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	89.7		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	0.93	14.9		08/27/96
Lead	mg/kg	4.5	20.4		08/27/96
Analytical No.:			74867		

	<u>Units</u>	<u>Reporting Limit</u>	<u>AOC 5 HA-3</u> <u>08/16/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	88.1		08/20/96
<u>EPA 6010</u>					
Chromium	mg/kg	0.94	17.4		08/27/96
Lead	mg/kg	4.5	48.3		08/27/96
Analytical No.:			74868		

	<u>Units</u>	<u>Reporting Limit</u>	<u>AOC11, LYS1 0-6</u> <u>08/12/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u>					
Total Solids	%	-	72.9		08/20/96
<u>EPA 6010</u>					
Lead	mg/kg	5.5	X		08/27/96
Analytical No.:			74869		

X = Analyzed but not detected.

Results calculated on a dry weight basis.

All analyses conducted in accordance with Enviroscan Quality Assurance Program.



# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

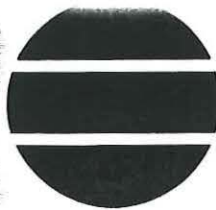
CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *ckv*  
REVIEWED BY: *sjk*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>AOC11, LYS12-2.5</u> <u>08/12/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 160.3</u> Total Solids	%	-	77.7		08/20/96
<u>EPA 6010</u> Lead	mg/kg	5.1	X		08/27/96
Analytical No.:			74870		

X = Analyzed but not detected.  
Results calculated on a dry weight basis.

# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *uv*  
REVIEWED BY: *Jen*

Attn: John Guhl

## Qualifier Descriptions

CSH	Check standard for this analyte exhibited a high bias. Sample results may also be biased high. Non-detects were verified by comparison with a low standard.
SPH	The matrix spike included with this analytical batch had a high recovery. Since that sample matrix appears similar to your sample, your result may also be high.
SPL	The matrix spike included with this analytical batch had a low recovery. Since that sample matrix appears similar to your sample, your result may also be low.
DUP	Result of duplicate analysis in this quality assurance batch exceeds the limits for precision. Sample results may also show a degree of variability.
CSL	Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects were verified by comparison with a low standard.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.00  
SAMPLED BY: Client  
DATE REC'D: 08/20/96  
REPORT DATE: 08/30/96  
PREPARED BY: CKV *CKV*  
REVIEWED BY: *JPH*

Attn: John Guhl

## Modified Diesel Range Organics (DRO) Parameter # 78919

	DRO	Qualifiers	Date Ext	Date Analyzed	Analytical No.
MW-1, 5-7'	4.92	D3	08/21/96	08/25/96	74871
MW-5, 2.5-4.5'	75.4	D2 D4	08/21/96	08/27/96	74874
B-1, 2.5-4.5'	16.8	D2	08/21/96	08/25/96	74875
B-1, 7.5-9.5'	4.12	D3	08/21/96	08/25/96	74876
B-2, 2.5-4.5'	6.32	D3	08/21/96	08/25/96	74877
B-2, 5-7'	X		08/21/96	08/25/96	74878
Reporting Limit	5.0				

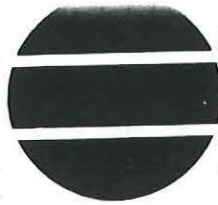
Units mg/kg  
X = Analyzed but not detected.  
Results calculated on a dry weight basis.

Qualifiers: Only above indicated qualifiers apply.

- (D1) The chromatogram is characteristic for a fuel oil/diesel. (i.e. #1 or #2 Diesel, jet fuel, kerosene, aged or degraded diesel, etc.)
- (D2) The chromatogram is not characteristic for diesel. It has the characteristics of a product which has significant peaks within the DRO window.
- (D2A) The chromatogram is characteristic for a light petroleum product (i.e. gasoline, aged or degraded gasoline, mineral spirits, etc.)
- (D2B) The chromatogram is characteristic for a heavier petroleum product other than diesel (i.e. motor oil, hydraulic oil, etc.)
- (D3) The chromatogram is not characteristic for diesel or any single common petroleum product.
- (D4) The chromatogram contained significant peaks outside the DRO window.
- (D5) The chromatogram contained significant peaks and a raised baseline outside the DRO window.

The entire area within the DRO window was quantitated.

The replicate spike recovery of this batch of samples was found to be 95.0% and 87.5%.



Sample Receipt Report

Client: Short

Date Received: 8/20/96

Analytical No.: 74862 Through 74878

Check all deviations from EPA or WDNR sample protocol.

Sample(s) received at \_\_\_\_ °C which is above the EPA and WDNR limit of 4°C.

VOC vial(s) received with headspace. Explain: \_\_\_\_\_

Sample(s) received in bottles not furnished by Enviroscan. Preservation method, if used, is unknown.

Sample(s) not properly preserved per EPA/WDNR protocol for the following: \_\_\_\_\_

Sample(s) received beyond EPA holding time for: \_\_\_\_\_

Sample date/time not supplied by client. Actual holding time unknown.

GRO/PVOC/VOC/DRO (circle appropriate) sample(s) are < 19.5 gms and this report is the flag for that information. Sample(s) under-weight: \_\_\_\_\_

GRO/PVOC/VOC (circle appropriate) sample(s) were between 26.4-35.4 gms so methanol was added in a 1:1 ratio. Sample(s) included: 74871 → 3ml, 74873 → 3ml, 74874 → 4ml, 74877 → 0.5ml

GRO/PVOC/VOC/DRO (circle appropriate) sample(s) were > 35.4 gms and are required to be rejected. Sample(s) included: \_\_\_\_\_

Other: report on wet weight no total solids for samples, 74871 → 74878

Client contact concerning the above deviations:

Client John Gohl (contact name) notified of the above deviation(s) on 8/22/96 at 9:00 am/pm by Sharon K. Matley and the client ordered:  
(signature)

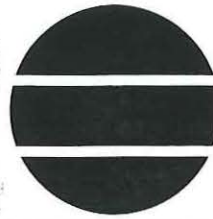
Proceed with analyses as ordered.

Proceed with analyses after taking the following corrective action: \_\_\_\_\_

Do NOT proceed with analyses.



# REQUEST FOR SERVICES



# SCAN

303 W. MILITARY RD. ROTHSCHILD, WI 54474 1-800-338-SCAN

**REPORT TO:**

Name: JOHN GUHL  
 Company: SHORT ELLIOTT HENDRICKSON INC.  
 Address: 421 FRENETTE DRIVE  
C.F. WI 54729  
 Phone: ( 715 ) 720-6200  
 P.O. # FRASER  
 Project # FRASER 01.00 Quote # \_\_\_\_\_

**BILL TO: (if different from Report To info):**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

**ANALYTICAL REQUESTS**

(use separate sheet if necessary)

- Sample Type**  
 (Check all that apply)
- Groundwater
  - Wastewater
  - Soil/Solid
  - Drinking Water
  - Oil
  - Vapor
  - Other
- Turnaround Time**
- Normal
  - Rush (Pre-approved by Lab)
- Date Needed \_\_\_\_\_  
 Approved By \_\_\_\_\_

LAB USE ONLY	DATE	TIME	No. of Containers		SAMPLE ID	PVOCs	DRO	REMARKS
			COMP	GRAB				
21074872	8-16-96				MW-3, 12.5'-14.5'	/	/	PVOC = 26.9
21074873	8-16-96				MW-4, 7.5'-9.5'	/	/	PVOC = 28.0
21074874	8-16-96				MW-5, 2.5'-4.5'	/	/	PVOC = 28.7 DRO = 27.6
21074875	8-16-96				B-1, 2.5'-4.5'	/	/	PVOC = 26.0 DRO = 25.3
21074876	8-16-96				B-1, 7.5'-9.5'	/	/	PVOC = 25.5 DRO = 26.0
21074877	8-16-96				B-2, 2.5'-4.5'	/	/	PVOC = 27.5 DRO = 26.3
21074878	8-16-96				B-2, 5'-7'	/	/	PVOC = 26.7 DRO = 28.6

## CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED FOR LABORATORY BY: (Signature)

Del'v: Hand  Comm.

Ship. Cont. OK?  Y N N/A

Samples leaking?  Y N N/A

Seals OK?  Y N N/A

Rec'd on ice?  Y N N/A \_\_\_ °C

Comments: \_\_\_\_\_

8-20-96 9:00

# ENVIROSCAN

September 16, 1996

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

ENVIRONMENTAL AND  
ANALYTICAL SERVICES

SEP 18 1996

Attn: John Guhl

Re: FRASE9401.00

Please find enclosed the analytical results for the samples received August 31, 1996.

All analyses were completed in accordance with appropriate EPA and Wisconsin methodologies. Methods and dates of analysis are included in the report tables.

The chain of custody document is enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.

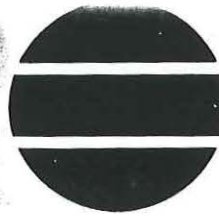
Sincerely,

US Filter/Enviroscan



Jay C. Hunger  
Analytical Chemist

# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	Units	Reporting Limit	MW-1 08/29/96	Qualifiers	Date Analyzed
<b>EPA 213.2</b>					
Cadmium (GFAAS)	µg/l	0.21	1.88		09/07/96
<b>EPA 239.2</b>					
Lead (GFAAS)	µg/l	1.0	X		09/04/96
<b>EPA 8021</b>					
Benzene	µg/l	0.5	X		09/06/96
Bromobenzene	µg/l	2.0	X		09/06/96
Bromodichloromethane	µg/l	1.0	X		09/06/96
n-Butylbenzene	µg/l	1.0	X		09/06/96
sec-Butylbenzene	µg/l	1.0	X		09/06/96
tert-Butylbenzene	µg/l	1.0	X		09/06/96
Carbon Tetrachloride	µg/l	1.0	X		09/06/96
Chlorobenzene	µg/l	1.0	X		09/06/96
Chlorodibromomethane	µg/l	1.0	X		09/06/96
Chloroethane	µg/l	1.0	X	CSL	09/06/96
Chloroform	µg/l	1.0	X		09/06/96
Chloromethane	µg/l	2.0	X	CSL	09/06/96
o-Chlorotoluene	µg/l	1.0	X		09/06/96
p-Chlorotoluene	µg/l	2.0	X		09/06/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		09/06/96
1,2-Dibromoethane	µg/l	1.0	X		09/06/96
1,2-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,3-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,4-Dichlorobenzene	µg/l	1.0	X		09/06/96
Dichlorodifluoromethane	µg/l	2.0	X		09/06/96
1,1-Dichloroethane	µg/l	1.0	X		09/06/96
1,2-Dichloroethane	µg/l	1.0	X		09/06/96
1,1-Dichloroethylene	µg/l	1.0	X		09/06/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		09/06/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		09/06/96
1,2-Dichloropropane	µg/l	1.0	X		09/06/96
1,3-Dichloropropane	µg/l	1.0	X		09/06/96
2,2-Dichloropropane	µg/l	2.0	X		09/06/96
Ethylbenzene	µg/l	1.0	X	SPH	09/06/96
Hexachlorobutadiene	µg/l	1.0	X		09/06/96
Isopropylbenzene	µg/l	1.0	X		09/06/96
Isopropyl Ether	µg/l	1.0	X		09/06/96
p-Isopropyltoluene	µg/l	1.0	X		09/06/96
Methyl tert Butyl Ether	µg/l	1.0	X		09/06/96
Methylene Chloride	µg/l	2.0	X	CSL	09/06/96
Naphthalene	µg/l	1.0	X		09/06/96

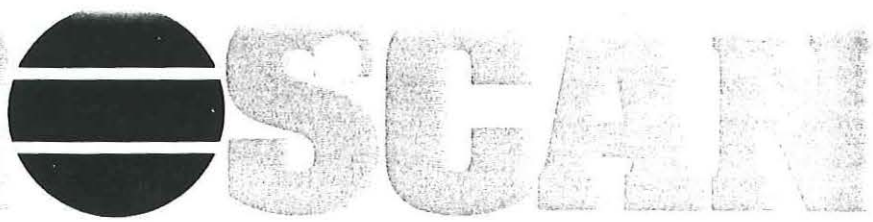
Analytical No.:

75796

X = Analyzed but not detected.



# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/31/96  
 REPORT DATE: 09/16/96  
 PREPARED BY: JCH *et al*  
 REVIEWED BY: *JA*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-1</u> <u>08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<b>EPA 8021</b>					
n-Propylbenzene	µg/l	1.0	X		09/06/96
Tetrachloroethylene	µg/l	1.0	X		09/06/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		09/06/96
Toluene	µg/l	1.0	X		09/06/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,1,1-Trichloroethane	µg/l	1.0	X		09/06/96
1,1,2-Trichloroethane	µg/l	1.0	X		09/06/96
Trichloroethylene	µg/l	0.5	X		09/06/96
Trichlorofluoromethane	µg/l	1.0	X	CSL	09/06/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
1,3,5-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
Vinyl Chloride	µg/l	0.2	X		09/06/96
m- & p-Xylene	µg/l	1.0	1.2		09/06/96
o-Xylene	µg/l	1.0	X		09/06/96
<b>EPA 8310</b>					
Acenaphthene	µg/l	0.2	X		09/12/96
Acenaphthylene	µg/l	0.04	X		09/12/96
Anthracene	µg/l	0.32	X		09/12/96
Benzo (a) Anthracene	µg/l	0.14	X		09/12/96
Benzo (a) Pyrene	µg/l	0.14	X		09/12/96
Benzo (b) Fluoranthene	µg/l	0.08	X		09/12/96
Benzo (k) Fluoranthene	µg/l	0.06	X		09/12/96
Benzo (ghi) Perylene	µg/l	0.16	X		09/12/96
Chrysene	µg/l	0.06	X		09/12/96
Dibenzo (a, h) Anthracene	µg/l	0.22	X		09/12/96
Fluoranthene	µg/l	0.22	X		09/12/96
Fluorene	µg/l	0.12	X		09/12/96
Indeno (1,2,3-cd) Pyrene	µg/l	0.24	X		09/12/96
1-Methyl Naphthalene	µg/l	0.04	X		09/12/96
2-Methyl Naphthalene	µg/l	0.12	X		09/12/96
Naphthalene	µg/l	0.06	X		09/12/96
Phenanthrene	µg/l	0.24	0.251		09/12/96
Pyrene	µg/l	0.18	0.207		09/12/96

Analytical No.: 75796

X = Analyzed but not detected.

# ANALYTICAL REPORT ENVIROSCAN

Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls , WI 54729

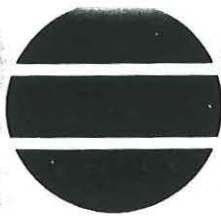
CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/31/96  
 REPORT DATE: 09/16/96  
 PREPARED BY: JCH *JCH*  
 REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-2</u> <u>08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 218.2</u> Chromium (GFAAS)	µg/l	1.0	X		09/10/96
<u>EPA 239.2</u> Lead (GFAAS)	µg/l	1.0	48.8		09/04/96
Analytical No.:			75797		

X = Analyzed but not detected.

# ANALYTICAL REPORT



# SCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-3</u> 08/29/96	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 8021</u>					
Benzene	µg/l	0.5	X		09/04/96
Ethylbenzene	µg/l	1.0	X		09/04/96
Methyl tert Butyl Ether	µg/l	1.0	X		09/04/96
Toluene	µg/l	1.0	X		09/04/96
1,2,4-Trimethylbenzene	µg/l	1.0	X		09/04/96
1,3,5-Trimethylbenzene	µg/l	1.0	X		09/04/96
m- & p-Xylene	µg/l	1.0	X		09/04/96
o-Xylene	µg/l	1.0	X		09/04/96

Analytical No.: 75798

X = Analyzed but not detected.

# ANALYTICAL REPORT



# SCANN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH *JCH*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-4</u> <u>08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 8021</u>					
Benzene	µg/l	0.5	X		09/04/96
Ethylbenzene	µg/l	1.0	X		09/04/96
Methyl tert Butyl Ether	µg/l	1.0	X		09/04/96
Toluene	µg/l	1.0	X		09/04/96
1,2,4-Trimethylbenzene	µg/l	1.0	X		09/04/96
1,3,5-Trimethylbenzene	µg/l	1.0	X		09/04/96
m- & p-Xylene	µg/l	1.0	X		09/04/96
o-Xylene	µg/l	1.0	X		09/04/96

Analytical No.: 75799

X = Analyzed but not detected.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/31/96  
 REPORT DATE: 09/16/96  
 PREPARED BY: JCH *JCH*  
 REVIEWED BY: *[Signature]*

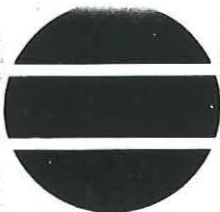
Attn: John Guhl

	Units	Reporting Limit	DUP-1 08/29/96	Qualifiers	Date Analyzed
<b>EPA 8021</b>					
Benzene	µg/l	0.5	X		09/06/96
Bromobenzene	µg/l	2.0	X		09/06/96
Bromodichloromethane	µg/l	1.0	X		09/06/96
n-Butylbenzene	µg/l	1.0	X		09/06/96
sec-Butylbenzene	µg/l	1.0	X		09/06/96
tert-Butylbenzene	µg/l	1.0	X		09/06/96
Carbon Tetrachloride	µg/l	1.0	X		09/06/96
Chlorobenzene	µg/l	1.0	X		09/06/96
Chlorodibromomethane	µg/l	1.0	X		09/06/96
Chloroethane	µg/l	1.0	X	CSL	09/06/96
Chloroform	µg/l	1.0	X		09/06/96
Chloromethane	µg/l	2.0	X	CSL	09/06/96
o-Chlorotoluene	µg/l	1.0	X		09/06/96
p-Chlorotoluene	µg/l	2.0	X		09/06/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		09/06/96
1,2-Dibromoethane	µg/l	1.0	X		09/06/96
1,2-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,3-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,4-Dichlorobenzene	µg/l	1.0	X		09/06/96
Dichlorodifluoromethane	µg/l	2.0	X		09/06/96
1,1-Dichloroethane	µg/l	1.0	X		09/06/96
1,2-Dichloroethane	µg/l	1.0	X		09/06/96
1,1-Dichloroethylene	µg/l	1.0	X		09/06/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		09/06/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		09/06/96
1,2-Dichloropropane	µg/l	1.0	X		09/06/96
1,3-Dichloropropane	µg/l	1.0	X		09/06/96
2,2-Dichloropropane	µg/l	2.0	X		09/06/96
Ethylbenzene	µg/l	1.0	X	SPH	09/06/96
Hexachlorobutadiene	µg/l	1.0	X		09/06/96
Isopropylbenzene	µg/l	1.0	X		09/06/96
Isopropyl Ether	µg/l	1.0	X		09/06/96
p-Isopropyltoluene	µg/l	1.0	X		09/06/96
Methyl tert Butyl Ether	µg/l	1.0	X		09/06/96
Methylene Chloride	µg/l	2.0	X	CSL	09/06/96
Naphthalene	µg/l	1.0	X		09/06/96
n-Propylbenzene	µg/l	1.0	X		09/06/96
Tetrachloroethylene	µg/l	1.0	X		09/06/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		09/06/96
Toluene	µg/l	1.0	X		09/06/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,1,1-Trichloroethane	µg/l	1.0	X		09/06/96
1,1,2-Trichloroethane	µg/l	1.0	X		09/06/96
Trichloroethylene	µg/l	0.5	X		09/06/96

Analytical No.: 75800

X = Analyzed but not detected.

# ANALYTICAL REPORT



# FRASESCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH *JCH*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>DUP-1 08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 8021</u>					
Trichlorofluoromethane	µg/l	1.0	X	CSL	09/06/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
1,3,5-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
Vinyl Chloride	µg/l	0.2	X		09/06/96
m- & p-Xylene	µg/l	1.0	1.6		09/06/96
o-Xylene	µg/l	1.0	X		09/06/96

Analytical No.: 75800

X = Analyzed but not detected.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	Units	Reporting Limit	TRIP BLANK 08/29/96	Qualifiers	Date Analyzed
<b>EPA 8021</b>					
Benzene	µg/l	0.5	X		09/06/96
Bromobenzene	µg/l	2.0	X		09/06/96
Bromodichloromethane	µg/l	1.0	X		09/06/96
n-Butylbenzene	µg/l	1.0	X		09/06/96
sec-Butylbenzene	µg/l	1.0	X		09/06/96
tert-Butylbenzene	µg/l	1.0	X		09/06/96
Carbon Tetrachloride	µg/l	1.0	X		09/06/96
Chlorobenzene	µg/l	1.0	X		09/06/96
Chlorodibromomethane	µg/l	1.0	X		09/06/96
Chloroethane	µg/l	1.0	X	CSL	09/06/96
Chloroform	µg/l	1.0	X		09/06/96
Chloromethane	µg/l	2.0	X	CSL	09/06/96
o-Chlorotoluene	µg/l	1.0	X		09/06/96
p-Chlorotoluene	µg/l	2.0	X		09/06/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		09/06/96
1,2-Dibromoethane	µg/l	1.0	X		09/06/96
1,2-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,3-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,4-Dichlorobenzene	µg/l	1.0	X		09/06/96
Dichlorodifluoromethane	µg/l	2.0	X		09/06/96
1,1-Dichloroethane	µg/l	1.0	X		09/06/96
1,2-Dichloroethane	µg/l	1.0	X		09/06/96
1,1-Dichloroethylene	µg/l	1.0	X		09/06/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		09/06/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		09/06/96
1,2-Dichloropropane	µg/l	1.0	X		09/06/96
1,3-Dichloropropane	µg/l	1.0	X		09/06/96
2,2-Dichloropropane	µg/l	2.0	X		09/06/96
Ethylbenzene	µg/l	1.0	X	SPH	09/06/96
Hexachlorobutadiene	µg/l	1.0	X		09/06/96
Isopropylbenzene	µg/l	1.0	X		09/06/96
Isopropyl Ether	µg/l	1.0	X		09/06/96
p-Isopropyltoluene	µg/l	1.0	X		09/06/96
Methyl tert Butyl Ether	µg/l	1.0	X		09/06/96
Methylene Chloride	µg/l	2.0	X	CSL	09/06/96
Naphthalene	µg/l	1.0	X		09/06/96
n-Propylbenzene	µg/l	1.0	X		09/06/96
Tetrachloroethylene	µg/l	1.0	X		09/06/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		09/06/96
Toluene	µg/l	1.0	X		09/06/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,1,1-Trichloroethane	µg/l	1.0	X		09/06/96
1,1,2-Trichloroethane	µg/l	1.0	X		09/06/96
Trichloroethylene	µg/l	0.5	X		09/06/96

Analytical No.:

75801

X = Analyzed but not detected.

# ENVIROSCAN

## ANALYTICAL REPORT

Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/31/96  
 REPORT DATE: 09/16/96  
 PREPARED BY: JCH  
 REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>TRIP BLANK 08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<b><u>EPA 8021</u></b>					
Trichlorofluoromethane	µg/l	1.0	X	CSL	09/06/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
1,3,5-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
Vinyl Chloride	µg/l	0.2	X		09/06/96
m- & p-Xylene	µg/l	1.0	X		09/06/96
o-Xylene	µg/l	1.0	X		09/06/96

Analytical No.: 75801

X = Analyzed but not detected.



# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 08/31/96  
 REPORT DATE: 09/16/96  
 PREPARED BY: JCH *JCH*  
 REVIEWED BY: *[Signature]*

Attn: John Guhl

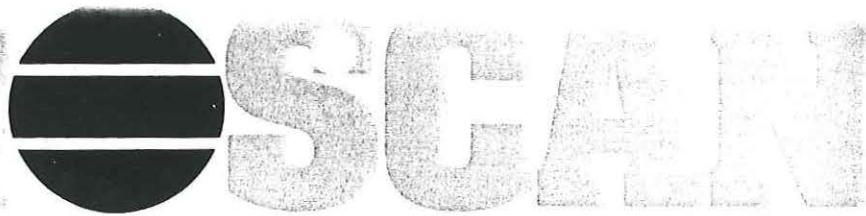
	Units	Reporting Limit	MW-5 08/29/96	Qualifiers	Date Analyzed
<u>EPA 213.2</u>					
Cadmium (GFAAS)	µg/l	0.21	2.84		09/07/96
<u>EPA 218.2</u>					
Chromium (GFAAS)	µg/l	1.0	X		09/10/96
<u>EPA 239.2</u>					
Lead (GFAAS)	µg/l	1.0	X		09/04/96
<u>EPA 8021</u>					
Benzene	µg/l	0.5	X		09/06/96
Bromobenzene	µg/l	2.0	X		09/06/96
Bromodichloromethane	µg/l	1.0	X		09/06/96
n-Butylbenzene	µg/l	1.0	X		09/06/96
sec-Butylbenzene	µg/l	1.0	X		09/06/96
tert-Butylbenzene	µg/l	1.0	X		09/06/96
Carbon Tetrachloride	µg/l	1.0	X		09/06/96
Chlorobenzene	µg/l	1.0	X		09/06/96
Chlorodibromomethane	µg/l	1.0	X		09/06/96
Chloroethane	µg/l	1.0	X	CSL	09/06/96
Chloroform	µg/l	1.0	X		09/06/96
Chloromethane	µg/l	2.0	X	CSL	09/06/96
o-Chlorotoluene	µg/l	1.0	X		09/06/96
p-Chlorotoluene	µg/l	2.0	X		09/06/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		09/06/96
1,2-Dibromoethane	µg/l	1.0	X		09/06/96
1,2-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,3-Dichlorobenzene	µg/l	1.0	X		09/06/96
1,4-Dichlorobenzene	µg/l	1.0	X		09/06/96
Dichlorodifluoromethane	µg/l	2.0	X		09/06/96
1,1-Dichloroethane	µg/l	1.0	X		09/06/96
1,2-Dichloroethane	µg/l	1.0	X		09/06/96
1,1-Dichloroethylene	µg/l	1.0	X		09/06/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		09/06/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		09/06/96
1,2-Dichloropropane	µg/l	1.0	X		09/06/96
1,3-Dichloropropane	µg/l	1.0	X		09/06/96
2,2-Dichloropropane	µg/l	2.0	X		09/06/96
Ethylbenzene	µg/l	1.0	X	SPH	09/06/96
Hexachlorobutadiene	µg/l	1.0	X		09/06/96
Isopropylbenzene	µg/l	1.0	X		09/06/96
Isopropyl Ether	µg/l	1.0	X		09/06/96
p-Isopropyltoluene	µg/l	1.0	X		09/06/96

Analytical No.:

75802

X = Analyzed but not detected.

# ANALYTICAL REPORT



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH *JCH*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	Units	Reporting Limit	MW-5 08/29/96	Qualifiers	Date Analyzed
<b>EPA 8021</b>					
Methyl tert Butyl Ether	µg/l	1.0	X		09/06/96
Methylene Chloride	µg/l	2.0	X	CSL	09/06/96
Naphthalene	µg/l	1.0	X		09/06/96
n-Propylbenzene	µg/l	1.0	X		09/06/96
Tetrachloroethylene	µg/l	1.0	X		09/06/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		09/06/96
Toluene	µg/l	1.0	X		09/06/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		09/06/96
1,1,1-Trichloroethane	µg/l	1.0	X		09/06/96
1,1,2-Trichloroethane	µg/l	1.0	X		09/06/96
Trichloroethylene	µg/l	0.5	X		09/06/96
Trichlorofluoromethane	µg/l	1.0	X	CSL	09/06/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
1,3,5-Trimethylbenzene	µg/l	1.0	X	SPH	09/06/96
Vinyl Chloride	µg/l	0.2	X		09/06/96
m- & p-Xylene	µg/l	1.0	X		09/06/96
o-Xylene	µg/l	1.0	X		09/06/96
<b>EPA 8310</b>					
Acenaphthene	µg/l	0.1	X		09/12/96
Acenaphthylene	µg/l	0.02	X		09/12/96
Anthracene	µg/l	0.16	X		09/12/96
Benzo (a) Anthracene	µg/l	0.07	0.97		09/12/96
Benzo (a) Pyrene	µg/l	0.07	1.42		09/12/96
Benzo (b) Fluoranthene	µg/l	0.04	0.835		09/12/96
Benzo (k) Fluoranthene	µg/l	0.03	0.509		09/12/96
Benzo (ghi) Perylene	µg/l	0.08	0.541		09/12/96
Chrysene	µg/l	0.03	X		09/12/96
Dibenzo (a, h) Anthracene	µg/l	0.11	X		09/12/96
Fluoranthene	µg/l	0.11	2.97		09/12/96
Fluorene	µg/l	0.06	X		09/12/96
Indeno (1, 2, 3-cd) Pyrene	µg/l	0.12	0.840		09/12/96
1-Methyl Naphthalene	µg/l	0.02	1.01		09/12/96
2-Methyl Naphthalene	µg/l	0.06	X		09/12/96
Naphthalene	µg/l	0.03	0.338		09/12/96
Phenanthrene	µg/l	0.12	1.48		09/12/96
Pyrene	µg/l	0.09	4.25		09/12/96

Analytical No.:

75802

X = Analyzed but not detected.

# ANALYTICAL REPORT

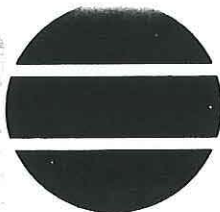
Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>LYS-1 08/29/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 239.2</u> Lead (GFAAS)	µg/l	1.0	6.94		09/04/96
Analytical No.:			75803		

# ANALYTICAL REPORT



# ENVIROSCAN

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 08/31/96  
REPORT DATE: 09/16/96  
PREPARED BY: JCH *JCH*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

## Qualifier Descriptions

- CSL            Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects were verified by comparison with a low standard.
  
- SPH            The matrix spike included with this analytical batch had a high recovery. Since that sample matrix appears similar to your sample, your result may also be high.

# REQUEST FOR SERVICES



# SCAN

303 W. MILITARY RD. ROTHSCHILD, WI 54474 1-800-338-SCAN

**REPORT TO:**

Name: John Guhl  
 Company: SEH Inc.  
 Address: 421 Frenette Dr.  
Chippewa Falls, WI 54729  
 Phone: ( 715 ) 720-6200  
 P.O. # \_\_\_\_\_  
 Project # FRASE9401.00 Quote # 3741-5

**BILL TO: (if different from Report To info):**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

**ANALYTICAL REQUESTS**

(use separate sheet if necessary)

- Sample Type**  
 (Check all that apply)
- Groundwater
  - Wastewater
  - Soil/Solid
  - Drinking Water
  - Oil
  - Vapor
  - Other
- Turnaround Time**
- Normal
  - Rush (Pre-approved by Lab)
- Date Needed \_\_\_\_\_  
 Approved By \_\_\_\_\_

PAHs LPNA A  
 VOCs L80x1 Vocri  
 PVOCS F-Pb F-Cd Vocri  
 Lead Cadmium F-Cr  
 Lead, Chromium

LAB USE ONLY	DATE	TIME	No. of Containers		SAMPLE ID	ANALYTICAL REQUESTS						REMARKS		
			COMP	GRAB		PAHs	VOCs	PVOCS	F-Pb	F-Cd	Lead		Cadmium	F-Cr
10075796	8/29/96	9:40 AM	4		MW-1	X	X		X					Page 1 of 2
10075797		12:45	1		MW-2								X	
10075798		11:30	2		MW-3			X						
10075799		11:35	2		MW-4			X						
10075800		1:00	2		Dup-1		X							
10075801			2		Trip Blank		X							
			1		Temp Blank									

Short Fraserish

## CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)  
John Ban

RELINQUISHED BY: (Signature) John Ban DATE/TIME 8/30/96 9:30 AM RECEIVED BY: (Signature) \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY: (Signature) \_\_\_\_\_

RELINQUISHED BY: (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED FOR LABORATORY BY: (Signature) \_\_\_\_\_ DATE/TIME 8/31/96 10:15

Del'v: Hand Comm.  
 Ship. Cont. OK?  Y  N N/A  
 Samples leaking?  Y  N N/A  
 Seals OK?  Y  N N/A  
 Rec'd on ice?  Y  N N/A °C

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**U.S. FILTER/ENVIROSCAN** TELEPHONE 715-359-7226  
301 WEST MILITARY ROAD FACSIMILE 715-355-3221  
ROTHSCHILD, WI 54474

December 12, 1996

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

Attn: John Guhl

Re: FRASE9401.00

DEC 16

Please find enclosed the analytical results for the samples received November 23, 1996.

All analyses were completed in accordance with appropriate EPA methodologies. Methods and dates of analysis are included in the report tables.

The chain of custody document is also enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.

Sincerely,

US Filter/Enviroscan



Gary L. Scharrer  
Instrumentation Chemist



UNITED STATES FILTER CORPORATION

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *msl*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-5 11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 213.2</u>					
Cadmium (GFAAS)	µg/l	0.21	X		12/02/96
<u>EPA 218.2</u>					
Chromium (GFAAS)	µg/l	1.0	X	SPL	11/26/96
<u>EPA 239.2</u>					
Lead (GFAAS)	µg/l	1.0	X		12/03/96
<u>EPA 8021</u>					
Benzene	µg/l	0.5	X		12/04/96
Bromobenzene	µg/l	2.0	X		12/04/96
Bromodichloromethane	µg/l	1.0	X		12/04/96
n-Butylbenzene	µg/l	1.0	X		12/04/96
sec-Butylbenzene	µg/l	1.0	X		12/04/96
tert-Butylbenzene	µg/l	1.0	X		12/04/96
Carbon Tetrachloride	µg/l	1.0	X		12/04/96
Chlorobenzene	µg/l	1.0	X		12/04/96
Chlorodibromomethane	µg/l	1.0	X		12/04/96
Chloroethane	µg/l	1.0	X		12/04/96
Chloroform	µg/l	1.0	X		12/04/96
Chloromethane	µg/l	2.0	X		12/04/96
o-Chlorotoluene	µg/l	1.0	X	SPH	12/04/96
p-Chlorotoluene	µg/l	2.0	X		12/04/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		12/04/96
1,2-Dibromoethane	µg/l	1.0	X		12/04/96
1,2-Dichlorobenzene	µg/l	1.0	X		12/04/96
1,3-Dichlorobenzene	µg/l	1.0	X		12/04/96
1,4-Dichlorobenzene	µg/l	1.0	X		12/04/96
Dichlorodifluoromethane	µg/l	2.0	X	CSL	12/04/96
1,1-Dichloroethane	µg/l	1.0	X		12/04/96
1,2-Dichloroethane	µg/l	1.0	X		12/04/96
1,1-Dichloroethylene	µg/l	1.0	X		12/04/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		12/04/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		12/04/96
1,2-Dichloropropane	µg/l	1.0	X		12/04/96
1,3-Dichloropropane	µg/l	1.0	X		12/04/96
2,2-Dichloropropane	µg/l	2.0	X		12/04/96
Ethylbenzene	µg/l	1.0	X		12/04/96
Hexachlorobutadiene	µg/l	1.0	X		12/04/96
Isopropylbenzene	µg/l	1.0	X		12/04/96
Isopropyl Ether	µg/l	1.0	X		12/04/96
p-Isopropyltoluene	µg/l	1.0	X		12/04/96

Analytical No.:

83151

X = Analyzed but not detected.



Short Elliott Hendrickson, Inc.  
 421 Frenette Drive  
 Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
 SAMPLED BY: Client  
 DATE REC'D: 11/23/96  
 REPORT DATE: 12/12/96  
 PREPARED BY: GLS *MS*  
 REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-5</u> <u>11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<b><u>EPA 8021</u></b>					
Methyl tert Butyl Ether	µg/l	1.0	X		12/04/96
Methylene Chloride	µg/l	2.0	X		12/04/96
Naphthalene	µg/l	1.0	X		12/04/96
n-Propylbenzene	µg/l	1.0	X		12/04/96
Tetrachloroethylene	µg/l	1.0	X		12/04/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		12/04/96
Toluene	µg/l	1.0	X		12/04/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		12/04/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		12/04/96
1,1,1-Trichloroethane	µg/l	1.0	X		12/04/96
1,1,2-Trichloroethane	µg/l	1.0	X		12/04/96
Trichloroethylene	µg/l	0.5	X		12/04/96
Trichlorofluoromethane	µg/l	1.0	X		12/04/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	CSL	12/04/96
1,3,5-Trimethylbenzene	µg/l	1.0	X		12/04/96
Vinyl Chloride	µg/l	0.2	X		12/04/96
m- & p-Xylene	µg/l	1.0	X		12/04/96
o-Xylene & Styrene	µg/l	1.0	X		12/04/96
<b><u>EPA 8310</u></b>					
Acenaphthene	µg/l	0.2	X		12/05/96
Acenaphthylene	µg/l	0.04	X		12/05/96
Anthracene	µg/l	0.32	X		12/05/96
Benzo (a) Anthracene	µg/l	0.14	0.718	S1L S2L DUP	12/05/96
Benzo (a) Pyrene	µg/l	0.14	0.785	DUP	12/05/96
Benzo (b) Fluoranthene	µg/l	0.08	0.684	S1L S2L	12/05/96
Benzo (k) Fluoranthene	µg/l	0.06	0.390	S1L S2L	12/05/96
Benzo (ghi) Perylene	µg/l	0.16	0.415	S1L S2L DUP	12/05/96
Chrysene	µg/l	0.06	X		12/05/96
Dibenzo (a, h) Anthracene	µg/l	0.22	X	S1L S2L	12/05/96
Fluoranthene	µg/l	0.22	X	S2L DUP	12/05/96
Fluorene	µg/l	0.12	X		12/05/96
Indeno (1, 2, 3-cd) Pyrene	µg/l	0.24	0.565	S1L S2L DUP	12/05/96
1-Methyl Naphthalene	µg/l	0.04	X		12/05/96
2-Methyl Naphthalene	µg/l	0.12	X		12/05/96
Naphthalene	µg/l	0.06	X		12/05/96
Phenanthrene	µg/l	0.24	1.03		12/05/96
Pyrene	µg/l	0.18	X		12/05/96
Water Org Ext - PNAs		-	COMP		11/27/96

Analytical No.:

83151

X = Analyzed but not detected.



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *msl*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	Units	Reporting Limit	TRIP BLANK-USF 11/21/96	Qualifiers	Date Analyzed
<u>EPA 8021</u>					
Benzene	µg/l	0.5	X		12/04/96
Bromobenzene	µg/l	2.0	X		12/04/96
Bromodichloromethane	µg/l	1.0	X		12/04/96
n-Butylbenzene	µg/l	1.0	X		12/04/96
sec-Butylbenzene	µg/l	1.0	X		12/04/96
tert-Butylbenzene	µg/l	1.0	X		12/04/96
Carbon Tetrachloride	µg/l	1.0	X		12/04/96
Chlorobenzene	µg/l	1.0	X		12/04/96
Chlorodibromomethane	µg/l	1.0	X		12/04/96
Chloroethane	µg/l	1.0	X		12/04/96
Chloroform	µg/l	1.0	X		12/04/96
Chloromethane	µg/l	2.0	X		12/04/96
o-Chlorotoluene	µg/l	1.0	X	SPH	12/04/96
p-Chlorotoluene	µg/l	2.0	X		12/04/96
1,2-Dibromo-3-chloropropane	µg/l	1.0	X		12/04/96
1,2-Dibromoethane	µg/l	1.0	X		12/04/96
1,2-Dichlorobenzene	µg/l	1.0	X		12/04/96
1,3-Dichlorobenzene	µg/l	1.0	X		12/04/96
1,4-Dichlorobenzene	µg/l	1.0	X		12/04/96
Dichlorodifluoromethane	µg/l	2.0	X	CSL	12/04/96
1,1-Dichloroethane	µg/l	1.0	X		12/04/96
1,2-Dichloroethane	µg/l	1.0	X		12/04/96
1,1-Dichloroethylene	µg/l	1.0	X		12/04/96
cis-1,2-Dichloroethylene	µg/l	2.0	X		12/04/96
trans-1,2-Dichloroethylene	µg/l	1.0	X		12/04/96
1,2-Dichloropropane	µg/l	1.0	X		12/04/96
1,3-Dichloropropane	µg/l	1.0	X		12/04/96
2,2-Dichloropropane	µg/l	2.0	X		12/04/96
Ethylbenzene	µg/l	1.0	X		12/04/96
Hexachlorobutadiene	µg/l	1.0	X		12/04/96
Isopropylbenzene	µg/l	1.0	X		12/04/96
Isopropyl Ether	µg/l	1.0	X		12/04/96
p-Isopropyltoluene	µg/l	1.0	X		12/04/96
Methyl tert Butyl Ether	µg/l	1.0	X		12/04/96
Methylene Chloride	µg/l	2.0	X		12/04/96
Naphthalene	µg/l	1.0	X		12/04/96
n-Propylbenzene	µg/l	1.0	X		12/04/96
Tetrachloroethylene	µg/l	1.0	X		12/04/96
1,1,2,2-Tetrachloroethane	µg/l	1.0	X		12/04/96
Toluene	µg/l	1.0	X		12/04/96
1,2,3-Trichlorobenzene	µg/l	1.0	X		12/04/96
1,2,4-Trichlorobenzene	µg/l	1.0	X		12/04/96
1,1,1-Trichloroethane	µg/l	1.0	X		12/04/96
1,1,2-Trichloroethane	µg/l	1.0	X		12/04/96
Trichloroethylene	µg/l	0.5	X		12/04/96

Analytical No.:

83152

X = Analyzed but not detected.



UNITED STATES FILTER CORPORATION

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *msl*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>TRIP BLANK-USF 11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 8021</u>					
Trichlorofluoromethane	µg/l	1.0	X		12/04/96
1,2,4-Trimethylbenzene	µg/l	1.0	X	CSL	12/04/96
1,3,5-Trimethylbenzene	µg/l	1.0	X		12/04/96
Vinyl Chloride	µg/l	0.2	X		12/04/96
m- & p-Xylene	µg/l	1.0	X		12/04/96
o-Xylene & Styrene	µg/l	1.0	X		12/04/96

Analytical No.: 83152

X = Analyzed but not detected.



Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *GLS*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>LYS-1 11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 239.2</u> Lead (GFAAS)	µg/l	1.0	X		12/03/96
Analytical No.:			83153		

X = Analyzed but not detected.

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *Had*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-1 11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<b>EPA 213.2</b>					
Cadmium (GFAAS)	µg/l	0.21	X		12/02/96
<b>EPA 239.2</b>					
Lead (GFAAS)	µg/l	1.0	X		12/03/96
<b>EPA 8021</b>					
Benzene	µg/l	0.5	X		11/27/96
Ethylbenzene	µg/l	1.0	X	SPH	11/27/96
Methyl tert Butyl Ether	µg/l	1.0	X		11/27/96
Toluene	µg/l	1.0	X		11/27/96
1,2,4-Trimethylbenzene	µg/l	1.0	X		11/27/96
1,3,5-Trimethylbenzene	µg/l	1.0	X		11/27/96
m- & p-Xylene	µg/l	1.0	1.12		11/27/96
o-Xylene & Styrene	µg/l	1.0	X		11/27/96
<b>EPA 8310</b>					
Acenaphthene	µg/l	0.1	X		12/06/96
Acenaphthylene	µg/l	0.02	X		12/06/96
Anthracene	µg/l	0.16	X		12/06/96
Benzo (a) Anthracene	µg/l	0.07	X	SPL DUP	12/06/96
Benzo (a) Pyrene	µg/l	0.07	X	DUP	12/06/96
Benzo (b) Fluoranthene	µg/l	0.04	0.085	SPL	12/06/96
Benzo (k) Fluoranthene	µg/l	0.03	X	SPL	12/06/96
Benzo (ghi) Perylene	µg/l	0.08	X	SPL DUP	12/06/96
Chrysene	µg/l	0.03	X		12/06/96
Dibenzo (a, h) Anthracene	µg/l	0.11	X	SPL	12/06/96
Fluoranthene	µg/l	0.11	0.350	SPL DUP	12/06/96
Fluorene	µg/l	0.06	X		12/06/96
Indeno (1,2,3-cd) Pyrene	µg/l	0.12	X	SPL DUP	12/06/96
1-Methyl Naphthalene	µg/l	0.02	X		12/06/96
2-Methyl Naphthalene	µg/l	0.06	X		12/06/96
Naphthalene	µg/l	0.03	X		12/06/96
Phenanthrene	µg/l	0.12	0.176		12/06/96
Pyrene	µg/l	0.09	0.195		12/06/96
Water Org Ext - PNAS		-	COMP		11/27/96

Analytical No.: 83154

X = Analyzed but not detected.

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *Handwritten initials*  
REVIEWED BY: *Handwritten signature*

Attn: John Guhl

	<u>Units</u>	<u>Reporting Limit</u>	<u>MW-2 11/21/96</u>	<u>Qualifiers</u>	<u>Date Analyzed</u>
<u>EPA 218.2</u> Chromium (GFAAS)	µg/l	1.0	X	S1L S2L	12/11/96
<u>EPA 239.2</u> Lead (GFAAS)	µg/l	1.0	34.2		12/03/96
Analytical No.:			83155		

X = Analyzed but not detected.

Short Elliott Hendrickson, Inc.  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401.0  
SAMPLED BY: Client  
DATE REC'D: 11/23/96  
REPORT DATE: 12/12/96  
PREPARED BY: GLS *mm*  
REVIEWED BY: *[Signature]*

Attn: John Guhl

## Qualifier Descriptions

SPL	The matrix spike included with this analytical batch had a low recovery. Since that sample matrix appears similar to your sample, your result may also be low.
SPH	The matrix spike included with this analytical batch had a high recovery. Since that sample matrix appears similar to your sample, your result may also be high.
CSL	Check standard for this analyte exhibited a low bias. Sample results may also be biased low. Non-detects were verified by comparison with a low standard.
S1L	Matrix spike recovery of this sample was low. Result for sample may also be biased low.
S2L	Matrix spike duplicate recovery of this sample was low. Result for sample may also be biased low.
DUP	Result of duplicate analysis in this quality assurance batch exceeds the limits for precision. Sample results may also show a degree of variability.

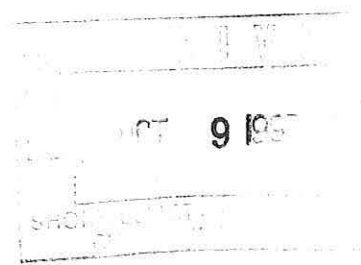
# U.S. FILTER

U.S. FILTER/ENVIROSCAN  
301 WEST MILITARY ROAD  
ROTHSCHILD, WI 54474

TELEPHONE 715-359-7226  
FACSIMILE 715-355-3221

October 8, 1997

Short Elliott Hendrickson Inc  
421 Frenette Drive  
Chippewa Falls , WI 54729



Attn: John Guhl

Re: Analytical Results  
FRASE9401

Please find enclosed the analytical results for the samples received October 3, 1997.

The chain of custody document is enclosed.

If you have any questions about the results, please call. Thank you for using US Filter/Enviroscan for your analytical needs.


Sincerely,

US Filter/Enviroscan

Bruce M. Schertz  
Inorganic Laboratory Supervisor



Short Elliott Hendrickson Inc  
421 Frenette Drive  
Chippewa Falls , WI 54729

CUST NUMBER: FRASE9401  
SAMPLED BY: Client  
DATE REC'D: 10/03/97  
REPORT DATE: 10/08/97  
PREPARED BY: BMS  
REVIEWED BY: 

Attn: John Guhl

<u>Sample ID</u>	<u>Sol. Lead (GFAAS)</u>		<u>Analytical No.</u>
	<u>EPA 239.2</u>	<u>Qualifiers</u>	
MW-2	X		17230
HP-1	X		17231
HP-2	1.06		17232
HP-3	X		17233
HP-4	X		17234
HP-5	X		17235
HP-6	X	S1L S2L DUP	17236
Reporting Limit	1.0		
Units	$\mu\text{g}/\text{l}$		
Date Analyzed:	10/07/97		

X = Analyzed but not detected.

#### Qualifier Descriptions

S1L	Sample matrix spike recovery was low. Sample result may be biased low.
S2L	Sample matrix spike duplicate recovery was low. Sample result may be biased low.
DUP	Result of duplicate analysis in this quality assurance batch exceeds the limits for precision.

# REQUEST FOR SERVICES

U.S. FILTER/ENVIROSCAN 301 W. MILITARY RD. ROTHSCHILD, WI 54474 1-800-338-SCAN

**REPORT TO:**  
 Name: JOHN GULL  
 Company: SHORT ELLIOTT HENDRIKSEN  
 Address: 421 FRENETTE DRIVE  
CHIPPEWA FALLS, WI  
 Phone: ( 715 ) 720-6225  
 P.O. # \_\_\_\_\_  
 Project # FRAS9401 Quote # 37715  
 Location \_\_\_\_\_

**BILL TO: (if different from Report To info):**  
 Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

**ANALYTICAL REQUESTS**  
 (use separate sheet if necessary)

- Sample Type**  
 (Check all that apply)
- Groundwater
  - Wastewater
  - Soil/Solid
  - Drinking Water
  - Oil
  - Vapor
  - Other
- Turnaround Time**
- Normal
  - Rush (Pre-approved by Lab)
- Date Needed 10-17-97  
 Approved By \_\_\_\_\_

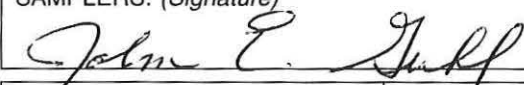
21-0753


LAB USE ONLY	DATE	TIME	No. of Containers		SAMPLE ID	REMARKS
			COMP	GRAB		
07017230	10-1-97	11:30		✓	MW-2	FIELD - FILTERED PRESERVED - HAWB3 ↓
07017231	10-1-97	11:10		✓	HP-1	
07017232	10-1-97	12:30		✓	HP-2	
07017233	10-1-97	12:45		✓	HP-3	
07017234	10-1-97	1:15		✓	HP-4	
07017235	10-1-97	1:30		✓	HP-5	
07017236	10-1-97	2:00		✓	HP-6	

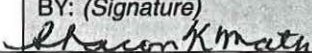
TOTAL DISSOLVED LEAD

Short      Frasersh

## CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)  


RELINQUISHED BY: (Signature) 	DATE/TIME 10-2-97 8:30	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED FOR LABORATORY BY: (Signature) 	DATE/TIME 10-3-97 9:00
------------------------------	-----------	---	---------------------------

Del'v: Hand Comm  
 Shp. Cont. OK?  Y  N N/A  
 Samples leaking?  Y  N N/A  
 Seals OK?  Y  N N/A  
 Rec'd on ice?  Y  N N/A °C

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_