



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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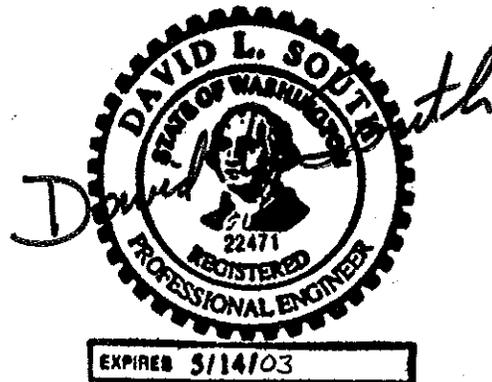
Professional Engineer's Statement
Everett Smelter Cleanup
March 17, 2003

Sampling and soil remediation were carried out at the following homes within the Everett Smelter Site during the period September 2002 to January 2003:

<u>Address</u>	<u>Owner</u>
Jeffrey G. Martz	108 Skyline Drive
William Udman and Alice Shaefer	203 Skyline Drive
Sam Bagley	206 Skyline Drive
Marion O. Lamb	209 Skyline Drive
Beverly Innes	212 Bridgeway
Gertrude L. Vaughn	216 Bridgeway
Scott Schroeder	222 Bridgeway
Mark M. Leonard	226 Bridgeway
Jean M. Burt	232 Bridgeway

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.

Remediation work remaining to be done at these homes includes addressing crawl spaces as necessary and carpet and duct cleaning.



Washington Department of Ecology Everett Smelter Site 2002 Cleanup

Details of Cleanup Activities

The Department of Ecology (Ecology) selected 9 homes within the Everett Smelter Site for cleanup in 2002. Cleanup activities were conducted between September 4, 2002 and January 29, 2003. The cleanup was conducted according to the *Everett Smelter Site: Integrated Final Cleanup Action Plan and Final Environmental Impact Statement for the Upland Area*.

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

Property Owner Scott Schroeder

Address: 222 Bridgeway
 Everett, WA 98201

Snohomish County
State of Washington
Tax Parcel No. # 005203-000-033-00

For the purposes of sampling to determine the depth to which excavation would be required, this property was divided into two Decision Units, A and B, as shown on the attached map. The following is a summary of the work done to remediate the property within each of the decision units.

Decision Unit: A

Results of pre-cleanup sampling indicated 24 inches of soil would have to be excavated in this decision unit. Attachment B shows that below 24 inches, results of composite and discrete sample analyses are below the remediation levels of 150 parts per million (ppm) and 500 ppm, respectively. However, because the soil below 24 inches contains arsenic above the cleanup level of 20 ppm, a geofabric marker was placed. Two large trees in the front yard were removed to facilitate access and excavation.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 24 inches, except as noted below. The concrete walkway from the front door to the driveway was not removed. During excavation, the water service line was damaged and replaced with ¾ inch copper tubing. At the request of the tenants, a lilac in the front lawn was saved and moved to the back yard. A rock wall was constructed to allow restoration of the original grade as closely as possible. The driveway, consisting of broken asphalt and gravel was excavated to a depth of 6 inches, backfilled with 4 inches of crushed rock, compacted and paved with asphalt.

After placing a geofabric marker, the Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation*. After placing the topsoil, sod was planted. Replacement shrubs were delivered to the tenant, who stated he would plant them.

Decision Unit: B

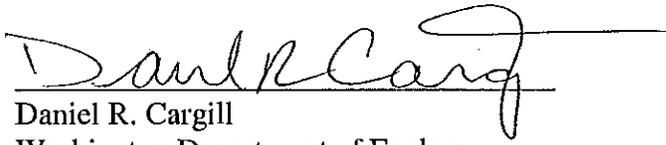
Results of pre-cleanup sampling indicated 12 inches of soil would have to be excavated in this decision unit. Attachment B shows that below 12 inches, results of composite sample analyses are below the remediation level of 60 parts per million (ppm). The soil below 12 inches contains arsenic below the cleanup level of 20 ppm. Chain link fences along the north, south and east side of the yard were removed to facilitate access.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 12 inches, except as noted below. The slope along the west side of the property, from the base to the chain link fence (sampling locations L-1 to L-5) was not excavated because the concentrations of arsenic are below the cleanup level of 20 ppm. The vegetation and surface soils were removed to allow access to the fence to facilitate the control of erosion from the adjoining, uphill property. At the owner's request, the large maple tree in the southwest corner of the property was left in place. Soil was removed from the top of the roots to the drip line and the roots covered with fabric. Beyond the drip line, soil was removed to a depth of 12 inches. The shed located in the back yard was demolished and the waste disposed. During excavation, it was found that wastewater was flowing from the joints of the concrete sewer line into the excavation. Examination showed the sewer line was totally blocked with sludge. The blocked portion of the line was removed and replaced with PVC sewer pipe. Three French drains were installed in the back yard, one along the base of the slope, the other in a north-south line along the back of the deck and the third through the center of the yard. These drains and the downspouts on the north side of the house were connected by a plastic sewer pipe placed under the driveway to a French drain placed along the property line between 222 and 216 Bridgeway. This line connects to the storm sewer on Bridgeway. The downspouts on the south side of the house were connected to a French drain, which discharges into a cobble-filled dry well located in the front yard.

The Decision Unit was backfilled with clean material as described in the *Specifications for Everett Residential Soil Remediation*. A portion of the yard at the west end of the

222 Bridgeway
Everett, WA 98201

driveway was finished as a parking area and topped with crushed rock. The slope up to the west property line was backfilled with topsoil, covered with jute netting, planted with groundcover and covered with bark. In the remainder of the yard, topsoil was placed and sod was planted. An animal barrier consisting of wood lattice backed by ¼-inch wire mesh was placed around the base of the deck. Upon completing the cleanup, the fences were restored to their original locations.


Daniel R. Cargill
Washington Department of Ecology

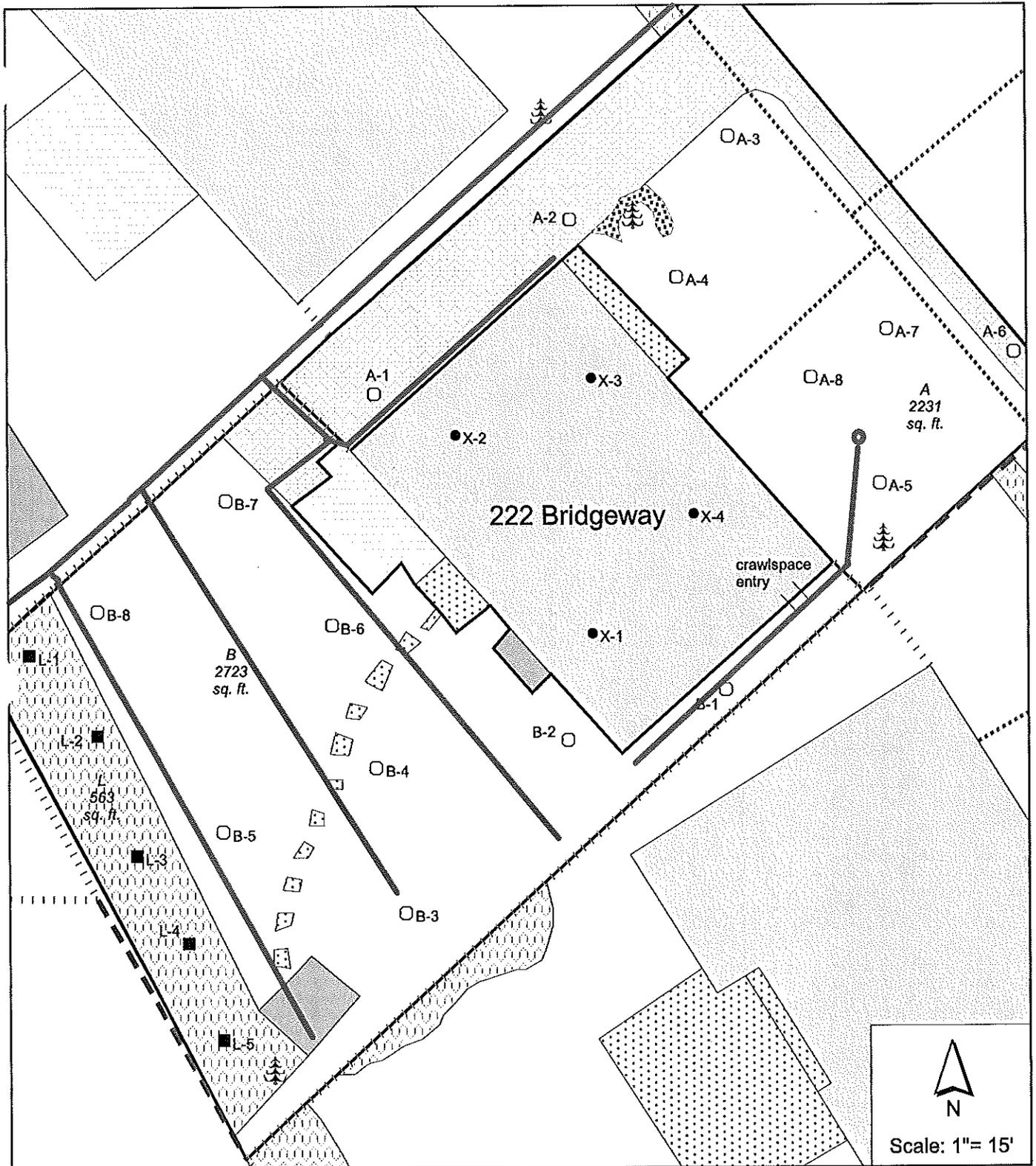
April 3, 2003

DRC:dc

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

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.

cc: Ecology Central Files, NWRO
Everett Public Library
Asarco Information Center, Everett
Northeast Everett Community Organization
Northwest Everett Neighborhood Association
City of Everett Public Works
Snohomish PUD
Office of the Attorney General
Ecology Contract Officer
Ecology On-site Coordinator



- LEGEND**
- Decision Unit Samples
 - Landscape Samples
 - Crawlspace Samples
 - Sub surface drains

222 Bridgeway (Home 52)

Everett Smelter Homesite Cleanup

Source: Snohomish Health District

