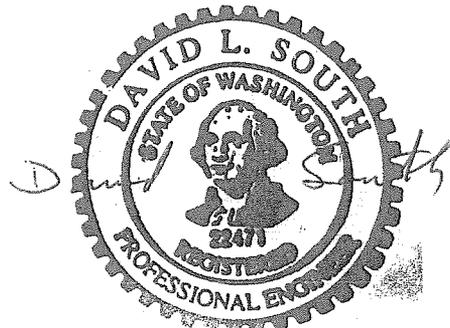


Professional Engineer's Statement  
Everett Smelter Cleanup  
June 16, 2008

Soil remediation was carried out at the following homes within the Everett Smelter Site during the period May 2007 to November 2007:

Address	Owner
229 Bridgeway	Arthur Guinn Shaffer
225 Bridgeway	Steffanie Campbell
223 Bridgeway	Godfrey and Ramona Holzinger
215 Bridgeway	Joshua & Michelle Allen ←
209 Bridgeway	Maria Paulay
207 Bridgeway	Paul D. King
205 Bridgeway	William C. MacPherson
201 Bridgeway	James and Kathleen Pankiewicz
115 Bridgeway	Mark & Lori Childress
109 Bridgeway	Bud E. Kast

Based on the results of testing and inspections, it is my opinion that the soil remediation carried out at these homes was performed in substantial compliance with the plans, specifications, and related documents governing the work



EXPIRES 5/14/2009

**Washington Department of Ecology  
Everett Smelter Site  
2007 Cleanup**

**Details of Cleanup Activities for 215 Bridgeway**

In 2007, Department of Ecology (Ecology) selected 10 homes within the Everett Smelter Site for cleanup. These homes are located along the east side of Bridgeway in north Everett. Cleanup activities were conducted from May 21, 2007 – November 30, 2007. The cleanup was conducted according to the “Everett Smelter Site: Integrated Final Cleanup Action Plan and Final Environmental Impact Statement for the Upland Area” (see Document Repository information on page 5).

Where used for the first time, definitions for words marked in *bold italics* may be found in the definition section following this summary.

This report describes the cleanup actions that were conducted, where arsenic-contaminated soil was removed and where it remains for the following location:

Property Owner	Joshua & Michelle Allen
Address:	215 Bridgeway Everett, WA 98201
Snohomish County	
State of Washington	
Tax Parcel No.	# 005203-000-046-00

**Purpose of Sampling**

The purpose of sampling was to determine the required depth of excavation for this property. The property was divided into two *Decision Units* A and B, as shown on the attached map in Attachment A. A *rotating laser level* was used to measure the depth of the excavated soil in each decision unit.

The following is a summary of the work done to remediate the property within each of the decision units or other areas on the property.

## DECISION UNIT A

### Cleanup Activities

Results of pre-cleanup sampling indicated 30 inches of soil would have to be excavated in this decision unit. The on-site coordinator witnessed the soil being removed to a target depth of 30 inches.

Attachment B shows that:

- Below 30 inches, the composite sample analyses are below the remediation level of 150 *parts per million (ppm)*.
- Below 30 inches, the soil contains arsenic above the cleanup level of 20 ppm; therefore, a *geofabric* marker was placed.

The Decision Unit was backfilled with clean material as described in the “Specifications for Everett Residential Soil Remediation” (see Document Repository information on page 5). Approximately 6 inches of clean topsoil was placed above the *backfill* and the surface was restored with sod.

### Concrete Steps

The concrete steps leading from street level to the front of the house were left in place and soil was dug around them.

### Tree Stumps

Seven tree stumps were removed from the front and back yard areas.

### Concrete Walkway

The concrete walkway that curved around the western corner of the house, and the concrete pad adjacent to the northern corner of the house were removed. The soil was excavated and refilled beneath these areas. The concrete pad was replaced with a new one, and the former walkway area finished with *crushed rock* and extended to circle the area adjacent to the southern corner of the house.

### Plants

Planting beds were placed in the area adjacent to the front of the house and edged with roman stone provided by the homeowner. Plants were planted according to owner's list of replacement plants.

### Surface for Future Driveway

Upon the request of the homeowner and the owner of the adjacent home at 223 Bridgeway, a compacted gravel surface in preparation for a driveway was prepared from

215 Bridgeway  
Everett, WA 98201

street level to the space between these two homes (in the area occupied by sample A-1 in map of 215 Bridgeway). Both homeowners accepted that the constructed driveway was not motor vehicle usable as-is and would need to be hard surfaced with either concrete or asphalt prior to that use.

A *French drain* was installed at the end of the future driveway area to facilitate drainage with the restoration.

### **DECISION UNIT B**

#### **Cleanup Activities**

Results of pre-cleanup sampling indicated 18 inches of soil would have to be excavated in this decision unit. The on-site coordinator witnessed the soil being removed to a depth of 18 inches.

Attachment B shows that:

- Below 18 inches, the composite sample analyses are below the remediation levels of 60 and 150 parts per million (ppm).
- Below 18 inches, the soil contains arsenic above the cleanup level of 20 ppm; therefore, a geofabric marker was placed.

After placing a geofabric marker, the decision unit was backfilled with clean material as described in the "Specifications for Everett Residential Soil Remediation" (see Document Repository information on page 5). Approximately 6 inches of clean topsoil was placed above the backfill, and the surface was restored with sod.

#### **Planting Bed**

The former planting bed along the back of the house was restored with clean backfill and crushed rock as requested by the homeowner.

#### **Sewer Line and Septic Tank**

During excavation, the remediation crew found that the sewer line running across the back yard toward East Marine View Drive was leaking. The homeowner was notified of this discovery and the sewer line was repaired.

An old septic tank in the backyard was encountered during cleanup. The tank was broken up in place and filled with clean backfill.

RESTORATION SUMMARY

- As part of the property restoration, all roof drain downspouts were connected to a 4" corrugated plastic pipe subsurface drain system that surfaces at the downslope eastern property line.
- Upon the request of the homeowner and the owner of the adjacent home at 223 Bridgeway, a compacted gravel surface for a future driveway was prepared from street level to the space between these two homes, to be surfaced with asphalt or concrete prior to use.
- A French drain was installed at the end of the future driveway area to facilitate drainage with the restoration.
- Plants were planted according to owner's list of replacement plants.
- The concrete pad adjacent to the northern corner of the house was replaced with a new one, and the concrete walkway that curved around the western corner of the house was finished with crushed rock
- The sewer line running across the back yard toward East Marine View Drive was leaking. The homeowner was notified of this discovery and the sewer line was repaired.
- An old septic tank in the backyard was encountered during cleanup. The tank was broken up in place and filled with clean backfill.

MATERIAL QUANTITIES

Quantity of contaminated soil removed:	406.88 Tons
Quantity of clean backfill used:	275 Cubic Yards
Quantity of clean topsoil used:	51 Cubic Yards



Jerome Cruz  
Washington Department of Ecology  
3190 160<sup>th</sup> Ave SE  
Bellevue, WA 98008

January 31, 2007

Attachments: A. Site Map  
B. Graphs of Arsenic Concentration vs. Depth  
C. Explanation of graphs

215 Bridgeway  
Everett, WA 98201

**Note:**

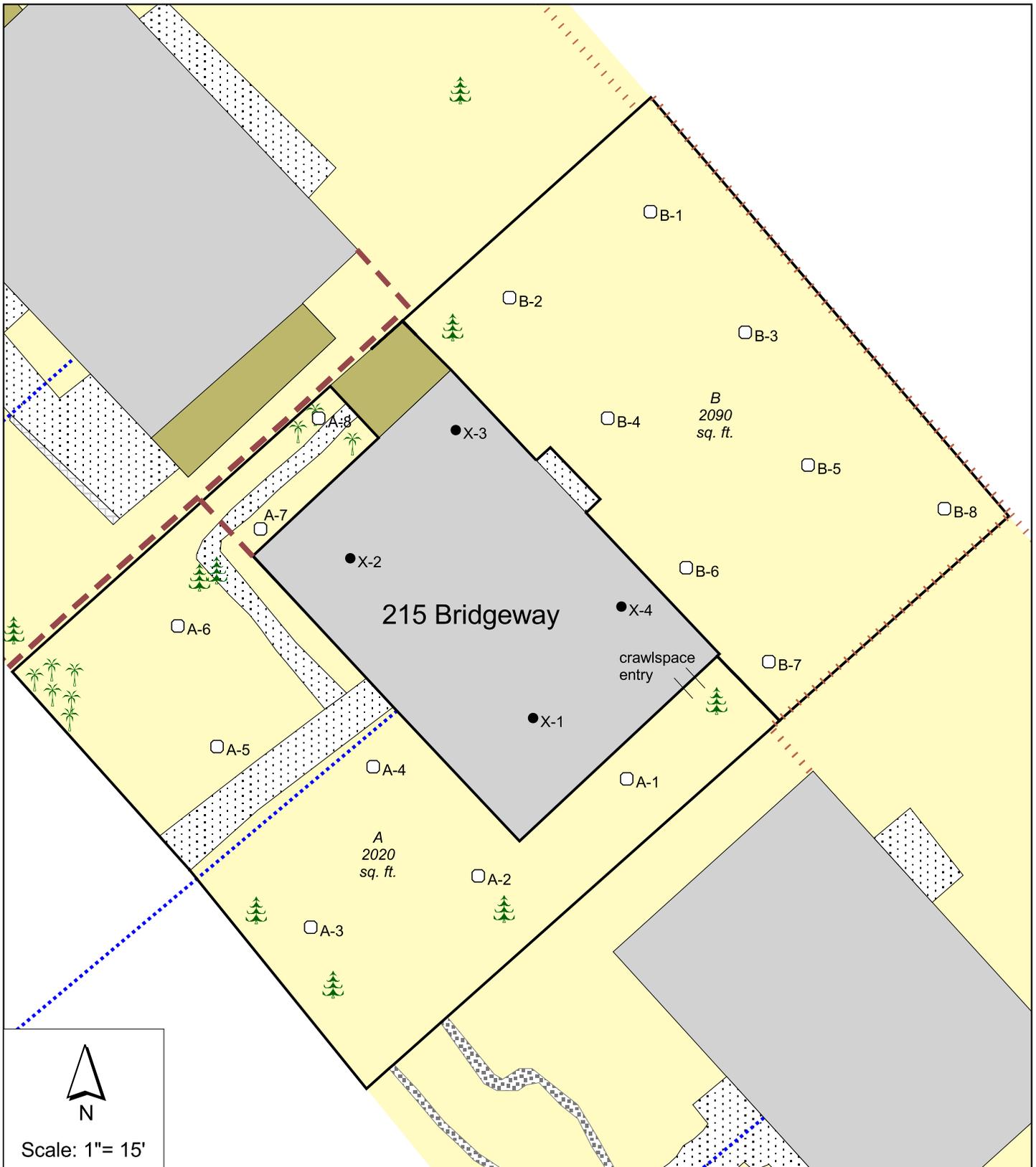
If the attachments listed above do not accompany this document, copies may be obtained from Ecology. Please contact Central Records at Ecology's Northwest Regional Office (NWRO) at (425) 649-7190 for information on obtaining copies.

**Document Repository**

These following documents can also be found at NWRO:

- Integrated Final Cleanup Action Plan
- Final Environmental Impact Statement for the Upland Area
- Specifications for Everett Residential Soil Remediation

cc: City of Everett Public Works  
Ecology Central Files, Northwest Regional Office  
Ecology Contract Officer, Headquarters  
Ecology, Office of the Attorney General  
Ecology On-site Coordinator, SAIC  
Everett Public Library  
Northeast Everett Community Organization  
Northwest Everett Neighborhood Association  
Snohomish PUD  
Wyser Construction, Inc.



**LEGEND**

- Decision Unit Samples
- Crawlspace Samples

# 215 Bridgeway (Home 50)

Everett Smelter Homesite Cleanup

Source: Snohomish Health District

