STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

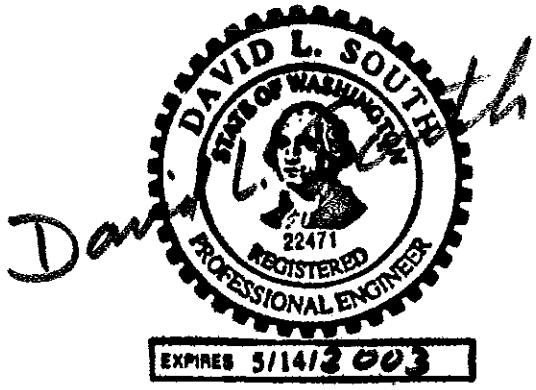
Professional Engineer's Statement
Everett Smelter Cleanup, 2000-2001

Sampling and soil remediation were carried out at the following homes within the Everett Smelter Site during the years 2000 and 2001:

Address	Owner
Muriel Jones	110 Bridgeway
Andrew Michels	235 Bridgeway
Jeanette Mempa	236 Bridgeway
Thomas, Christine & Ronnie	240 Bridgeway
Martha Watkins	244 Bridgeway
Joanne Felmer	2803 Medora Way
Terry Tavares & Linda Guy-Tavares	2811 Medora Way
Duane & Edna Rapelje	2817 Medora Way
Dave & Rene Goodrich	2818 Medora Way
Ron & Bonnie Sylvester	2830 Medora Way
Anh Black	528 Hawthorne
Steve & Sherrie Wamba	415 Legion Drive
Gary & Darlene Bunger & Sandra Kane	112 Skyline Drive
Michael Paeth	116 Skyline Drive
Randy Hall	212 Skyline Drive
Willy Pompey	215 Skyline Drive
Dorothy Larson	218 Skyline Drive
Bob & Peggy Redline	221 Skyline Drive
Michael & Sheila Crehan	222 Skyline Drive
Kurt Bertilson	230 Skyline Drive
Louise Hiller	302 Skyline Drive
Margie Hogle	303 Skyline Drive
Fred Brown	307 Skyline Drive
Jackie Robinett	308 Skyline Drive
Al Vandenbosch	316 Skyline Drive
Al Sorenson	320 Skyline Drive
Jo Newland	323 Skyline Drive
John & Christina Bull	328 Skyline Drive

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 evaluation of crawl space data and addressing crawl spaces as necessary and carpet and duct cleaning. Some plant replacement also remains to be done and will be done this Spring.



Washington Department of Ecology
Everett Smelter Site
2000 - 2001 Cleanup

Details of Cleanup Activities

The Department of Ecology (Ecology) targeted the yards of 28 homes within the Everett Smelter Site for cleanup in 2000 and 2001. Cleanup activities were conducted between August 2000 and March 2001, and again between July and November, 2001. 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 not removed and where it remains for the following location:

Property Owner	Dorothy Larson
Address:	218 Skyline Drive Everett, WA 98201
Snohomish County State of Washington Tax Parcel No.	# 005203-000-008-00

This property was divided by Ecology into three Decision Units, A and B, as shown on the attached map, for purposes of pre-cleanup sampling and decision-making regarding the depth to which excavation was required. The following is a summary of the work done in the remediation of the property within each of the decision units.

Decision Unit: A

Results of pre-cleanup sampling indicated 12 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 12 inches, results of composite sample analyses are below the remediation levels of 60 and 150 parts per million (ppm), and discrete sample analyses are below the remediation level of 150 and 500 ppm. However, because the soil below 12 inches contains arsenic levels above the cleanup level of 20 ppm, a geofabric marker was placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 12 inches. The paved driveway and walkway to the front door were not removed. Along the sides of the existing home, driveway and walkway to the front door, the excavation was sloped approximately 1:1 away from the foundations to protect the integrity of the structures. At the owners' request, the ivy along the southern edge of the driveway, the hydrangea, rhododendron and rose bush near the front door and the ivy covered stump on the northeast corner of the house were not removed. Within the

dripline of the shrubs and plants, only the existing sod and soil was removed from the top of the root ball; beyond the dripline, 12 inches were excavated. All other planting beds and plants were removed. Prior to excavating along the concrete retaining wall, the tilt of the wall was measured in several locations. The wall was braced and soils were excavated to a depth of three feet below grade. A plastic geogrid was placed at the bottom of the excavation, drain pipe was placed and covered with a layer of gravel, followed by geofabric, sand, another layer of geogrid then sand to within 6 inches of the original grade. During excavation of the front yard, a dry well for the roof drains was uncovered and found to be plugged with soil. The pipe was cleared of soil, fitted with a PVC connection and joined to the retaining wall drainage line which was then connected to the sewer line. 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. The tilt of the concrete retaining wall was re-measured and was found to have changed no more than 6%.

Decision Unit: B

Results of pre-cleanup sampling indicated 18 inches of soil were to be excavated from within this decision unit. Attachment B shows that below 18 inches, results of composite sample analyses are below the remediation level of 60 ppm and discrete sample analyses are below the remediation level of 150 ppm. Because the soil below 18 inches contains arsenic levels below the cleanup level of 20 ppm, a geofabric marker was not placed.

Field measurements by the Ecology on-site coordinator confirmed that soil was removed to a depth of 18 inches. Along the sides of the existing home and driveway, the excavation was sloped approximately 1:1 away from the foundations to protect the integrity of the structures. At the owners' request, the trees along the golf course fence, the ivy-covered stump and the planting beds in the south and southwestern portion of the yard, (sampling locations L-1 through L-4) were not removed. Within the dripline of the trees and shrubs, only the existing sod and soil was removed from the top of the root ball; beyond the dripline, 18 inches were excavated. All other planting beds and plants were removed. An old septic tank was uncovered on the north side of the house opposite the bathroom window. After the soils in the tank were excavated, it was backfilled with sand. The sewer line from the house was found to be broken near the foundation. The broken section of pipe was replaced with plastic sewer pipe including a clean-out set just below grade. 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.

January 9, 2002

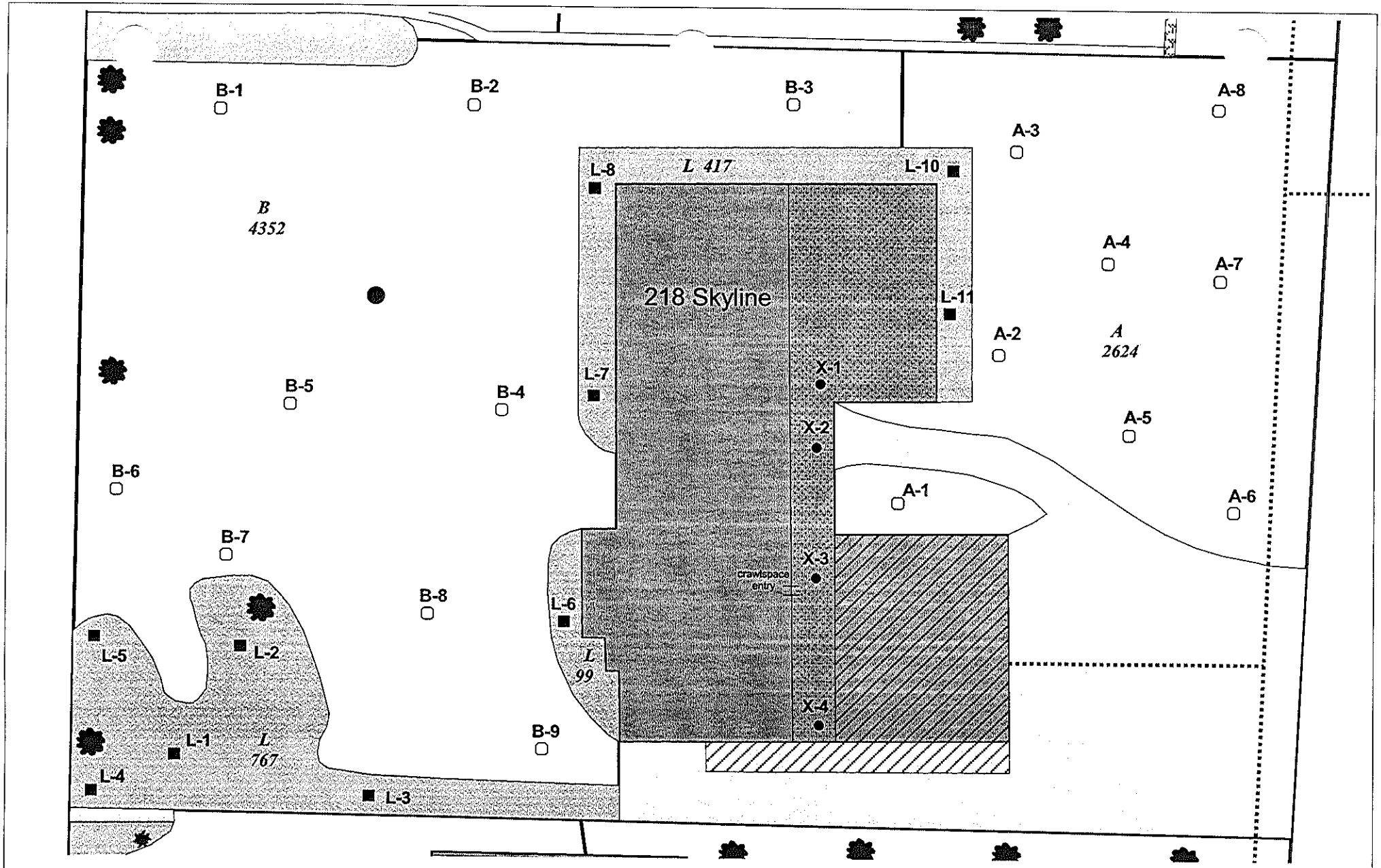
Dan Cargill
Washington Department of Ecology

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
Office of the Attorney General
Snohomish Health District
City of Everett Public Works
Everett Public Library
Snohomish PUD
Northeast Everett Community Organization
Northwest Everett Neighborhood Association
Asarco Information Center, Everett



218 Skyline (Home 035)

Everett Smelter Homesite Cleanup

Source of Basemap: Snohomish Health District

- ● Crawlspace Samples
- ■ Landscape Samples
- ○ DU Samples

N

Not to scale

SAIC
Science Applications International Corporation