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.

DAVID L. SOUTH
STATE OF WASHINGTON
22471
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 5/14/2003

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:	Jeanette Mempa
Address:	236 Bridgeway Everett, WA 98201
Snohomish County State of Washington Tax Parcel No.	# 005203-000-036-00

This property was divided by Ecology into two 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 36 inches of soil were to be excavated from within this decision unit. Attachment B shows that at 36 inches, results of composite sample analyses are above the remediation level of 500 parts per million (ppm). Additional samples were taken of the underlying 12 inches. The composite sample analyses shows that at 48 inches, results are below the remediation level of 150 ppm and discrete sample analyses are below the remediation level of 500 ppm. However, because the soil below 48 inches may contain 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 48 inches. Along both sides of the driveway and the north and eastern side of the existing home, the excavation was sloped approximately 1:1 away from the concrete slab and foundation to protect the integrity of the structures. At the request of

the owner, the tree at the northeast corner of the house was not removed. Within the dripline of the tree, the existing sod and soil was removed to the top of the root ball. Beyond the dripline, soil was excavated to 48 inches. After placing a geofabric marker, clean backfill material was placed in the excavation, as described in the *Specifications for Everett Residential Soil Remediation*. A keystone block wall was constructed along the north and east sides of the property to restore the yard to its original grade. The area south of the paved driveway was finished with crushed rock. The area along the south side of the house was paved with concrete. In the remainder of the Decision Unit, topsoil was placed and sod was planted.

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 and 150 ppm. The soil below 18 inches contains arsenic levels below the cleanup level of 20 ppm, so no geofabric marker was necessary. In order to facilitate excavation, the fence on the property along the western boundary was removed.

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, storage shed, cinder block walls and the paved patio, the excavation was sloped approximately 1:1 away from the foundations to protect the integrity of the structures. At the request of the owner, the trees in the landscaped area along the west and northwest side of the property were not removed. Within the dripline, only the existing sod, duff and soil was removed; beyond the dripline, 18 inches were excavated, including the area west of the shed. A geofabric marker was placed in areas that were not excavated to 18 inches. The failing concrete block retaining wall along the south side of the property was removed and a Keystone block wall was constructed to restore the original grade of the adjacent property. The area on the south side of the house (M1 & M2) as well as the planting beds next to the house on the west side were excavated, backfilled with 5/8" crushed rock, compacted and paved with concrete. One unpaved area southeast of the back steps was excavated and found to be a drywell. The concrete lid was reset and the area was backfilled with 5/8" crushed rock. The Decision Unit was backfilled with clean material, as described in the *Specifications for Everett Residential Soil Remediation*. After placing the topsoil, sod and shrubs were planted. Jute netting was placed over the topsoil in the landscaped area along the west side of the property to prevent erosion. The fence on the adjacent property was replaced.

January 8, 2002

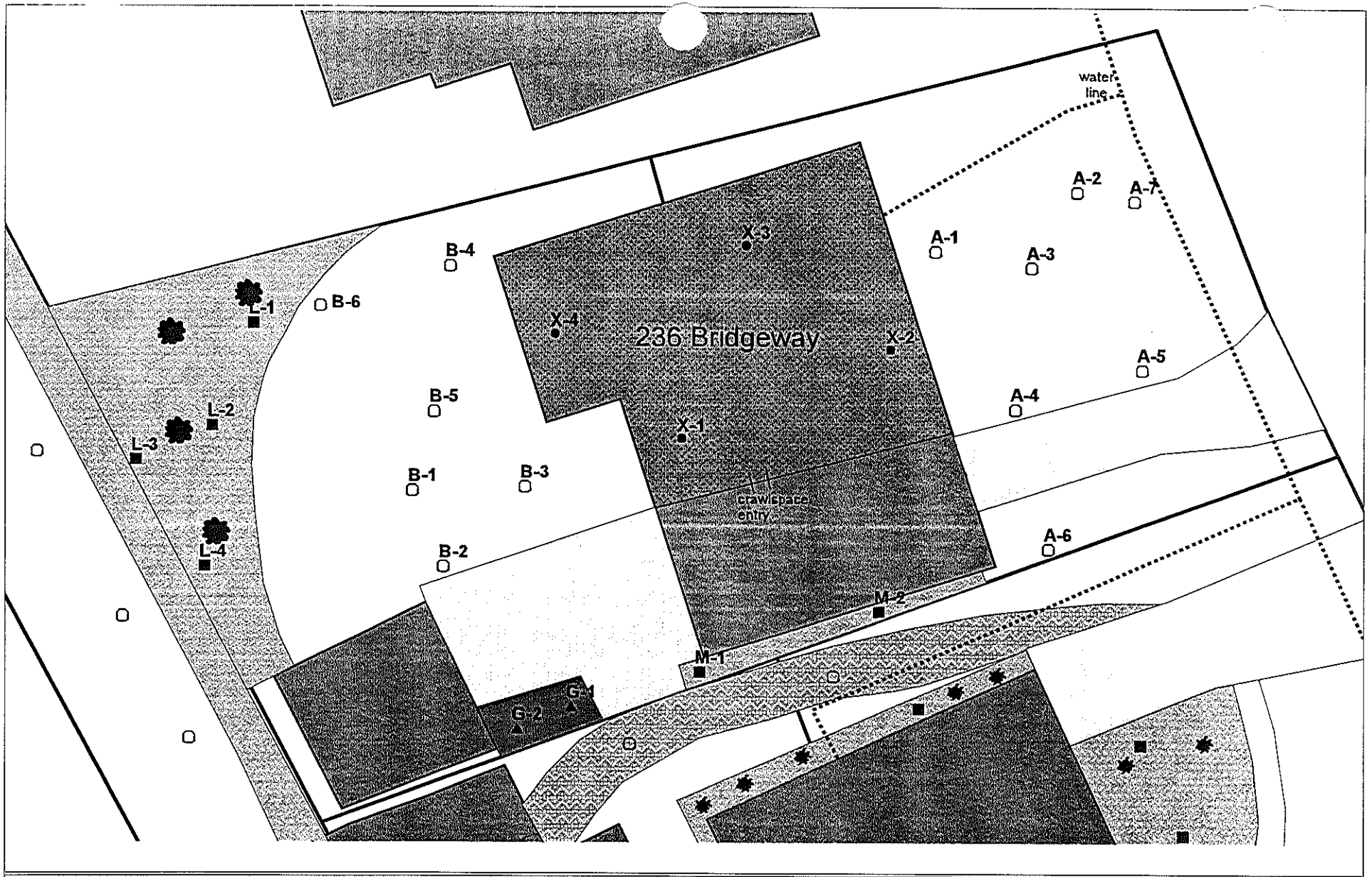
Dan Cargill
Washington Department of Ecology

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



236 Bridgeway

Everett Smelter Homesite Cleanup

Source: Snohomish Health District

▲ Garden Samples
● Crawlspace Samples
■ Landscape Samples
○ DU Samples

N

Not to scale