



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:

<u>Address</u>	<u>Owner</u>
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 cleanup of the yards of 24 homes, within the Everett Smelter Site, during the 2000-2001 biennium. 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: Al Vandenbosch

Address:
316 Skyline Drive
Everett, WA 98201

Snohomish County
State of Washington
Tax Parcel No. # 5203-000-015-0007

This property was divided by Ecology into three Decision Units, A, B, and C, 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 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 levels of 60 and 150 parts per million (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 except the excavation was sloped 1:1 away from the curb along Skyline Drive, the driveway, and the front walk in order to maintain the structural

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integrity of those structures. Soil beneath two large propane tanks, at the north end of the house, was not removed. Evergreen bush directly west of the tanks was left in place, at owner's request. Planter areas next to the east side of the house were hand-dug; soil was tapered away from the base of bushes. At owner's request, two azaleas along the street and the flowering plum tree in the yard were left in place. Excavation was sloped away from their bases. At owner's request, planter area along street, the location of landscape sample L-5, was left intact; no soil was removed from that area. After excavation of the decision unit was completed, backfilling with clean backfill material was carried out, as described in the *Specifications for Everett Residential Soil Remediation*. Topsoil was then placed, and new 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 levels of 60 and 150 parts per million (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 except the excavation was sloped 1:1 away from the house foundation, base of fiberglass shed, and sidewalks in order to maintain the structural integrity of those structures. Soil was removed from all planters, and all plants removed. Plants were removed from the planted area next to the fence at the west side of the property. Soil from the floor of the fiberglass shed was removed. After excavation of the decision unit was completed, backfilling with clean backfill material was carried out, as described in the *Specifications for Everett Residential Soil Remediation*. Topsoil was then placed, and new sod was planted.

Decision Unit: C

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 levels of 60 and 150 ppm. However, because the soil below 18 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 18 inches, except along the foundation of the garage, the driveway, and along the street curb, where the excavation was sloped 1:1 in order to maintain the structural integrity of those structures. Red-leaf maple tree near the street was left in place, as were the large poplar trees along the eastern edge of the property. Within the driplines of those trees, the excavation sloped along the top of the root structures. After completing the excavation, a geofabric marker was placed and backfilling with clean

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the success of any business or organization. The text outlines various methods for recording transactions, including the use of journals and ledgers. It also discusses the importance of regular audits and the role of accountants in ensuring the accuracy of financial statements.

The second part of the document focuses on the importance of budgeting and financial planning. It explains how a well-defined budget can help an organization allocate resources effectively and avoid financial pitfalls. The text provides practical advice on how to create a budget and how to monitor it over time. It also discusses the importance of contingency planning and the role of financial advisors in providing expert guidance.

The third part of the document discusses the importance of risk management. It explains how to identify potential risks and how to develop strategies to mitigate them. The text covers various types of risks, including financial, operational, and reputational risks. It also discusses the importance of insurance and the role of risk management professionals in assessing and managing risk.

The fourth part of the document discusses the importance of financial reporting. It explains how to prepare financial statements and how to present them in a clear and concise manner. The text covers various types of financial reports, including balance sheets, income statements, and cash flow statements. It also discusses the importance of transparency and the role of auditors in verifying the accuracy of financial reports.

The fifth part of the document discusses the importance of financial analysis. It explains how to use financial ratios and other tools to evaluate the performance of an organization. The text covers various types of financial analysis, including ratio analysis, trend analysis, and benchmarking. It also discusses the importance of interpreting financial data and the role of financial analysts in providing insights into an organization's financial health.

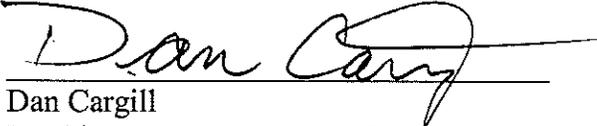
backfill material was carried out, as described in the *Specifications for Everett Residential Soil Remediation*. Topsoil was then placed, and new sod was planted. At the owners request, the area directly to the southwest of the driveway was finished with crushed rock.



Al Armstrong
Washington Department of Ecology

December 18, 2000

Note: As of December 18, 2000, replacement trees or bushes had not been planted. This was completed on February 8, 2001.



Dan Cargill
Washington Department of Ecology

April 9, 2001

ATA:aa

Attachments: Site Map
 Graphs of Arsenic Concentration vs. Depth (1 page)
 Graph Explanation

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

cc: Ecology Central Files, NWRO
Mary Sue Wilson, Assistant Attorney General
Mike Young, Snohomish Health District
City of Everett
Snohomish PUD
Northeast Everett Community Organization
Northwest Everett Neighborhood Association

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include interviews, surveys, and focus groups, each of which has its own strengths and limitations.

3. The third part of the document describes the process of identifying and defining the research objectives. This involves a thorough review of the literature and a clear understanding of the research question.

4. The fourth part of the document discusses the importance of selecting a representative sample. This is crucial for ensuring that the results of the study are generalizable to the population of interest.

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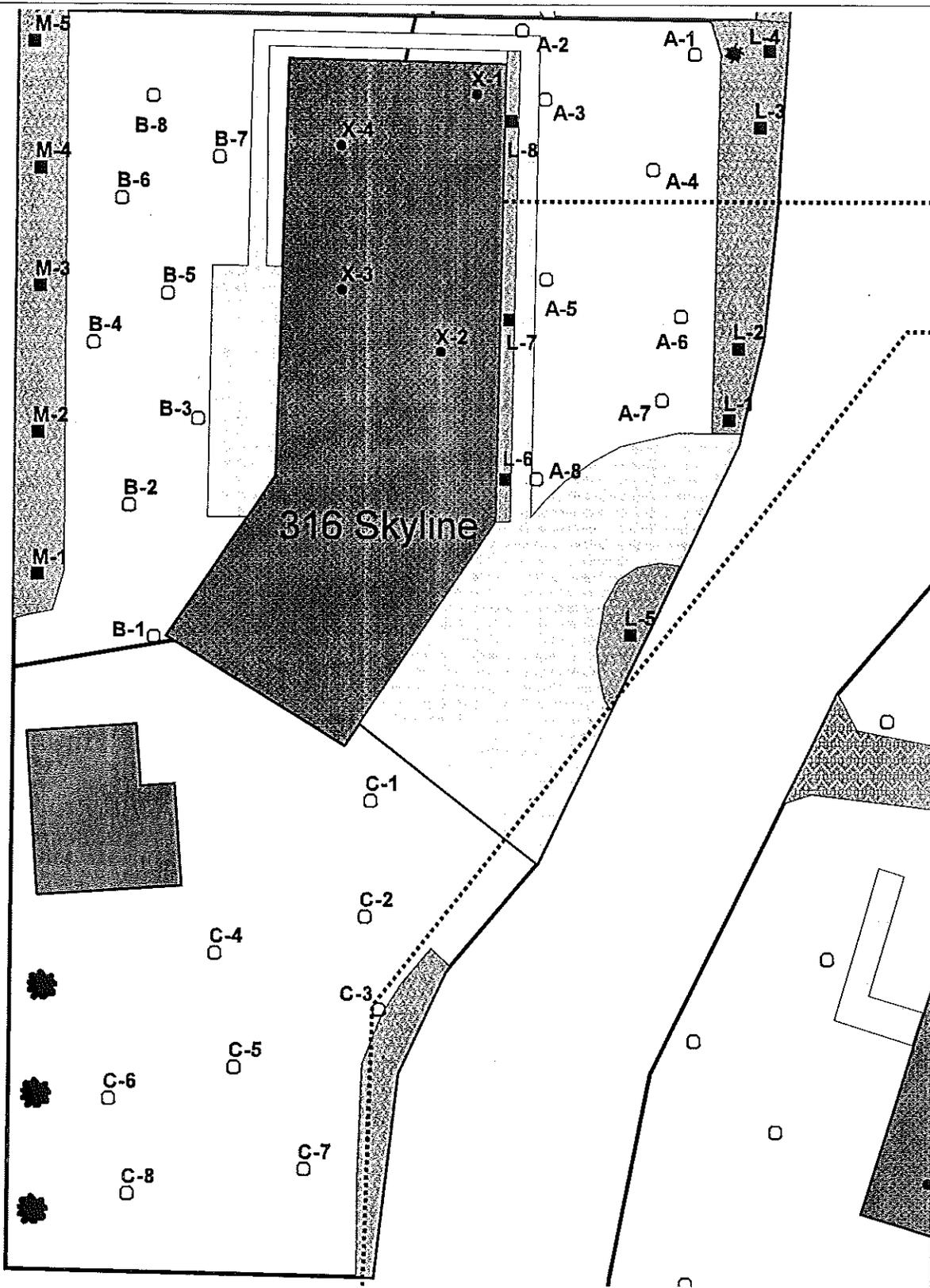
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316 Skyline

Everett Smelter Homesite Cleanup

Source: Snohomish Health District

- Crawspace Samples
- Landscape Samples
- DU Samples



Not to scale



