



September 13, 2011

Mr. Jon Boe  
Swinomish Indian Tribal Community  
11430 Moorage Way  
La Conner, WA 98257

**Re: Lime Storage Area Brownfield Remediation Project Report**  
12737-01

Dear Jon:

Hart Crowser is pleased to provide you with the Lime Storage Brownfield Remediation Report. This work was accomplished in accordance with the approved addendums to the Brownfields Cleanup Cooperative Agreement Work Plan (Swinomish Tribe, September 8, 2010) and the Sampling Quality Assurance Plan (Environmental International, September 19, 2008). The work we performed under this addendum is detailed in the remediation Work Plan for Lime Storage Site Cleanup (Hart Crowser, April 29, 2011) and the Addendum to the Swinomish Indian Tribal Community U.S. EPA Brownfields Assessment Grant Sampling Quality Assurance Plan (Hart Crowser, May 18, 2011). The results of our work are presented in the final report—Summary of Cleanup Activities, Lime Storage Site Cleanup, Swinomish Reservation, Anacortes, Washington (Hart Crowser, August 17, 2011).

The site remediation work consisted of removing near surface soil from three locations at the former Lime Storage site and disposing of these soils under a subcontract to Rabanco Regional Disposal Company. About 280 cubic yards (380 tons) of impacted soil were properly disposed of at the Roosevelt Regional Landfill, located near Roosevelt, Washington. Confirmation soil chemistry data collected after impacted soil was removed show that the soil removal project met the cleanup goals as outlined in the Work Plan developed for the project and approved by the Swinomish Tribe and the EPA. Once confirmation soil data was received and shown to meet data quality objectives, the soil excavation areas were backfilled with clean soil provided by the Swinomish Tribe from a nearby stockpile source.

The invoice for the month of August will contain the disposal costs. There will be a few hundred dollars of additional charges in the final invoice for September, which you will receive in early





Swinomish Indian Tribal Community  
September 13, 2011

12737-01  
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October. We are happy to report that we were able to accomplish this project without expending all authorized funds. There are about \$25,000 in unused funds remaining in the authorized budget.

We enjoyed working with you and the Swinomish Tribe on this project and are very happy with the outcome. Please let us know if you have any questions or need additional assistance. We look forward to an ongoing, mutually beneficial relationship with the Swinomish Indian Tribal Community.

Sincerely,

**HART CROWSER, INC.**

**JAMES E. STARKES**  
Associate Fisheries Biologist

**WILLIAM B. ABERCROMBIE**  
Principal





**Letter of Transmittal**

**To:** Swinomish Indian Tribal Community  
11430 Moorage Way  
La Conner, WA 98257

**Date:** September 13, 2011

**Job No.:** 12373-01

**Attn:** Mr. Jon Boe

**Re:** Lime Storage Area Brownfield Remediation Project Report

**We are sending the following items:**

<i>Date</i>	<i>Copies</i>	<i>Description</i>
September 13, 2011	1	The above-referenced report

**These are transmitted:**

- For your information   
 For action specified below   
 For review and comment   
 For your use   
 As requested

**Remarks**

Enclosed.

**By:**

  
Karis A. Pratt

**Title:**

Office/Project Administrator

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***Summary of Cleanup Activities  
Lime Storage Site Cleanup  
Swinomish Reservation  
Anacortes, Washington***



***Prepared for  
Swinomish Indian Tribal Community***



***August 17, 2011  
12737-01***





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***Summary of Cleanup Activities  
Lime Storage Site Cleanup  
Swinomish Reservation  
Anacortes, Washington***

***Prepared for  
Swinomish Indian Tribal Community***

***August 17, 2011  
12737-01***

Prepared by  
**Hart Crowser, Inc.**



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**SUMMARY OF CLEANUP ACTIVITIES  
LIME STORAGE SITE CLEANUP  
SWINOMISH INDIAN TRIBAL COMMUNITY  
ANACORTES, WASHINGTON**

**EXECUTIVE SUMMARY**

This report summarizes cleanup activities conducted at the Lime Storage Site (Site), an approximately 1-acre area located on the west side of the Swinomish Channel in Anacortes, Washington. The Site was formerly used as a storage facility for agricultural amendments (Figure 1). The Site is located on tribal trust land in the northern Tribal Economic Zone (TEZ) of the Swinomish Indian Reservation.

Previous evaluations of the Site (HWA 2006 and EI 2009) detected metals and dioxin contaminations in the soil that exceed the Washington State Model Toxics Control Act (MTCA) Method A or B cleanup levels for unrestricted land use. While requirements under State law do not apply on Tribal land, the MTCA cleanup levels are based on the protection of human health and the environment and were used to guide the cleanup at the Site. Contaminants were found at three locations associated with a debris pile, a burn pile, and in soil associated with a historical conveyor belt. These contaminants included arsenic, cadmium, lead, and dioxin/furan compounds.

Proposed cleanup activities included removal of contaminated soil from the three impacted areas, post-excavation verification sampling, and backfilling of the excavation. These planned activities were detailed in Hart Crowser's EPA-approved Remediation Plan (Hart Crowser 2011). Work described in this report was completed in accordance with the EPA-approved Remediation Plan.

Hart Crowser provided full-time, on-site assistance with identification and isolation of soil identified for removal during excavation work performed by Spyderman Excavation, LLC between June and July 2011. Verification sampling and analysis during cleanup activities confirmed that soil with chemical concentrations above cleanup levels identified in the Remediation Plan was removed. Approximately 280 cubic yards of impacted material and soil were removed and disposed of off-site at Roosevelt Regional landfill in Klickitat County. Areas that contained soil impacted with constituents of concern (COCs), which also serve as verification sample locations, are shown on Figure 2.

Fifteen soil verification samples (twelve samples and three field duplicate samples) were collected and analyzed during soil excavation and removal

activities. The verification samples confirmed that residual COC concentrations were below MTCA Method A and B criteria, which were selected by the Tribe as Applicable or Relevant and Appropriate Requirements (ARARs). Analytical results for soil verification samples are presented in Tables 1 and 2.

Following receipt of the analytical data, the three areas were backfilled and graded with clean fill provided by the Tribe.

## **1.0 INTRODUCTION**

On behalf of the Swinomish Indian Tribal Community (Tribe), Hart Crowser oversaw environmental cleanup activities at the Lime Storage Site located on the west side of Swinomish Channel in Anacortes, Washington (Figure 1). Remedial activities were completed in accordance with a site-specific Remediation Plan dated June 2, 2011.

The Lime Storage Site (Site) was used as a storage facility for agricultural amendments, including lime. The Site and surrounding features are shown on Figure 2. The Site was contaminated during several decades of use as a storage facility from the mid-1960s to the early 1990s. Previous evaluations of the Site detected some soil constituent concentrations exceeding Washington State Model Toxics Control Act (MTCA) Method A or B cleanup levels for unrestricted land use.

## **2.0 SITE DESCRIPTION AND HISTORY**

This section presents background information on the subject property, including the location, operational history, hydrogeology, and previous environmental investigations.

### ***2.1 Site Description and Environmental Conditions***

The Site is located on tribal trust land in the northern Tribal Economic Zone (TEZ) of the Swinomish Indian Reservation. Contamination was detected at the Site following several decades of use as an agricultural amendment storage and processing facility. The storage facility operated on leased Tribal land. The Tribe had no involvement in the operation of the facility.

A concrete slab measuring 180 feet x 60 feet and four footings, soil piles, and building debris are the only remnants of the agricultural amendment facility that remain on the approximately 1-acre site. East of the Site, a deteriorating pier that was partially damaged by fire and a creosoted bulkhead remain.

The Site is located on dredge material from maintenance of the Swinomish Channel by the US Army Corps of Engineers before 1950 on top of either mudflats or saltmarsh tidelands. The Tribe has determined that the areas intended for cleanup are unlikely to contain any cultural resources.

Based on a 2009 Phase II investigation (EI 2009), three areas (Figure 2) were identified that contained chemicals exceeding the MTCA Method A or B cleanup levels for unrestricted land use, which were selected by the Tribe as Applicable or Relevant and Appropriate Requirements (ARARs).

- Area A – A small stockpile to the west that consisted of sand and gravel with an assortment of charred wood debris. This pile had documented exceedances of dioxin/furan compounds and cadmium.
- Area B – A central stockpile that consisted of debris and stained soil. This pile had documented exceedances of arsenic, cadmium, and lead.
- Area C – An area located immediately east of the on-grade concrete slab where the former conveyor belt operated. The surface soil was composed of sand and gravel and was lightly vegetated. A granular yellow material (suspected to be sulfur based) was found on the surface of this area between the slab and the bulkhead along the Swinomish Channel. This area had documented exceedances of cadmium.

## **2.2 Site-Specific Geology and Hydrogeology**

The surficial dredge spoils at the Site are fine to medium sand that is excessively drained, and has moderately high hydraulic conductivity. The water table is tidally influenced and most likely shallow, given the low elevation of the project area relative to water in the Channel. Groundwater in this area is likely saline and has been determined by the Tribe to be unsuitable for use as a current or future drinking water source.

There are reportedly no active or abandoned wells on the Site; all drinking water in the area is municipal water piped to the Reservation from Anacortes, Washington (SITC 2008).

## **2.3 Historical Background**

The Site was originally intertidal mudflat or saltmarsh. In the first half of the 20th century, the US Army Corps of Engineers dredged the Swinomish Channel and deposited the dredge spoils on the upland area.

The Site was leased to a non-tribal member between 1964 and 1989. A storage facility was constructed, and the Site was used to store agricultural amendments. Lease agreement documents from 1964 note that the intended use of the facility was to store "lime, fertilizer, gravel, and other materials." During operation, the lime and other material was offloaded from a barge to the storage area on a conveyor belt. By the mid-1990s, the facility remained but was no longer used for lime storage; in 2003 the building was demolished.

The building and equipment were removed, but the concrete slab floor of the building and concrete footings for the former conveyor system remain on the Site. Debris piles and a burn pile remained on the Site following the demolition.

## **2.4 Previous Environmental Investigations**

In 1998, Hong West Associates Geosciences was contracted to perform a Phase I Environmental Site Assessment for the area, which was part of a planned marina development (HWA 1998). The lime storage facility was noted as a potential area of concern, but was not considered a hazard to human health or the environment based on information available at that time.

An updated Phase I assessment was conducted in 2000 (HWA 2000). No significant changes were observed between the 1998 and 2000 assessments. In 2006, HWA conducted another Phase I assessment that included a small portion of TEZ Area 1 (HWA 2006). A Phase II site investigation was recommended for areas where there were planned site improvements.

Between 2008 and 2009, Environment International Ltd. (EI) of Seattle, Washington, was contracted to assist with a Phase I assessment performed by the Environmental Management Program within the Swinomish Planning Office (SITC 2008). The Phase I assessment recommended a Phase II investigation for the lime storage facility, due to historical building use and the presence of a burn pile and debris piles.

During the subsequent Phase II ESA (EI 2009), eight soil samples were collected from around the periphery of the foundation slab and from burn and debris piles. The samples were analyzed for total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), organochlorine pesticides, metals, and pH. Samples collected from a burn pile were analyzed for dioxin/furan compounds. COCs were identified as cadmium, lead, arsenic, and dioxin/furan compounds at concentrations exceeding Washington MTCA Method A or B cleanup levels for unrestricted land use in one or more locations.

### **3.0 CLEANUP ACTION PLAN OBJECTIVES**

The Remediation Plan was intended to remove and properly dispose of identified areas where soil contamination exceeded the MTCA Method A or B soil cleanup levels. Tasks included:

- Delineation of the work areas and placement of temporary erosion control measures prior to excavation;
- Removal of contaminated soil from the three impacted areas (Figure 2);
- Post-excavation verification sampling; and
- Backfilling of the excavation.

### **4.0 SUMMARY OF REMEDIAL ACTIONS**

Remedial actions were conducted on the property in June and July 2011. This section summarizes the remedial action and provides a brief description of when the action occurred, what was done, and what the results were.

#### **4.1 Removal Action Overview**

Hart Crowser provided full-time construction oversight during June and July 2011. Acting as a representative of the owner, the Hart Crowser field representative observed excavation and removal of soil and debris from the three areas. Following excavation, the field representative collected verification soil samples from beneath the impacted areas.

Soil sampling and laboratory analysis verified that the soil remaining in place did not exceed MTCA Method A or B unrestricted soil cleanup levels. Field reports were completed to document activities observed, conditions encountered, and samples collected.

##### **4.1.1 Soil Removal**

Prior to soil excavation and removal, Temporary Erosion and Sediment Control measures were implemented in accordance with the Remediation Plan (Hart Crowser 2011).

The areas where the impacted soil was removed are identified on Figure 2. The burn and debris piles (Areas A and B) were removed and disposed of. Stockpiled material from Area A contained charred wood, debris, and sand. Material from Area B contained debris including metal fragments, bricks, concrete, possible ash, and sand. Potentially impacted soil from beneath the

piles were excavated to a depth of approximately 1 foot and removed from the Site.

Area C was excavated to a depth of approximately 1 to 2 feet below grade. The excavated soil was removed; this soil contained sand with scattered coarse granular yellow material with a strong sulfur-like odor. The granular yellow material was located at depths greater than the presumed 1 foot below ground surface (bgs) in the northeast corner of Area C, and the Tribe was contacted. Jon Boe, the tribal representative, arrived on site to observe the excavation, and agreed that the excavation could extend to 2 feet bgs to remove most of the yellow material.

A total of approximately 280 cubic yards (approximately 380 tons) of impacted soil and debris was removed and disposed of at the Roosevelt Regional Landfill. The material was transported by dump truck to the Burlington Northern railroad (BNRR) terminal in Burlington, Washington, for transfer to a railcar. Disposal tickets are included as Appendix B.

#### **4.1.2 Soil Sample Collection and Analysis**

Four verification soil samples and one field duplicate sample were collected from beneath Area A, Area B, and Area C. The location of the verification samples and excavation limits are shown on Figure 2.

Samples were transported to the Hart Crowser office in Seattle, Washington, and couriered to TestAmerica-Seattle (TAS) environmental laboratory in Tacoma, Washington, following chain-of-custody procedures. The samples were submitted for analysis for arsenic, cadmium, and lead by EPA Method 6010B. One sample from Area A was subcontracted to TestAmerica-West Sacramento, in West Sacramento, California, for analysis of dioxin/furan compounds. Sample results are discussed below.

### **4.2 Soil Chemical Analysis Results**

#### **4.2.1 Analytical Results**

Sample results are presented in Tables 1 and 2. The analytical laboratory report is included in Appendix A. Sample results were compared to cleanup levels defined in the Remediation Plan (Hart Crowser 2011).

Cleanup levels were selected following the MTCA criteria for metals. Specifically, the arsenic cleanup level was set at 7.3 milligrams/kilogram (mg/kg) or parts per million (ppm) based on background soil concentrations in Puget

Sound (Ecology 1994). The cadmium cleanup level is 2.0 ppm (based on protection of drinking water) and lead is 250 ppm (base on direct contact exposure). Cleanup levels for cadmium and lead are based on MTCA Method A cleanup level for unrestricted land use.

Cleanup levels for total dioxins/furans were compared to the MTCA Method B cleanup level of 11 picograms/gram (pg/g) based on 2,3,7,8-TCDD (tetrachlorodibenzodioxin) toxic equivalents (TEQs).

### ***Area A – Burn Pile Area***

Five soil samples were collected from Area A for metals analysis at the locations shown on Figure 2. In addition, one soil sample was collected for dioxin/furan analysis.

Samples collected from beneath the burn pile at Area A for metals were analyzed for arsenic, cadmium, and lead (Table 1). Results for arsenic and cadmium in all samples were non-detect at the laboratory reporting limit, which was below the appropriate cleanup level. Results for lead in all samples fell below the cleanup level.

Analytical results for dioxins/furans in soil expressed as 2,3,7,8-TCDD TEQs are presented in Table 2. TEQs were calculated using the World Health Organization (WHO) 2005 toxic equivalency factors (TEF) for mammals. Total dioxin TEQs are reported using two conventions: adding only detected congeners, and using one-half the detection limit for non-detected congeners. All congeners were non-detect in the sample, and the TEQ for detected compounds was, therefore, not applicable. The TEQ for one-half the detection limit was calculated as 0.0816 pg/g. This value falls below the MTCA Method B direct contact cleanup level of 11 pg/g.

### ***Area B – Debris Pile Area***

Soil samples collected from beneath the debris pile at Area B were analyzed for arsenic, cadmium, and lead (Table 1). Results for arsenic and cadmium in all samples were non-detect at the laboratory reporting limit, which was below their respective cleanup levels. Results for lead were either non-detect at the laboratory reporting limit or below the cleanup level.

### ***Area C – Barge Offload Area***

Soil samples collected from beneath the impacted soil at Area C were analyzed for arsenic, cadmium, and lead (Table 1). Results for cadmium in all samples

were non-detect at the laboratory reporting limit, which was below the appropriate cleanup level. Results for arsenic and lead were either non-detect at the laboratory reporting limit or below the appropriate cleanup level.

#### **4.2.2 Data Quality**

The analytical report was reviewed and validated by a chemist at Hart Crowser in accordance with the Sampling Quality Assurance Plan (SQAP). A detailed quality assurance report is included in Appendix A. All results for this project met data quality objectives (DQOs).

Field and analytical precision were evaluated by review of relative percent differences (RPD) between laboratory duplicate and field duplicate samples. The precision goals of 35 percent were met.

Accuracy was evaluated by review of percent recovery of laboratory control samples. Recoveries fell within laboratory and method control limits, and met the SQAP goals.

Representativeness was evaluated by confirming that the sampling and analytical protocols were followed. The only deviation noted was that the metals analysis was requested on the chain-of-custody as EPA Method 6010C. The laboratory analyzed the samples by EPA Method 6010B. EPA Method 6010C is a revised version of EPA Method 6010B. There is no significant analytical difference between the two methods, and results from both methods are considered comparable.

Comparability is a qualitative parameter. The samples were analyzed at an accredited laboratory, following standardized procedures, and the data is considered comparable.

Completeness was evaluated by comparing the number of valid results to the number of samples collected. All sample results for this project were valid, and completeness is 100 percent.

## **5.0 CONCLUSIONS**

Verification sample analysis of soil collected from beneath Areas A, B, and C indicates that impacted soil was removed and the cleanup goals in the Remediation Plan were met. The truck disposal tickets show that the soils were removed off-site and properly disposed of at Roosevelt Regional Landfill.

## 6.0 REFERENCES

Environment International Ltd. (EI), 2009. Swinomish Indian Tribal Community, Phase II Environmental Site Assessment Report. Prepared for Swinomish Indian Tribal Community. September 16, 2009.

Hart Crowser, 2011. Remediation Plan, Lime Storage Site Cleanup, Swinomish Reservation, Anacortes, Washington. June 2, 2011. 12737-01.

Hong West Associates Geosciences Inc. (HWA), 1998. Level One Environmental Property Assessment Swinomish Channel Marina Skagit County, Washington, prepared for Swinomish Indian Tribal Community. September 17, 1998.

HWA, 2000. Updated Environmental Property Assessment Swinomish Marina Property, Area 1 Casino, Bingo and Related Operations, Skagit County, Washington. Prepared for Swinomish Indian Tribal Community. July 17, 2000.

HWA, 2006. Level One Environmental Site Assessment 350-Acre Knudsen Property Fidalgo Island, Washington. Prepared for Swinomish Indian Tribal Community. August 15, 2006.

Swinomish Indian Tribal Community (SITC), July 2008. Swinomish Indian Tribal Community, Brownfields Phase I Environmental Assessment, North Tribal Economic Zone Area 1 (TEZ Area 1), prepared by SITC Environmental Management Program, Office of Planning and Community Development, and reviewed by Environment International, Ltd.

SITC, 2011. Fact Sheet for the Swinomish Lime Storage Site Cleanup Project. [http://www.swinomish-nsn.gov/media/7604/lime\\_storage\\_cleanup\\_fact\\_sheet.pdf](http://www.swinomish-nsn.gov/media/7604/lime_storage_cleanup_fact_sheet.pdf)

Washington State Department of Ecology (Ecology), 1994. Natural Background Soil Metals Concentrations in Washington State. Toxics Cleanup Program Publication No. 94-115. October 1994.

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## TABLES

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**Table 1 – Analytical Results for Soil Samples – Metals**

Sample ID: Sampling Date:	Cleanup Level	Area A-S1 6/22/2011	Area A-S2 6/22/2011	Area A-S3 6/22/2011	Area A-S4 6/22/2011	Area A-S10 6/22/2011 Dup of Area A-S1
<b>Conventional in %</b>						
Percent Solids		95	97	96	96	95
<b>Metals in mg/kg</b>						
Arsenic	7.3 <sup>a</sup>	2.8 U	2.9 U	3 U	2.9 U	3.1 U
Cadmium	2 <sup>b</sup>	0.47 U	0.49 U	0.5 U	0.48 U	0.52 U
Lead	250 <sup>b</sup>	1.5	2	1.9	1.5	1.6
Sample ID: Sampling Date:		Area B-S1 6/23/2011	Area B-S2 6/23/2011	Area B-S3 6/23/2011	Area B-S4 6/23/2011	Area B-S10 6/23/2011 Dup of Area B-S1
<b>Conventional in %</b>						
Percent Solids		96	95	96	95	95
<b>Metals in mg/kg</b>						
Arsenic	7.3 <sup>a</sup>	2.9 U	3.1 U	3 U	2.8 U	2.6 U
Cadmium	2 <sup>b</sup>	0.48 U	0.52 U	0.51 U	0.47 U	0.43 U
Lead	250 <sup>b</sup>	1.6	5.1	1.5	1.4 U	1.4
Sample ID: Sampling Date:		Area C-S1 6/23/2011	Area C-S2 6/23/2011	Area C-S3 6/23/2011	Area C-S4 6/23/2011	Area C-S10 6/23/2011 Dup of Area C-S1
<b>Conventional in %</b>						
Percent Solids		96	96	93	95	96
<b>Metals in mg/kg</b>						
Arsenic	7.3 <sup>a</sup>	2.7 U	3.1 U	2.7	2.9 U	3 U
Cadmium	2 <sup>b</sup>	0.44 U	0.51 U	0.45 U	0.48 U	0.5 U
Lead	250 <sup>b</sup>	1.3	1.6	2.3	2.3	1.5 U

<sup>a</sup> Cleanup level is based on Puget Sound Basin background soil concentration (Ecology 1994).

**Table 2 – Analytical Results for Soil Samples – Dioxins**

Sample ID Sampling Date	Cleanup Level	Area A-S1 6/22/2011
<b>Percent Solids</b>		95
<b>Dioxins in pg/g</b>		
2,3,7,8-TCDD		0.11 U
1,2,3,7,8-PeCDD		0.19 U
1,2,3,4,7,8-HxCDD		0.13 U
1,2,3,6,7,8-HxCDD		0.11 U
1,2,3,7,8,9-HxCDD		0.11 U
1,2,3,4,6,7,8-HpCDD		0.41 U
OCDD		2.4 U
2,3,7,8-TCDF		0.21 U
1,2,3,7,8-PeCDF		0.14 U
2,3,4,7,8-PeCDF		0.16 U
1,2,3,4,7,8-HxCDF		0.14 U
1,2,3,6,7,8-HxCDF		0.10 U
1,2,3,7,8,9-HxCDF		0.065 U
2,3,4,6,7,8-HxCDF		0.057 U
1,2,3,4,6,7,8-HpCDF		0.22 U
1,2,3,4,7,8,9-HpCDF		0.11 U
OCDF		0.55 U
Total TCDD		0.11 U
Total PeCDD		0.19 U
Total HxCDD		0.13 U
Total HpCDD		0.45 U
Total TCDF		0.21 U
Total PeCDF		0.16 U
Total HxCDF		0.14 U
Total HpCDF		0.22 U
TEQ (Detects Only)	11 <sup>a</sup>	NA
TEQ (1/2 ND)	11 <sup>a</sup>	0.08157

<sup>a</sup> Based on MTCA Method B cleanup level for direct soil contact

**FIGURES**

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Source: Base map prepared from DeLorme Topo 7.0, 2007.

Swinomish Lime Storage Cleanup Site  
Anacortes, Washington

Vicinity Map

12737-01

8/11

Figure

1





Source: Swinomish Tribe

- A - West Burn Pile
- B - Central Stockpile
- C - East Area of Surface Contamination

Lime Storage Cleanup Site Anacortes, Washington	
<b>Location of Areas Above Cleanup Levels</b>	
12737-01	5/11
	Figure <b>2</b>

**APPENDIX A  
CHEMICAL DATA QUALITY REVIEW AND  
LABORATORY REPORTS**



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## **APPENDIX A CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS**

### ***Chemical Data Quality Review***

Twelve soil samples and three field duplicates were collected on June 22 and 23, 2011. The samples were submitted to TestAmerica Seattle (TAS), of Tacoma, Washington, for chemical analysis. The sample results were reported as TAS Job ID 580-27019-1.

The soil samples were analyzed for the following:

- Total arsenic, cadmium, and lead by EPA Method 6010B; and
- Percent solids.

One soil sample was subcontracted to TestAmerica West Sacramento and reported as TA-West Sacramento Project Number G1F280458. The sample was analyzed for:

- Dioxin/furan compounds by EPA Method 8290.

Quality assurance/quality control (QA/QC) reviews of laboratory procedures were performed on an ongoing basis by the laboratories. Hart Crowser performed the data review, using laboratory quality control results summary sheets, to ensure they met data quality objectives for the project. The following criteria were evaluated in the standard data quality review process:

- Holding times;
- Method blanks;
- Laboratory control sample (LCS) recoveries;
- Standard reference material (SRM) recoveries;
- Internal standard recoveries (where applicable);
- Field duplicate relative percent differences (RPDs); and
- Reporting limits (RL).

The data were determined to be acceptable for use without qualification. Full laboratory results are presented at the end of this memo. Results of the data review follow.

## **Discrepancies**

The Sampling and Analysis Plan (SAP) and the Chain of Custody (COC) requested analysis for metals by EPA Method 6010C. The laboratory analyzed the samples by EPA Method 6010B. The methods are considered comparable.

The SAP listed analysis of cadmium only from Area A. The COC requested analysis of cadmium, lead, and arsenic from Area A. The laboratory followed the COC.

The laboratory did not provide any batch quality control data for the percent solids analysis.

## **Total Metals**

The holding times were acceptable. Reporting limits were acceptable. No method blank contamination was detected. LCS recoveries were within method control limits. SRM recoveries were within laboratory control limits. Field duplicate RPDs were within control limits or not applicable when results for the sample and duplicate were non-detect or less than five times the reporting limit.

## **Percent Solids**

The holding times were acceptable. Reporting limits were acceptable. Field duplicate RPDs were within control limits.

## **Dioxin/Furan Compounds**

The holding times were acceptable. Reporting limits were acceptable. LCS recoveries were within laboratory control limits. Internal standard recoveries were within control limits.

The method blank had detections for 2,3,7,8-TCDF between the Estimated Detection Limit (EDL) and the reporting limit; and a detection for total TCDF above the reporting limit. The associated sample, Area A-S1, was non-detect for those analytes, and the results were not qualified.

**TESTAMERICA SEATTLE  
ANALYTICAL LABORATORY REPORT**

STATE OF TEXAS  
COUNTY OF DALLAS

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-27019-1  
Client Project/Site: Swinomish-Lime Storage  
Revision: 1

For:  
Hart Crowser, Inc.  
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Attn: Anne Conrad



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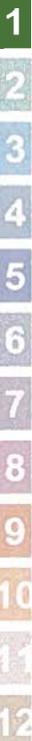
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# Case Narrative

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

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**Job ID: 580-27019-1**

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**Laboratory: TestAmerica Seattle**

**Narrative**

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**Job Narrative**  
**580-27019-1**

**Comments**

No additional comments.

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## Definitions/Glossary

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

### Glossary

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Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.



# Client Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

**Client Sample ID: Area A-S1**

**Lab Sample ID: 580-27019-1**

Date Collected: 06/22/11 14:00

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.3

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.8		mg/Kg	☼	07/06/11 11:34	07/06/11 17:59	1
Lead	1.5		1.4		mg/Kg	☼	07/06/11 11:34	07/06/11 17:59	1
Cadmium	ND		0.47		mg/Kg	☼	07/06/11 11:34	07/06/11 17:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95		0.10		%			07/01/11 13:58	1
Percent Moisture	4.7		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area A-S2**

**Lab Sample ID: 580-27019-2**

Date Collected: 06/22/11 14:05

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 97.0

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.9		mg/Kg	☼	07/06/11 11:34	07/06/11 18:06	1
Lead	2.0		1.5		mg/Kg	☼	07/06/11 11:34	07/06/11 18:06	1
Cadmium	ND		0.49		mg/Kg	☼	07/06/11 11:34	07/06/11 18:06	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97		0.10		%			07/01/11 13:58	1
Percent Moisture	3.0		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area A-S3**

**Lab Sample ID: 580-27019-3**

Date Collected: 06/22/11 14:10

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 96.1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg	☼	07/06/11 11:34	07/06/11 18:12	1
Lead	1.9		1.5		mg/Kg	☼	07/06/11 11:34	07/06/11 18:12	1
Cadmium	ND		0.50		mg/Kg	☼	07/06/11 11:34	07/06/11 18:12	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10		%			07/01/11 13:58	1
Percent Moisture	3.9		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area A-S4**

**Lab Sample ID: 580-27019-4**

Date Collected: 06/22/11 14:15

Matrix: Solid

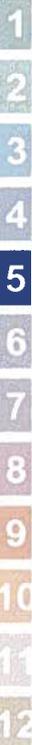
Date Received: 06/24/11 15:00

Percent Solids: 95.6

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.9		mg/Kg	☼	07/06/11 11:34	07/06/11 18:19	1
Lead	1.5		1.5		mg/Kg	☼	07/06/11 11:34	07/06/11 18:19	1
Cadmium	ND		0.48		mg/Kg	☼	07/06/11 11:34	07/06/11 18:19	1

TestAmerica Seattle



# Client Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10		%			07/01/11 13:58	1
Percent Moisture	4.4		0.10		%			07/01/11 13:58	1

### Client Sample ID: Area A-S10

Date Collected: 06/22/11 15:00  
Date Received: 06/24/11 15:00

### Lab Sample ID: 580-27019-5

Matrix: Solid  
Percent Solids: 95.2

### Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.1		mg/Kg	⊛	07/06/11 11:37	07/06/11 18:25	1
Lead	1.6		1.5		mg/Kg	⊛	07/06/11 11:37	07/06/11 18:25	1
Cadmium	ND		0.52		mg/Kg	⊛	07/06/11 11:37	07/06/11 18:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95		0.10		%			07/01/11 13:58	1
Percent Moisture	4.8		0.10		%			07/01/11 13:58	1

### Client Sample ID: Area B-S1

Date Collected: 06/23/11 11:00  
Date Received: 06/24/11 15:00

### Lab Sample ID: 580-27019-6

Matrix: Solid  
Percent Solids: 95.8

### Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.9		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:29	1
Lead	1.6		1.4		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:29	1
Cadmium	ND		0.48		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:29	1

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10		%			07/01/11 13:58	1
Percent Moisture	4.2		0.10		%			07/01/11 13:58	1

### Client Sample ID: Area B-S2

Date Collected: 06/23/11 11:05  
Date Received: 06/24/11 15:00

### Lab Sample ID: 580-27019-7

Matrix: Solid  
Percent Solids: 95.4

### Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.1		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:36	1
Lead	5.1		1.5		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:36	1
Cadmium	ND		0.52		mg/Kg	⊛	07/06/11 12:41	07/06/11 21:36	1

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95		0.10		%			07/01/11 13:58	1
Percent Moisture	4.6		0.10		%			07/01/11 13:58	1

# Client Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

**Client Sample ID: Area B-S3**

Date Collected: 06/23/11 11:10

Date Received: 06/24/11 15:00

**Lab Sample ID: 580-27019-8**

Matrix: Solid

Percent Solids: 96.3

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg	☼	07/06/11 12:41	07/06/11 21:42	1
Lead	1.5		1.5		mg/Kg	☼	07/06/11 12:41	07/06/11 21:42	1
Cadmium	ND		0.51		mg/Kg	☼	07/06/11 12:41	07/06/11 21:42	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10		%			07/01/11 13:58	1
Percent Moisture	3.7		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area B-S4**

Date Collected: 06/23/11 11:15

Date Received: 06/24/11 15:00

**Lab Sample ID: 580-27019-9**

Matrix: Solid

Percent Solids: 95.5

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.8		mg/Kg	☼	07/06/11 12:41	07/06/11 21:48	1
Lead	ND		1.4		mg/Kg	☼	07/06/11 12:41	07/06/11 21:48	1
Cadmium	ND		0.47		mg/Kg	☼	07/06/11 12:41	07/06/11 21:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95		0.10		%			07/01/11 13:58	1
Percent Moisture	4.5		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area B-S10**

Date Collected: 06/23/11 12:00

Date Received: 06/24/11 15:00

**Lab Sample ID: 580-27019-10**

Matrix: Solid

Percent Solids: 95.2

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.6		mg/Kg	☼	07/06/11 12:41	07/06/11 21:55	1
Lead	1.4		1.3		mg/Kg	☼	07/06/11 12:41	07/06/11 21:55	1
Cadmium	ND		0.43		mg/Kg	☼	07/06/11 12:41	07/06/11 21:55	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95		0.10		%			07/01/11 13:58	1
Percent Moisture	4.8		0.10		%			07/01/11 13:58	1

**Client Sample ID: Area C-S1**

Date Collected: 06/23/11 12:10

Date Received: 06/24/11 15:00

**Lab Sample ID: 580-27019-11**

Matrix: Solid

Percent Solids: 96.1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.7		mg/Kg	☼	07/06/11 12:41	07/06/11 22:01	1
Lead	1.3		1.3		mg/Kg	☼	07/06/11 12:41	07/06/11 22:01	1
Cadmium	ND		0.44		mg/Kg	☼	07/06/11 12:41	07/06/11 22:01	1

TestAmerica Seattle

# Client Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	DII Fac
Percent Solids	96		0.10		%			07/06/11 14:23	1
Percent Moisture	3.9		0.10		%			07/06/11 14:23	1

Client Sample ID: Area C-S2

Lab Sample ID: 580-27019-12

Date Collected: 06/23/11 12:15

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.9

Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Arsenic	ND		3.1		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:08	1
Lead	1.6		1.5		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:08	1
Cadmium	ND		0.51		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:08	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	DII Fac
Percent Solids	96		0.10		%			07/06/11 14:23	1
Percent Moisture	4.1		0.10		%			07/06/11 14:23	1

Client Sample ID: Area C-S3

Lab Sample ID: 580-27019-13

Date Collected: 06/23/11 12:20

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 92.9

Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Arsenic	2.7		2.7		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:14	1
Lead	2.3		1.3		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:14	1
Cadmium	ND		0.45		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:14	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	DII Fac
Percent Solids	93		0.10		%			07/06/11 14:23	1
Percent Moisture	7.1		0.10		%			07/06/11 14:23	1

Client Sample ID: Area C-S4

Lab Sample ID: 580-27019-14

Date Collected: 06/23/11 12:25

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.2

Method: 6010B - Metals (ICP)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Arsenic	ND		2.9		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:38	1
Lead	2.3		1.4		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:38	1
Cadmium	ND		0.48		mg/Kg	⊛	07/06/11 12:41	07/06/11 22:38	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	DII Fac
Percent Solids	95		0.10		%			07/06/11 14:23	1
Percent Moisture	4.8		0.10		%			07/06/11 14:23	1

# Client Sample Results

Client: Hart Crowser, Inc.  
 Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

**Client Sample ID: Area C-S10**

**Lab Sample ID: 580-27019-15**

Date Collected: 06/23/11 13:10

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.9

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg	*	07/06/11 12:41	07/06/11 22:44	1
Lead	ND		1.5		mg/Kg	*	07/06/11 12:41	07/06/11 22:44	1
Cadmium	ND		0.50		mg/Kg	*	07/06/11 12:41	07/06/11 22:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96		0.10		%			07/06/11 14:23	1
Percent Moisture	4.1		0.10		%			07/06/11 14:23	1



# QC Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

## Method: 6010B - Metals (ICP)

<b>Lab Sample ID: MB 580-89648/22-A</b>							<b>Client Sample ID: Method Blank</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89727</b>							<b>Prep Batch: 89648</b>			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Arsenic	ND		3.0		mg/Kg		07/06/11 11:37	07/06/11 15:48	1	
Lead	ND		1.5		mg/Kg		07/06/11 11:37	07/06/11 15:48	1	
Cadmium	ND		0.50		mg/Kg		07/06/11 11:37	07/06/11 15:48	1	

<b>Lab Sample ID: LCS 580-89648/23-A</b>							<b>Client Sample ID: Lab Control Sample</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89727</b>							<b>Prep Batch: 89648</b>			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits			
Arsenic	200	195		mg/Kg		98	80 - 120			
Lead	50.0	48.1		mg/Kg		96	80 - 120			
Cadmium	5.00	4.80		mg/Kg		96	80 - 120			

<b>Lab Sample ID: LCSD 580-89648/24-A</b>							<b>Client Sample ID: Lab Control Sample Dup</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89727</b>							<b>Prep Batch: 89648</b>			
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD Limit	
Arsenic	200	198		mg/Kg		99	80 - 120		2 20	
Lead	50.0	48.7		mg/Kg		97	80 - 120		1 20	
Cadmium	5.00	4.86		mg/Kg		97	80 - 120		1 20	

<b>Lab Sample ID: MB 580-89665/21-A</b>							<b>Client Sample ID: Method Blank</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89731</b>							<b>Prep Batch: 89665</b>			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Arsenic	ND		3.0		mg/Kg		07/06/11 13:19	07/06/11 19:56	1	
Lead	ND		1.5		mg/Kg		07/06/11 13:19	07/06/11 19:56	1	
Cadmium	ND		0.50		mg/Kg		07/06/11 13:19	07/06/11 19:56	1	

<b>Lab Sample ID: LCS 580-89665/22-A</b>							<b>Client Sample ID: Lab Control Sample</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89731</b>							<b>Prep Batch: 89665</b>			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits			
Arsenic	200	188		mg/Kg		94	80 - 120			
Lead	50.0	45.9		mg/Kg		92	80 - 120			
Cadmium	5.00	4.61		mg/Kg		92	80 - 120			

<b>Lab Sample ID: LCSD 580-89665/23-A</b>							<b>Client Sample ID: Lab Control Sample Dup</b>			
<b>Matrix: Solid</b>							<b>Prep Type: Total/NA</b>			
<b>Analysis Batch: 89731</b>							<b>Prep Batch: 89665</b>			
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD Limit	
Arsenic	200	191		mg/Kg		95	80 - 120		1 20	
Lead	50.0	46.8		mg/Kg		94	80 - 120		2 20	
Cadmium	5.00	4.69		mg/Kg		94	80 - 120		2 20	

# QC Sample Results

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 580-89665/24-A  
Matrix: Solid  
Analysis Batch: 89731

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 89665

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	% Rec	% Rec.
							Limits
Arsenic	109	112		mg/Kg		103	71.1 - 128. 9
Lead	152	167		mg/Kg		110	75.3 - 125. 1
Cadmium	110	117		mg/Kg		107	73.2 - 126. 8



# Lab Chronicle

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

**Client Sample ID: Area A-S1**

**Lab Sample ID: 580-27019-1**

Date Collected: 06/22/11 14:00  
Date Received: 06/24/11 15:00

Matrix: Solid  
Percent Solids: 95.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89648	07/06/11 11:34	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89727	07/06/11 17:59	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

**Client Sample ID: Area A-S2**

**Lab Sample ID: 580-27019-2**

Date Collected: 06/22/11 14:05  
Date Received: 06/24/11 15:00

Matrix: Solid  
Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89648	07/06/11 11:34	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89727	07/06/11 18:06	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

**Client Sample ID: Area A-S3**

**Lab Sample ID: 580-27019-3**

Date Collected: 06/22/11 14:10  
Date Received: 06/24/11 15:00

Matrix: Solid  
Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89648	07/06/11 11:34	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89727	07/06/11 18:12	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

**Client Sample ID: Area A-S4**

**Lab Sample ID: 580-27019-4**

Date Collected: 06/22/11 14:15  
Date Received: 06/24/11 15:00

Matrix: Solid  
Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89648	07/06/11 11:34	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89727	07/06/11 18:19	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

**Client Sample ID: Area A-S10**

**Lab Sample ID: 580-27019-5**

Date Collected: 06/22/11 15:00  
Date Received: 06/24/11 15:00

Matrix: Solid  
Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89648	07/06/11 11:37	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89727	07/06/11 18:25	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

# Lab Chronicle

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

## Client Sample ID: Area B-S1

Lab Sample ID: 580-27019-6

Date Collected: 06/23/11 11:00

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 21:29	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

## Client Sample ID: Area B-S2

Lab Sample ID: 580-27019-7

Date Collected: 06/23/11 11:05

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 21:36	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

## Client Sample ID: Area B-S3

Lab Sample ID: 580-27019-8

Date Collected: 06/23/11 11:10

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 21:42	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

## Client Sample ID: Area B-S4

Lab Sample ID: 580-27019-9

Date Collected: 06/23/11 11:15

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 21:48	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

## Client Sample ID: Area B-S10

Lab Sample ID: 580-27019-10

Date Collected: 06/23/11 12:00

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 21:55	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89425	07/01/11 13:58	KKW	TAL SEA

# Lab Chronicle

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

## Client Sample ID: Area C-S1

Lab Sample ID: 580-27019-11

Date Collected: 06/23/11 12:10

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 22:01	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89690	07/06/11 14:23	ZF	TAL SEA

## Client Sample ID: Area C-S2

Lab Sample ID: 580-27019-12

Date Collected: 06/23/11 12:15

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 22:08	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89690	07/06/11 14:23	ZF	TAL SEA

## Client Sample ID: Area C-S3

Lab Sample ID: 580-27019-13

Date Collected: 06/23/11 12:20

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 22:14	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89690	07/06/11 14:23	ZF	TAL SEA

## Client Sample ID: Area C-S4

Lab Sample ID: 580-27019-14

Date Collected: 06/23/11 12:25

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 22:38	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89690	07/06/11 14:23	ZF	TAL SEA

## Client Sample ID: Area C-S10

Lab Sample ID: 580-27019-15

Date Collected: 06/23/11 13:10

Matrix: Solid

Date Received: 06/24/11 15:00

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			89665	07/06/11 12:41	ZF	TAL SEA
Total/NA	Analysis	6010B		1	89731	07/06/11 22:44	SP	TAL SEA
Total/NA	Analysis	Moisture		1	89690	07/06/11 14:23	ZF	TAL SEA

### Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

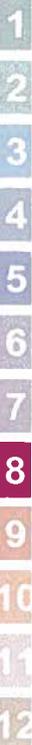
# Certification Summary

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska	Alaska UST	10	UST-022
TestAmerica Seattle	Alaska	TA-Port Heiden Mobile Lab	10	UST-093
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana	MT DEQ UST	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	USDA		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.



# Sample Summary

Client: Hart Crowser, Inc.  
Project/Site: Swinomish-Lime Storage

TestAmerica Job ID: 580-27019-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-27019-1	Area A-S1	Solid	06/22/11 14:00	06/24/11 15:00
580-27019-2	Area A-S2	Solid	06/22/11 14:05	06/24/11 15:00
580-27019-3	Area A-S3	Solid	06/22/11 14:10	06/24/11 15:00
580-27019-4	Area A-S4	Solid	06/22/11 14:15	06/24/11 15:00
580-27019-5	Area A-S10	Solid	06/22/11 15:00	06/24/11 15:00
580-27019-6	Area B-S1	Solid	06/23/11 11:00	06/24/11 15:00
580-27019-7	Area B-S2	Solid	06/23/11 11:05	06/24/11 15:00
580-27019-8	Area B-S3	Solid	06/23/11 11:10	06/24/11 15:00
580-27019-9	Area B-S4	Solid	06/23/11 11:15	06/24/11 15:00
580-27019-10	Area B-S10	Solid	06/23/11 12:00	06/24/11 15:00
580-27019-11	Area C-S1	Solid	06/23/11 12:10	06/24/11 15:00
580-27019-12	Area C-S2	Solid	06/23/11 12:15	06/24/11 15:00
580-27019-13	Area C-S3	Solid	06/23/11 12:20	06/24/11 15:00
580-27019-14	Area C-S4	Solid	06/23/11 12:25	06/24/11 15:00
580-27019-15	Area C-S10	Solid	06/23/11 13:10	06/24/11 15:00

July 12, 2011

**TestAmerica Project Number: G1F280458**  
PO/Contract: 580-27019

Curtis Armstrong  
TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424

Dear Mr. Armstrong,

This report contains the analytical results for the sample received under chain of custody by TestAmerica on June 28, 2011. This sample is associated with your Swinomish, Lime Storage project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4402.

Sincerely,



Linda C. Laver for  
Jill Kellmann  
Project Manager

## Table of Contents

### TestAmerica West Sacramento Project Number G1F280458

Case Narrative

Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

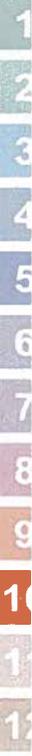
SOLID, 8290, Dioxins/Furans with Totals

Sample: 1

Sample Data Sheet

Method Blank Report

Laboratory QC Report





## Case Narrative

### TestAmerica West Sacramento Project Number G1F280458

#### **SOLID, 8290, Dioxins/Furans with Totals**

Sample: 1

The analytical result for this sample is reported on a dry weight basis using the percent solids data provided by TestAmerica Seattle.

There are no other anomalies associated with this project.

## TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
A2LA (DoD-ELAP)	2928-01	New Mexico	NA
Alaska	UST-055	New York*	11666
Arizona	AZ0708	Oregon*	CA 200005
Arkansas	88-0691	Pennsylvania*	68-1272
California*	01119CA	South Carolina	87014
Colorado	NA	Texas*	T104704399-08-TX
Connecticut	PH-0691	UCMR	CA00044
Florida*	E87570	US Fish & Wildlife	LE148388-0
Georgia	960	USDA Foreign Plant	37-82605
Guam	10-009r	USDA Foreign Soil	P330-09-00055
Hawaii	NA	Utah*	QUAN1
Illinois*	002701	Virginia	178
Kansas*	E-10375	Washington	C581
Louisiana*	01944	West Virginia	9930C, 334
Michigan	9947	Wisconsin	998204680
Nevada	CA44	Wyoming	8TMS-Q
New Jersey*	CA005		

\*NELAP accredited. A more detailed parameter list is available upon request. Updated 5/25/2011

### QC Parameter Definitions

**QC Batch:** The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

**Method Blank:** An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

**Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD):** An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

**Duplicate Sample (DU):** Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

**Surrogates:** Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

**Matrix Spike and Matrix Spike Duplicate (MS/MSD):** An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

**Isotope Dilution:** For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

**Control Limits:** The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.



## Sample Summary

### TestAmerica West Sacramento Project Number G1F280458

<u>WO#</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sampling Date</u>	<u>Received Date</u>
MKJPA	1	Area A-S1	6/22/2011 02:00 PM	6/28/2011 09:15 AM

**Notes(s):**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica Seattle  
 5755 8th Street East  
 Tacoma, WA 98424  
 Phone (253) 922-2310 Fax (253) 922-5047

### Chain of Custody Record

TestAmerica  
 THE LABORATORY FOR ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b> Client Contact: Armstrong, Curtis Shipping/Receiving: curtis.armstrong@testamericalab.com Company: TestAmerica Laboratories, Inc. Address: 880 Riverside Parkway City: West Sacramento State, Zip: CA, 95605 Phone: 916-373-5600(Tel) Email: Project Name: Swinomish-Lime Storage Site:		Lab P/N: Armstrong, Curtis E-Mail: curtis.armstrong@testamericalab.com Carrier Tracking No(s): COC No: 580-6118-1 Page: Page 1 of 1 Job #: 580-27019-1	
Due Date Requested: 7/7/2011 TAT Requested (days):		<b>Analysis Requested</b>	
PO #: WO #: Project #: 58004794 SSOW#:	Sample Date: 6/22/11 Sample Time: 14:00 Pacific	Sample Type (C=Comp, G=grab): Presentation Code: Solid	SUBCONTRACT/ Dioxins B280 X
<b>Sample Identification - Client ID</b> Area A-51		<b>Special Instructions/Note:</b>	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverables Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: Tom B... Date/Time: 6/27/11 1505 Company: TA-Sea... Company		Received by: [Signature] Date/Time: 6-28-11 1010 Company: TALLUS Company	
Relinquished by: [Signature] Date/Time:		Received by: [Signature] Date/Time:	
Relinquished by:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No:		Cooler Temperature: °C and Other Remarks:	



CLIENT TAL SEATTLE PM SMK LOG # 71353

LOT# (QUANTIMS ID) G1F280458 QUOTE# 45270 LOCATION W16A

DATE RECEIVED 6-28-11 TIME RECEIVED 9:45 Checked (✓)

DELIVERED BY  FEDEX  ON TRAC  OTHER  
 GOLDENSTATE  UPS  EZ PARCEL  
 TAL COURIER  TAL SF  CLIENT

SHIPPING CONTAINER(S)  TAL  CLIENT  N/A

CUSTODY SEAL STATUS  INTACT  BROKEN  N/A

CUSTODY SEAL #(S) 147076

COC #(S) 580-6118.1

TEMPERATURE BLANK Observed: 1 Corrected: 2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)  
Observed: 3 Average 3 Corrected Average 3

LABORATORY THERMOMETER ID:  
IR UNIT: #4  #5  OTHER

Initials Bj Date 6-28-11

pH MEASURED  YES  ANOMALY  N/A

LABELLED BY.....

LABELS CHECKED BY.....

PEER REVIEW  NA

SHORT HOLD TEST NOTIFICATION SAMPLE RECEIVING   
WETCHEM  N/A   
VOA-ENCORES  N/A

METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL  N/A

COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES  N/A

CLOUSEAU  TEMPERATURE EXCEEDED (2 °C - 6 °C)\*1  N/A  
 WET ICE  BLUE ICE  GEL PACK  NO COOLING AGENTS USED  PM NOTIFIED

Notes \_\_\_\_\_  
Initials gl Date 28 June 11

\*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.



Lot ID: G1F280458

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
VOAh*	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
___AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ	1																			
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
___CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid    s = sulfuric acid    na = sodium hydroxide    n = nitric acid    zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

From: (253) 922-2310  
Cathy Gamble  
TestAmerica Tacoma  
5755 8TH STREET EAST  
Tacoma, WA 98424

Origin ID: TCMA



J11201106290225

BILL RECIPIENT

SHIP TO: (916) 379-4384  
Sample Control  
TAL West Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605



Ship Date: 27 JUN 11  
ActWgt: 11.0 LB  
CAD: 5456984/JNET3180

Delivery Address Bar Code



Ref # 27019  
Invoice #  
PO #  
Dept #

TUE - 28 JUN A1  
PRIORITY OVERNIGHT

TRK# 7969 1557 8115  
0201

WD BLUA

95605  
CA-US  
SMF



50FG10C30M5F4



# SOLID, 8290, Dioxins/Furans with Totals



TestAmerica Seattle

Client Sample ID: Area A-S1

Trace Level Organic Compounds

Lot-Sample #...: G1F280458-001    Work Order #...: MKJPA1AC    Matrix.....: SO  
 Date Sampled...: 06/22/11    Date Received...: 06/28/11  
 Prep Date.....: 06/30/11    Analysis Date...: 07/06/11  
 Prep Batch #...: 1181128  
 Dilution Factor: 0.95

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.11	pg/g	SW846 8290
Total TCDD	ND	0.11	pg/g	SW846 8290
1,2,3,7,8-PeCDD	ND	0.19	pg/g	SW846 8290
Total PeCDD	ND	0.19	pg/g	SW846 8290
1,2,3,4,7,8-HxCDD	ND	0.13	pg/g	SW846 8290
1,2,3,6,7,8-HxCDD	ND	0.11	pg/g	SW846 8290
1,2,3,7,8,9-HxCDD	ND	0.11	pg/g	SW846 8290
Total HxCDD	ND	0.13	pg/g	SW846 8290
1,2,3,4,6,7,8-HpCDD	ND	0.41	pg/g	SW846 8290
Total HpCDD	ND	0.45	pg/g	SW846 8290
OCDD	ND	2.4	pg/g	SW846 8290
2,3,7,8-TCDF	ND	0.21	pg/g	SW846 8290
Total TCDF	ND	0.21	pg/g	SW846 8290
1,2,3,7,8-PeCDF	ND	0.14	pg/g	SW846 8290
2,3,4,7,8-PeCDF	ND	0.16	pg/g	SW846 8290
Total PeCDF	ND	0.16	pg/g	SW846 8290
1,2,3,4,7,8-HxCDF	ND	0.14	pg/g	SW846 8290
1,2,3,6,7,8-HxCDF	ND	0.10	pg/g	SW846 8290
2,3,4,6,7,8-HxCDF	ND	0.057	pg/g	SW846 8290
1,2,3,7,8,9-HxCDF	ND	0.065	pg/g	SW846 8290
Total HxCDF	ND	0.14	pg/g	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	0.22	pg/g	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	0.11	pg/g	SW846 8290
Total HpCDF	ND	0.22	pg/g	SW846 8290
OCDF	ND	0.55	pg/g	SW846 8290

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	(40 - 135)
13C-1,2,3,7,8-PeCDD	79	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	86	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	75	(40 - 135)
13C-OCDD	82	(40 - 135)
13C-2,3,7,8-TCDF	85	(40 - 135)
13C-1,2,3,7,8-PeCDF	82	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	91	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	82	(40 - 135)

NOTE (S) :

Results and reporting limits have been adjusted for dry weight.

# QC DATA ASSOCIATION SUMMARY

G1F280458

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	SO SO	SW846 8290 ASTM D 2216-90		1181128 1192152	



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METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #...: G1F280458      Work Order #...: MKLFE1AA      Matrix.....: SOLID  
 MB Lot-Sample #: G1F300000-128  
 Prep Date.....: 06/30/11  
 Analysis Date...: 07/06/11      Prep Batch #...: 1181128  
 Dilution Factor: 1

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.11	pg/g	SW846 8290
Total TCDD	ND	0.11	pg/g	SW846 8290
1,2,3,7,8-PeCDD	ND	0.42	pg/g	SW846 8290
Total PeCDD	ND	0.42	pg/g	SW846 8290
1,2,3,4,7,8-HxCDD	ND	0.38	pg/g	SW846 8290
1,2,3,6,7,8-HxCDD	ND	0.39	pg/g	SW846 8290
1,2,3,7,8,9-HxCDD	ND	0.43	pg/g	SW846 8290
Total HxCDD	ND	0.43	pg/g	SW846 8290
1,2,3,4,6,7,8-HpCDD	ND	0.44	pg/g	SW846 8290
Total HpCDD	ND	0.44	pg/g	SW846 8290
OCDD	ND	1.4	pg/g	SW846 8290
2,3,7,8-TCDF	0.73 J		pg/g	SW846 8290
Total TCDF	1.3		pg/g	SW846 8290
1,2,3,7,8-PeCDF	ND	0.60	pg/g	SW846 8290
2,3,4,7,8-PeCDF	ND	0.14	pg/g	SW846 8290
Total PeCDF	ND	0.60	pg/g	SW846 8290
1,2,3,4,7,8-HxCDF	ND	0.86	pg/g	SW846 8290
1,2,3,6,7,8-HxCDF	ND	0.52	pg/g	SW846 8290
2,3,4,6,7,8-HxCDF	ND	0.47	pg/g	SW846 8290
1,2,3,7,8,9-HxCDF	ND	0.48	pg/g	SW846 8290
Total HxCDF	ND	0.86	pg/g	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	1.6	pg/g	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	0.87	pg/g	SW846 8290
Total HpCDF	ND	1.6	pg/g	SW846 8290
OCDF	ND	3.5	pg/g	SW846 8290

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	76	(40 - 135)
13C-1,2,3,7,8-PeCDD	75	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	77	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	73	(40 - 135)
13C-OCDD	73	(40 - 135)
13C-2,3,7,8-TCDF	76	(40 - 135)
13C-1,2,3,7,8-PeCDF	80	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	90	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	76	(40 - 135)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 J Estimated result. Result is less than the reporting limit.

**LABORATORY CONTROL SAMPLE EVALUATION REPORT**

**Trace Level Organic Compounds**

Client Lot #...: G1F280458      Work Order #...: MKLFE1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: G1F300000-128  
 Prep Date.....: 06/30/11      Analysis Date...: 07/06/11  
 Prep Batch #...: 1181128  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
2,3,7,8-TCDD	106	(60 - 138)	SW846 8290
1,2,3,7,8-PeCDD	106	(70 - 122)	SW846 8290
1,2,3,4,7,8-HxCDD	110	(60 - 138)	SW846 8290
1,2,3,6,7,8-HxCDD	108	(68 - 136)	SW846 8290
1,2,3,7,8,9-HxCDD	112	(68 - 138)	SW846 8290
1,2,3,4,6,7,8-HpCDD	103	(71 - 128)	SW846 8290
OCDD	97	(70 - 128)	SW846 8290
2,3,7,8-TCDF	114	(56 - 158)	SW846 8290
1,2,3,7,8-PeCDF	107	(69 - 134)	SW846 8290
2,3,4,7,8-PeCDF	109	(70 - 131)	SW846 8290
1,2,3,4,7,8-HxCDF	106	(74 - 128)	SW846 8290
1,2,3,6,7,8-HxCDF	88	(67 - 140)	SW846 8290
2,3,4,6,7,8-HxCDF	103	(71 - 137)	SW846 8290
1,2,3,7,8,9-HxCDF	107	(72 - 134)	SW846 8290
1,2,3,4,6,7,8-HpCDF	108	(71 - 134)	SW846 8290
1,2,3,4,7,8,9-HpCDF	108	(68 - 129)	SW846 8290
OCDF	101	(63 - 141)	SW846 8290

<u>INTERNAL STANDARD</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C-2,3,7,8-TCDD	82	(40 - 135)
13C-1,2,3,7,8-PeCDD	89	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	85	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	79	(40 - 135)
13C-OCDD	76	(40 - 135)
13C-2,3,7,8-TCDF	83	(40 - 135)
13C-1,2,3,7,8-PeCDF	91	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	96	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	82	(40 - 135)

**NOTE(S):**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #...: G1F280458      Work Order #...: MKLFE1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: G1F300000-128  
 Prep Date.....: 06/30/11      Analysis Date...: 07/06/11  
 Prep Batch #...: 1181128  
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,3,7,8-TCDD	20.0	21.1	pg/g	106	SW846 8290
1,2,3,7,8-PeCDD	100	106	pg/g	106	SW846 8290
1,2,3,4,7,8-HxCDD	100	110	pg/g	110	SW846 8290
1,2,3,6,7,8-HxCDD	100	108	pg/g	108	SW846 8290
1,2,3,7,8,9-HxCDD	100	112	pg/g	112	SW846 8290
1,2,3,4,6,7,8-HpCDD	100	103	pg/g	103	SW846 8290
OCDD	200	195	pg/g	97	SW846 8290
2,3,7,8-TCDF	20.0	22.7	pg/g	114	SW846 8290
1,2,3,7,8-PeCDF	100	107	pg/g	107	SW846 8290
2,3,4,7,8-PeCDF	100	109	pg/g	109	SW846 8290
1,2,3,4,7,8-HxCDF	100	106	pg/g	106	SW846 8290
1,2,3,6,7,8-HxCDF	100	88.1	pg/g	88	SW846 8290
2,3,4,6,7,8-HxCDF	100	103	pg/g	103	SW846 8290
1,2,3,7,8,9-HxCDF	100	107	pg/g	107	SW846 8290
1,2,3,4,6,7,8-HpCDF	100	108	pg/g	108	SW846 8290
1,2,3,4,7,8,9-HpCDF	100	108	pg/g	108	SW846 8290
OCDF	200	201	pg/g	101	SW846 8290

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	82	(40 - 135)
13C-1,2,3,7,8-PeCDD	89	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	85	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	79	(40 - 135)
13C-OCDD	76	(40 - 135)
13C-2,3,7,8-TCDF	83	(40 - 135)
13C-1,2,3,7,8-PeCDF	91	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	96	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	82	(40 - 135)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

# Sample Custody Record

Samples Shipped to: Test America



27019  
1 of 2  
Hart Crowser, Inc.  
1910 Fairview Avenue East  
Seattle, Washington 98102-3699  
Phone: 206-324-9530 FAX: 206-328-5581

JOB	LAB NUMBER		REQUESTED ANALYSIS				OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	12737-01		NO. OF CONTAINERS				
PROJECT NAME	<u>Swinemish - Lime Storage</u>						
HART CROWSER CONTACT	<u>Jim Storkes (jim.storkes@hartcrowser.com)</u>						
SAMPLED BY:	<u>Phil Cordell</u>						
LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX		
1	Area A-51		6/22/11	1400	SOIL	X	3-402
2	Area A-52			1405		X	1-402
3	Area A-53			1410		X	"
4	Area A-54			1415		X	"
5	Area A-510			1500		X	"
6	Area B-51		6/23/11	1100		X	"
7	Area B-52			1105		X	"
8	Area B-53			1110		X	"
9	Area B-54			1115		X	"
10	Area B-510			1200		X	"
SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS: # Arsenic, Cadmium, lead (EPA 6010C)							TOTAL NUMBER OF CONTAINERS 12
RELINQUISHED BY: <u>Phil Cordell</u> SIGNATURE: <u>Phil Cordell</u> PRINT NAME: <u>Phil Cordell</u> COMPANY: <u>HCL</u>							SAMPLE RECEIPT INFORMATION: CUSTODY SEALS: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A GOOD CONDITION: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TEMPERATURE: <input type="checkbox"/> SHIPMENT METHOD: <input type="checkbox"/> HAND <input type="checkbox"/> COURIER <input type="checkbox"/> OVERNIGHT
RECEIVED BY: <u>Frankie L. Hays, Jr.</u> SIGNATURE: <u>Frankie L. Hays, Jr.</u> PRINT NAME: <u>Frankie L. Hays, Jr.</u> COMPANY: <u>LA-SEA</u>							TURNAROUND TIME: <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK <input type="checkbox"/> 48 HOURS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> 72 HOURS <input type="checkbox"/> OTHER
RELINQUISHED BY: _____ SIGNATURE: _____ PRINT NAME: _____ COMPANY: _____							COOLER NO.: _____ STORAGE LOCATION: _____ See Lab Work Order No. _____ for Other Contract Requirements

# Sample Custody Record

Samples Shipped to: Test America



27019  
2 of 2  
Hart Crowser, Inc.  
1910 Fairview Avenue East  
Seattle, Washington 98102-3699  
Phone: 206-324-9530 FAX: 206-328-5581

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JOB <u>12337-01</u> LAB NUMBER		PROJECT NAME <u>Swinomish - Lime Storage</u>				OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
HART CROWSER CONTACT <u>Phil Cordell</u>		HART CROWSER CONTACT <u>Jim Stokes</u>				
SAMPLED BY: <u>PRC</u>		SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:				TOTAL NUMBER OF CONTAINERS
		* As, Cd, Pb (EPA-6010)				
LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	NO. OF CONTAINERS
11	Area C-51		6/23/11	1210	SOIL	1
12	Area C-52			1215		1
13	Area C-53			1220		1
14	Area C-54			1225		1
15	Area C-5D			1310		1
* Metals Cooler/TB DigIR cor-lyc ime 8-2 Cooler Dsc Ly Red/White @ Lab 500 WetPacks Packing Plastic Bag						
RELINQUISHED BY		DATE	RECEIVED BY	DATE	SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:	
SIGNATURE <u>Phil Cordell</u>		6/24/11	<u>[Signature]</u>	6/24/11	* As, Cd, Pb (EPA-6010)	
PRINT NAME <u>Phil Cordell</u>		TIME	PRINT NAME <u>Fran C's 10 Langst</u>	TIME	COOLER NO. _____ STORAGE LOCATION: _____	
COMPANY <u>PRC</u>		8930	COMPANY <u>TH-SEA</u>	1405	See Lab Work Order No. _____ for Other Contract Requirements	
RELINQUISHED BY		DATE	RECEIVED BY	DATE	TURNAROUND TIME:	
SIGNATURE			SIGNATURE		<input type="checkbox"/> 24 HOURS <input type="checkbox"/> 1 WEEK	
PRINT NAME			PRINT NAME		<input type="checkbox"/> 48 HOURS <input checked="" type="checkbox"/> STANDARD	
COMPANY			COMPANY		<input type="checkbox"/> 72 HOURS <input type="checkbox"/> OTHER _____	

## Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-27019-1

Login Number: 27019

List Source: TestAmerica Seattle

List Number: 1

Creator: Luna, Francisco

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	Not needed on soil samples.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	No VOA rec'd.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

**APPENDIX B  
DISPOSAL TICKETS**



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1512055

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 490643	GRID 000000
WEIGHMASTER GH00035 GAIL H		
DATE IN 4 July 2011	TIME IN 3:29 pm	
DATE OUT 4 July 2011	TIME OUT 3:54 pm	
VEHICLE 6181	ROLL OFF 0CEU445133	
REFERENCE 0CEU445133	ORIGIN	

1. Gross Weight 106,180.00 LB  
 Tare Weight 46,840.00 LB  
 Net Weight 59,320.00 LB 29.66 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
29.66	TN	34 LB81 PDS 34  06/23/11 Inbound - RAIL TICKET DTX456143 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1512053

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 490641	GRID 000000
WEIGHMASTER GH00035 GAIL H		
DATE IN 4 July 2011	TIME IN 3:30 pm	
DATE OUT 4 July 2011	TIME OUT 3:50 pm	
VEHICLE 8648	ROLL OFF TPHU252029	
REFERENCE TPHU252029	ORIGIN	

1. Gross Weight 109,420.00 LB  
 Tare Weight 45,880.00 LB  
 Net Weight 63,540.00 LB 31.77 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.77	TN	34 LB81 PDS 34  06/23/11 Inbound - RAIL TICKET DTX456143 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1398864

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 490453	GRID 000000
WEIGHMASTER G100036 GAIL H		
DATE IN 4 July 2011	TIME IN 8:27 am	
DATE OUT 4 July 2011	TIME OUT 8:45 am	
VEHICLE 1556	ROLL OFF GCEU425978	
REFERENCE GCEU425978	ORIGIN Anacortes	

1 Gross Weight 103,160.00 LB  
 Tare Weight 40,280.00 LB  
 Net Weight 62,880.00 LB 31.44 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.44	TN	34 EB8J PCS 34  06/30/11 Inbound - RAIL TICKET DTTX27571 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375072

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 488677	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 25 June 2011	TIME IN 11:38 am	
DATE OUT 25 June 2011	TIME OUT 12:11 pm	
VEHICLE 9949	ROLL OFF GCEU431071	
REFERENCE GCEU431071	ORIGIN	

1 Gross Weight 99,660.00 LB  
 Tare Weight 46,740.00 LB  
 Net Weight 52,920.00 LB 26.46 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
26.46	TN	34 EB8J PCS 34  06/22/11 Inbound - RAIL TICKET DTTX27571 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375096

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.,  
 Hart Crowser Inc.,

Contract: LW-11240

SITE 42	TICKET 488701	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 25 June 2011	TIME IN 12:32 pm	
DATE OUT 25 June 2011	TIME OUT 1:03 pm	
VEHICLE 9951	ROLL OFF TOLU458824	
REFERENCE TOLU458824	ORIGIN	

1. Gross Weight 97,660.00 LB  
 Tare Weight 46,060.00 LB  
 Net Weight 51,600.00 LB 25.80 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.80	TN	34 EB81 FCS 34  06/22/11 Inbound - RAIL TICKET DTTX27571 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375100

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.,  
 Hart Crowser Inc.,

Contract: LW-11240

SITE 42	TICKET 488705	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 25 June 2011	TIME IN 12:41 pm	
DATE OUT 25 June 2011	TIME OUT 1:09 pm	
VEHICLE 9949	ROLL OFF TRLU900955	
REFERENCE TRLU900955	ORIGIN	

1. Gross Weight 100,160.00 LB  
 Tare Weight 46,000.00 LB  
 Net Weight 54,160.00 LB 27.08 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
27.08	TN	34 EB81 FCS 34  06/22/11 Inbound - RAIL TICKET DTTX27571 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375122

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 488727	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 25 June 2011		TIME IN 1:31 pm
DATE OUT 25 June 2011		TIME OUT 2:00 pm
VEHICLE 9951		ROLL OFF TOLU460811
REFERENCE TOLU460811	ORIGIN	

1. Gross Weight 108,780.00 LB  
 Tare Weight 45,700.00 LB  
 Net Weight 63,080.00 LB 31.54 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
31.54	TN	34 EB8J FCS 34  06/22/11 Inbound - RAIL TICKET DTTX27571 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375711

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 489307	GRID 000000
WEIGHMASTER VR00020 VICKY R		
DATE IN 28 June 2011		TIME IN 2:37 pm
DATE OUT 28 June 2011		TIME OUT 2:59 pm
VEHICLE 9951		ROLL OFF GCEU430480
REFERENCE GCEU430480	ORIGIN	

1. Gross Weight 113,620.00 LB  
 Tare Weight 47,180.00 LB  
 Net Weight 66,440.00 LB 33.22 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
33.22	TN	34 EB8J FCS 34  06/23/11 Inbound - RAIL TICKET BNSF231068 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375716

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract#: LW-11240

SITE 42	TICKET 489312	GRID 000000
WEIGHMASTER VR00020 VICKY R		
DATE IN 28 June 2011	TIME IN 2:44 pm	
DATE OUT 28 June 2011	TIME OUT 3:04 pm	
VEHICLE 1565	ROLL OFF GCEU435252	
REFERENCE GCEU435252	ORIGIN	

1. Gross Weight 103,280.00 LB  
 Tare Weight 47,000.00 LB  
 Net Weight 56,280.00 LB 28.14 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.14	TN	34 LB81 PCS 34  06/28/11 Inbound - RAIL TICKET BNSF231068 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375811

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract#: LW-11240

SITE 42	TICKET 489403	GRID 000000
WEIGHMASTER VR00020 VICKY R		
DATE IN 29 June 2011	TIME IN 7:45 am	
DATE OUT 29 June 2011	TIME OUT 8:07 am	
VEHICLE 7331	ROLL OFF TOLU457471	
REFERENCE TOLU457471	ORIGIN Anacortes	

1. Gross Weight 103,020.00 LB  
 Tare Weight 46,560.00 LB  
 Net Weight 56,460.00 LB 28.23 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.23	TN	34 LB81 PCS 34  06/28/11 Inbound - RAIL TICKET DTTX456094 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1375617

RABANCO REGIONAL DISPOSAL  
 P.O. BOX 338  
 Roosevelt, WA 99356  
 (509) 384-5641

011657 - 0001  
 Hart Crowser Inc.  
 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 489409	GRID 000000
WEIGHMASTER UR00020 VICKY R		
DATE IN 29 June 2011	TIME IN 7:58 am	
DATE OUT 29 June 2011	TIME OUT 8:17 am	
VEHICLE 9951	ROLL OFF TOLU466648	
REFERENCE TOLU466648	ORIGIN	

1. Gross Weight 103,680.00 LB  
 Tare Weight 46,020.00 LB  
 Net Weight 57,660.00 LB 28.83 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.83	TN	34 [E8] FCS 34  06/23/11 Inbound - RAIL TICKET DTTX456094 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1398020

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 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 489606	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 30 June 2011	TIME IN 8:23 am	
DATE OUT 30 June 2011	TIME OUT 8:49 am	
VEHICLE 3450	ROLL OFF UPCU411455	
REFERENCE UPCU411455	ORIGIN	

1. Gross Weight 100,680.00 LB  
 Tare Weight 45,960.00 LB  
 Net Weight 54,720.00 LB 27.36 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
27.36	TN	34 [E8] FCS 34  06/23/11 Inbound - RAIL TICKET BNSF231044 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

1398033

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 Hart Crowser Inc.

Contract: LW-11240

SITE 42	TICKET 489619	GRID 000000
WEIGHMASTER JF00025 JANICE F		
DATE IN 30 June 2011	TIME IN 8:52 am	
DATE OUT 30 June 2011	TIME OUT 9:16 am	
VEHICLE 1565	ROLL OFF TRLU901512	
REFERENCE TRLU901512	ORIGIN	

1. Gross Weight 107,080.00 LB  
 Tare Weight 46,400.00 LB  
 Net Weight 60,680.00 LB 30.34 TN

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
30.34	TN	34 EBBI FCS 34  06/23/11 Inbound - RAIL TICKET ENSF231044 Skagit Intermodal / Burlington				
0.00 YD						NET AMOUNT

