Western Steel Casling VCP NW1055 m



www.hartcrowser.com

December 19, 2002	Anchorage
Mr. Robert Alexander Western Steel Casting 145 South Horton Street Seattle, Washington 98134	Boston
Re: Underground Storage Tank Removal (UST-2) Western Steel Casting - Block 6 145 South Horton Street Seattle, Washington 7670-02	Denver
Dear Mr. Alexander:	Edmonds
This letter report summarizes the November 12, 2002, removal of a heating oil underground storage tank (UST) at Block 6 of Western Steel Casting (WSC) located in Seattle (Figure 1). The tank (UST-2) was abandoned and recently discovered on the east side of the WSC office. The UST location and excavation are shown on the Site Plan presented on Figure 2.	Eureka
Our report begins with a Summary of Findings which is followed by our:	Jersey City
 UST Excavation and Disposal; Soil Sampling and Analysis; Conclusion; and Limitations. 	Juneau
Complete laboratory analytical results for excavation and stockpile samples are included in Appendix A, and UST disposal documentation is presented in Appendix B.	
SUMMARY OF FINDINGS	Long Beach
A 300-gallon heating oil UST was removed from inside the Block 6 foundry building on the west side of the WSC office. The age of the UST was unknown. The UST was connected to a remote fill port located outside the building on Horton Street and was likely associated with a former heating system. The tank appeared to be in good condition and no obvious	Portland

indications of past leakage were noted. The base of the excavation was approximately 8

Hart Crowser, Inc. Five Centerpointe Drive, Suite 240 Lake Oswego, Oregon 97035-8652 Fax 503.320.6918 Tel 503.620.7284

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Seattle



Western Steel Casting December 19, 2002 7670-02 Page 2

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feet below grade. Some petroleum-impacted soil was observed around fittings above the top of the tank (0 to 4 feet below the floor slab). Approximately 5 cubic yards of petroleum-impacted soil were excavated and stockpiled next to the excavation.

Two composite side wall samples, one bottom sample, and one stockpile sample were collected and submitted to a laboratory for diesel-range total petroleum hydrocarbons (TPH) analysis. The east side wall sample contained 69 milligrams per kilogram (mg/kg) fuel oil-range TPH, well below Ecology's MTCA Method A cleanup level of 2,000 mg/kg. The west side wall and bottom samples were non detect for TPH.

Stockpile sample UST2-SP contained 2,600 mg/kg fuel oil-range TPH. The stockpile soils were added to petroleum-impacted soil excavated on November 13, 2002, from UST-1, located approximately 50 feet south of UST-2. The soils were transported to Waste Management 's South Alaska Street facility in Seattle on November 13. Marine Vacuum also removed 150 gallons of residual heating oil from UST-2 and transported it to the Marine Vacuum facility in Seattle.

Although the tank was not a regulated UST, because it was a heating oil tank, the tank was removed in general accordance with the state UST regulations (Chapter 173-360 WAC).

UST EXCAVATION AND DISPOSAL

Excavation of the tank was conducted on November 12, 2002, by Global Environmental Inc. under the observation of Hart Crowser. Prior to removal of the tank, 150 gallons of residual heating oil were pumped out and the tank was inerted using carbon dioxide. Approximately 5 cubic yards of overburden soils were stockpiled near the excavation. A slight petroleumlike odor was noted in the stockpile soils. The product piping, which connected to a remote fill port on the north side of the building, was severed and plugged with grout. Upon removal, the steel tank appeared to be in good condition, with no obvious indications of leakage present such as tank holes, stained soils, or odors.

The excavation was monitored using a hand-held photo-ionization detector (PID). No organic vapors indicative of petroleum releases were detected by the PID. The extent of the excavation was approximately 8 by 6 feet, with a total depth of 8 feet. The top of the tank was at approximately 4 feet below grade. After removal, the tank was cleaned and placed in a container with other scrap steel from WSC, and delivered to Seattle Iron and Metal for recycling. The UST excavation was then backfilled with clean overburden originating from nearby Occidental Avenue. The Occidental Avenue soils had been excavated by WSC on

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November 8, 2002, and placed in three stockpiles (SP-1, SP-2, and SP-3) in the WSC Block 5 warehouse. Hart Crowser collected samples of the stockpiles on November 12. Analysis of the samples indicated the soils contained non-detect to 230 mg/kg fuel oil-range TPH. Stockpile SP-1, which was non detect for TPH, accounted for approximately 80 percent to the total soils used for backfill at UST-2 and UST-1. Sample results for the Occidental Avenue stockpile soils are included in the UST-2 excavation sample lab report in Appendix A.

SOIL SAMPLING AND ANALYSIS

Hart Crowser collected discrete soil verification samples 6 feet below grade from the east and west side walls, and 8 feet below grade from the excavation bottom. Samples were collected from the backhoe bucket using a stainless steel spoon, transferred directly to a 4 oz. jar, and filled to a zero headspace level. The equipment contacting the soil samples was decontaminated prior to sampling. The samples were inserted into a cooler with blue ice and transferred directly to the ESN NW laboratory in Bellevue.

Samples were submitted for analysis of diesel- and oil-range petroleum hydrocarbons by Ecology Method WTPH-D-extended. The east side wall sample contained 69 mg/kg fuel oil-range TPH. The west side wall and bottom samples were non detect for TPH.

The ESN NW analytical report is presented in Appendix A.

Data Quality Evaluation

Hart Crowser reviewed laboratory results for the chemical samples analyzed to verify that the data met acceptable quality assurance/quality control (QA/QC) criteria. The criteria included the following parameters:

- Holding Times;
- Method Blanks;
- Surrogate Recoveries;
- Detection Limits; and
- Chain of Custody.

The laboratory-established control limits for the given parameters were met. The samples were received by the laboratory intact, in a sealed cooler containing blue ice. No data were qualified or rejected based on this evaluation for this project.



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CONCLUSION

UST-2 and TPH-impacted soil exceeding the Method A cleanup levels have been removed from the property. Though the UST was not a regulated tank, the UST was removed and assessed in conformance with Ecology's UST regulations and Ecology's guidance for the remediation of petroleum-impacted soils.

LIMITATIONS

Work for this project was performed, and this draft letter report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Western Steel Casting for specific application to the subject property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

Any questions regarding our work and this letter report, the presentation of the information and the interpretation of the data are welcome and should be referred the undersigned.

Sincerely,

HART CROWSER, INC.

ROB ROBERTS Project Chemist cer@hartcrowser.com TERRY MONTOYA Associate Remediation Engineer twm@hartcrowser.com

Attachments: Figure 1 - Vicinity Plan Figure 2 - Site Plan Appendix A - Laboratory Report ESN Northwest Appendix B - Disposal and Closure Documents

F:\docs\jobs\767002\WSC ust-2.doc

Vicinity Map



Note: Base map prepared from 7.5x15 minute quadrangle map of Seattle South, dated 1983.

Approximate Scale in Feet

0

2000

4000









Hart Crowser 7670-02 December 19, 2002

APPENDIX A LABORATORY REPORT **ESN NORTHWEST**



Environmental

Service: Network

November 21, 2002

Rob Roberts Hart Crowser 1910 Fairview Avenue East Seattle, WA 98102-3699

Dear Mr. Roberts:

Please find enclosed the analytical data report for the Western Steel Casting Project in Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended on November 12, 2002.

The results of these analyses are summarized in the attached tables. All soil samples are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work has been sent to your accounting department.

ESN Northwest appreciates the opportunity to have provided analytical services to Hart Crowser for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt Vice President

ESN SEATTLE CHEMISTRY LABORATORY (425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21112-1
Client:	HART CROWSER
Client Job Name:	WESTERN STEEL CASTING
Client Job Number:	NA

Analytical Results UST2-E UST2-B UST2-SP MTH BLK UST2-W NWTPH-Dx, mg/kg Soil Soil Soil Soil Soil Soil Matrix 11/12/02 11/12/02 11/12/02 11/12/02 11/12/02 Date extracted Reporting 11/12/02 11/12/02 11/12/02 11/12/02 11/12/02 Date analyzed Limits nd nd 20 nd nd nd Kerosene/Jet fuel 69 nd 2,600 20 nd nɗ Diesel/Fuel oil 50 nd nd nd nd nd Heavy oil Surrogate recoveries: 81% С 85% 79% 82% Fluorobiphenyl 91% 89% 93% 95% 87% o-Terphenyl

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

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Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY (425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21112-1
Client:	HART CROWSER
Client Job Name:	WESTERN STEEL CASTIN
Client Job Number:	NA

Analytical Results						DUPL
NWTPH-Dx, mg/kg		SP1-1	SP1-2	SP2-1	SP3-1	SP3-1
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	11/12/02	11/12/02	11/12/02	11/12/02	11/12/02
Date analyzed	Limits	11/12/02	11/12/02	11/12/02	11/12/02	11/12/02
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	220	230	220
Heavy oil	50	nd	nđ	nd	nd	nd
			•			
Surrogate recoveries:						
Fluorobiphenyl	·	81%	83%	86%	93%	91%
o-Terphenyl		90%	91%	92%	95%	92%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY (425) 957-9872, fax (425) 957-9904

ESN Job Number:	S21112-1
Client:	HART CROWSER
Client Job Name:	WESTERN STEEL CASTIN
Client Job Number:	NA

Analytical Results		RPD
NWTPH-Dx, mg/kg		SP3-1
Matrix	Soil	Soil
Date extracted	Reporting	11/12/02
Date analyzed	Limits	11/12/02
Kerosene/Jet fuel	20	
Diesel/Fuel oil	20	. 4%
Heavy oil	50	
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Surrogate recoveries:		

Fluorobiphenyl

o-Terphenyl

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

Sample Custody Record

52112-1



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Hart crowser, inc. 1910 Fairview Avenue East ington 98102-3699 FĂX: 206-328-5581

CONTAINERS

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Gold to Sample Custodian

APPENDIX B DISPOSAL AND CLOSURE DOCUMENTS

Hart Crowser 7670-02 December 19, 2002

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	GLOBAL ENVIRONMENTAL A Division of Clobal Divine & Salvage, Incorporated MOGA 5965 MUSTERIA STERI TANKE 2
-	UNDERGROUND STORAGE TANK
- 1 1	DISPOSAL CERTIFICATE
	THIS CERTIFICATE IS PROVIDED TO DOCUMENT LEGAL AND APPROPRIATE DISPOSAL OF <u>1E4</u> , 30, 45, 46, 47, 47, 47, 47, 47, 47, 47, 47, 47, 47
	TANK (8) WAS AT THE WESTERN STEEL CASTINGS PLANT LOCATED AT 145 South HORTON ST., SEATTLE, MA.
'L	THE TANK WAS TRANSPORTED OFF SITE, CUT OPEN, CLEANED AND DECOMMISSIONED AS SCRAP METAL AT SEATTLE IRON AND METALS CORP. OR OTHER FACILITY PERMITTED TO RECEIVE SCRAP METAL OR
-	□ THE TANK WAS DECOMMISSIONED IN PLACE WITH
) 1	 CONTROLLED DENSITY FILL CONCRETE STRUCTURAL FOAM OTHER
! ~-'	THE RESIDUAL MATERIAL THAT REMAINED IN THE TANK WAS REMOVED ALONG WITH ANY CLEANING RINSATE AND CONSOLIDATED WITH OTHER RECYCLABLE OIL PRODUCTS FOR DISPOSAL AT BASIN OIL CR OTHER FACILITY PERMITTED TO TREAT, STORE AND/OR DISPOSE OF PETROLEUM PRODUCTS.
:	IF YOU HAVE ANY QUESTIONS OR CONCERNS PLEASE CALL ME AT (206) 623-0621
	THANK YOU GLOBAL ENVIRONMENTAL GREGFLADSETH

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OPERATIONS	MANAGER		
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THE CITY OF SEATTLE

FIRE DEPARTMENT Fire Marshal's Office

220 Third Ave South Scattle, WA 98104-2608 (206) 386-1450



THIS IS NOT A BILL PLEASE DO NOT PAY

When property nucle out and signed this becomes a receipt for the amount and purposes as specified herein



DATE:

11/08/2002

AMOUNT:
JOB SITE:
PAYMENT FOR:
CHECK #:
INVOICE #:
PERMIT CODE(S):
REMARK:

\$98.00 145 S HORTON ST APPLICATION FEE 29382

7908

Chief of the Fire Department

By T. Ngo

NOTE: PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.

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Seattle 10:00 a.m. NOV 08 2002 Wett 5865
APPLICATION OR TEMPORARY DEDUCT
Permit Code No.: 7908 Title: FLAMMABLE/COMBUSTIBLE LIQUID COMMERCIAL TANK DECOMMISSIONE
Fee: <u>\$98.00 (No Renewal)</u> Code Reference: <u>SFC 7901.3</u> <u>11-8-04</u> <u>11-12-02</u> <u>11-12-02</u> <u>11-12-02</u>
Firm Names Gal Olace Gal Anna State D
Firm Address 3000 WINDER WARGINAL WAY V: SEATTLE State: NA Zip: 52106
Job Site: WERTERN STEEL GASTIGT - 145 SO, HORSTON ST. STORE
Person In Charge: Charge Canada C
Number of Tank(s): Tank Size(s): OOO
Product(s) Previously Contained: DIFCE
Removal Abandonment-in-Place Hot Work: Yes DNo
REMITTANCE FOR PERMIT FEE AS SHOWN ABOVE MUST BE RETURNED WITH THIS APPLICATION TO:
SEATTLE FIRE DEPARTMENT HEADQUARTERS HAZARDOUS MATERIAL PERMITS 301 Second Avenue South Seattle, WA 98104-2618 Make Checks Payable To: CITY OF SEATTLE
PERMIT CONDITIONS:
1. TANKS MAY BE REMOVED ONLY AFTER FIRE DEPARTMENT INSPECTION.
2. Two (2) portable fire extinguishers with a minimum rating of 40 BC shall be on site within 50 feet of the operation.
3. Rope or ribbon barricades must be provided circling 10' from the operation or be enclosed in a fenced yard.
1. "No Smoking" signs must be posted in readily visible locations.
 No hot work is allowed on a tank unless the tank is certified "safe for hot work" by a marine chemist. A separate Fire Department permit (Code 4913) is required for cutting and welding operations.
PROCEDURES:
Call 233-7106, a minimum of 24 hours prior to removal of abandonment to arrange for an inspection appointment. Appointments must be confirmed by an inspector.
Permits may cover multiple tanks located at the same address of eductional tanks are to be removed or abandoned at later dates, separate permits shall be obtained. Each address location requires a separate permit application regardless of whether multiple address locations are physically next to one another.
Additional fees will be charged if inspectors are required to work other than normal business hours. (Normal business hours are Monday through Friday, 7:30 a.m. to 4:30 p.m.)
FMOUSE: APPROVED BY:
Receipt No.: 5-52036 Inspector: JUA MAN
Check No.: 29382 Date: $11 - 12 - D2 - Rg File ID# 44979$

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	TOTAL			<u>364.07</u>	

SUMMARY OF CONTAMINATED SOIL FROM ARRF

11/12/02 Stockp:le for UST-Z included With 11/13/02 UST-1 50:75

11/18/2002