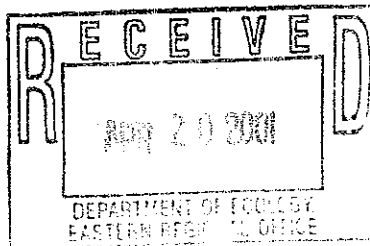
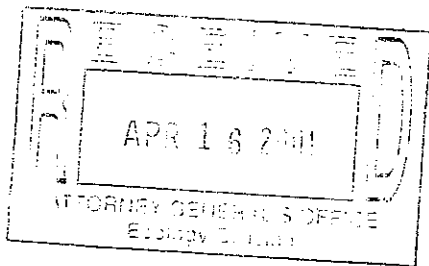


FS 627



COPY ORIGINAL FILED APR 12 2001 SUPERIOR COURT SPOKANE COUNTY, WN

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON IN AND FOR THE COUNTY OF SPOKANE

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

THE BURLINGTON NORTHERN AND SANTA FE RAIL WAY COMPANY,

Defendant.

NO. 01202037-9

SUMMONS

TO: The Burlington Northern and Santa Fe Railway Company,

AND TO: The Clerk of the above-entitled Court:

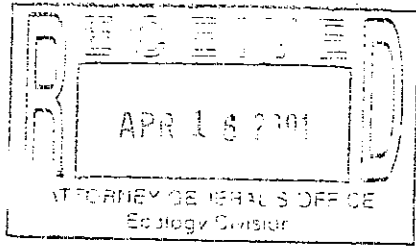
A lawsuit has been started against you in the above-entitled court by the State of Washington, Department of Ecology, Plaintiff. Plaintiff's claim is stated in the written complaint, a copy of which is served upon you with this Summons.

The parties have agreed to resolve this matter by entry of a Consent Decree. Accordingly, this Summons shall not require the filing of an answer.

Respectfully submitted this 5th day of April, 2001.

CHRISTINE O. GREGOIRE Attorney General

KEN LEDERMAN, WSBA #26515 Assistant Attorney General Attorneys for Plaintiff Department of Ecology (360) 586-4607



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APR 12 2001
SUPERIOR COURT
SPOKANE COUNTY, WN

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**IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF SPOKANE**

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant.

NO. 01202037-9

COMPLAINT

I. JURISDICTION

1.1 This court has jurisdiction over the parties and over the subject matter under the Model Toxics Control Act, chapter 70.105D RCW.

II. PARTIES

2.1 Plaintiff State of Washington Department of Ecology (Ecology) is a state agency charged with the implementation of the Model Toxics Control Act.

2.2 Defendant is the Burlington Northern and Santa Fe Railway Company (BNSF). Defendant has agreed to enter into a Consent Decree with Ecology under the Model Toxics Control Act to remedy the release of hazardous substances on property.

III. FACTUAL ALLEGATIONS

3.1 The Facility, referred to as Aluminum Recycling Corporation, as defined in RCW 70.105D 020(4), is located at East 3412 Wellesley Avenue, Spokane, Washington. The Burlington Northern and Santa Fe Railway Company (BNSF), formerly known as Burlington

1 Northern Railroad Company (BN), is the owner of the property at East 3412 Wellesley Avenue.
2 Spokane, Washington on which the Site is located. The Site is more particularly described in
3 Exhibit A of the Consent Decree that is being submitted to settle this action.

4 3.2 Ecology has determined that there has been a release or threatened release of
5 hazardous substances at the Facility. Ecology has further determined that this release or
6 threatened release requires remedial action to protect human health, welfare, and the
7 environment; and that Defendant is a potentially liable person with respect to this Facility.

8 3.3 Ecology and Defendant has entered into a Consent Decree regarding remedial
9 actions to be taken at the Facility.

10 3.4 The Consent Decree has been the subject of public notice and comment under
11 RCW 70.105D 040(4)(a). The Consent Decree is being submitted to the court along with this
12 Complaint

13 Ecology has determined that entry of the Consent Decree will lead to a more expeditious
14 cleanup of the Facility.

15 IV. CAUSE OF ACTION

16 4.1 Plaintiff realleges all preceding paragraphs.

17 4.2 Plaintiff alleges that the Defendant is responsible for remedial action at the
18 Facility pursuant to the MTCA, chapter 70.105D RCW

19 V. PRAYER FOR RELIEF

20 5.1 Ecology and BNSF request that the court sign and enter the Consent Decree in this
21 matter.

22 5.2 Ecology and BNSF further request that the court retain jurisdiction to enforce the
23 terms of the Consent Decree

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Respectfully submitted this 5th day of April, 2001.


CHRISTINE O. GREGOIRE
Attorney General



KEN LEDERMAN, WSBA #26515
Assistant Attorney General
Attorneys for Plaintiff
Department of Ecology
(360) 586-4607

F:ALUMINUM RECYCLING COMPLAINT

1 STATE OF WASHINGTON
2 DEPARTMENT OF ECOLOGY

3 
4 JIM PENDOWSKI
5 Program Manager
6 Toxics Cleanup Program

7 Date: 3/23/01

8 THE BURLINGTON NORTHERN AND
9 SANTA FE RAILWAY COMPANY

10 Title: _____

11 Date: _____

12
13 DATED this _____ day of _____, 2001.

CHRISTINE O. GREGOIRE
Attorney General


KEN LEDERMAN, WSBA #26515
Assistant Attorney General

Date: 4/3/01

ATTORNEY FOR THE BURLINGTON
NORTHERN AND SANTA FE
RAILWAY COMPANY

14 Date: _____

15 ROYCE H. MOE
COURT COMMISSIONER

16 JUDGE
Spokane County Superior Court

1 STATE OF WASHINGTON
2 DEPARTMENT OF ECOLOGY

CHRISTINE O GREGOIRE
Attorney General

3
4 FLORA GOLDSTEIN
5 Section Manager
6 Toxics Cleanup Program

KEN LEDERMAN, WSBA #26515
Assistant Attorney General

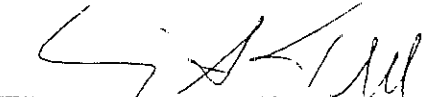
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8 Date: _____

Date: _____

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10 THE BURLINGTON NORTHERN AND
11 SANTA FE RAILWAY COMPANY

ATTORNEY FOR THE BURLINGTON
NORTHERN AND SANTA FE
RAILWAY COMPANY

12
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14
15 Title: VP General Counsel

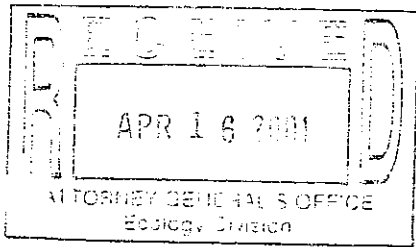
CRAIG S. TRUEBLOOD, WSBA #18357
PRESTON GATES & ELLIS LLP

16
17 Date: Feb. 1, 2001

Date: Feb 1, 2001

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21 DATED this _____ day of _____, 2001

22
23 JUDGE
24 Spokane County Superior Court



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APR 12 2001

SUPERIOR COURT
SPOKANE COUNTY, WN

**IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF SPOKANE**

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant.

NO 01202037-9

MOTION FOR ENTRY OF
CONSENT DECREE AND
MEMORANDUM IN SUPPORT OF
MOTION

I. INTRODUCTION

Plaintiff, Washington State Department of Ecology (Ecology), represented by Christine O. Gregoire, Attorney General, and Ken Lederman, Assistant Attorney General, brings this motion seeking entry of the attached Consent Decree. This motion is based upon the pleadings filed in this matter, including the Declaration of Ken Lederman.

II. RELIEF REQUESTED

Ecology requests that the Court approve and enter the attached Consent Decree that requires certain remedial actions at the Aluminum Recycling Corporation Site, a facility where there has been a release of hazardous substances. Ecology also requests that the Court retain jurisdiction over this action until the work required by the Consent Decree is completed and the parties request a dismissal of this action

1 III. AUTHORITY

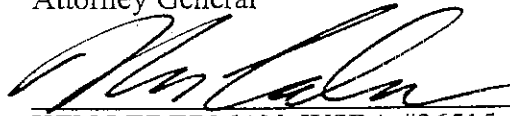
2 RCW 70.105D.030 authorizes Ecology to issue such orders as may be necessary to
3 effectuate the purposes of the Model Toxics Control Act, chapter 70.105D RCW, and to enter
4 into consent decrees through judicial proceedings. In addition, RCW 70.105D 040(4)
5 authorizes the Attorney General to agree to a settlement with a potentially liable person and to
6 request that the settlement be entered as a consent decree in the superior court of the county
7 where a violation is alleged to have occurred.

8 IV. CONCLUSION

9 Ecology believes it is appropriate for the Court to exercise its judicial discretion and
10 approve the attached Consent Decree, and hereby requests that the Court enter the attached
11 Order.

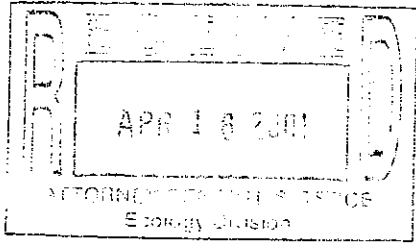
12 DATED this 5th day of April, 2001.

13 CHRISTINE O. GREGOIRE
14 Attorney General



15 KEN LEDERMAN, WSBA #26515
16 Assistant Attorney General
17 Attorneys for Plaintiff
18 Department of Ecology
19 (360) 586-4607

20
21 F:ALUMINUM RECYCLING MOTION FOR ENTRY
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APR 12 2001

SUPERIOR COURT SPOKANE COUNTY WA

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON IN AND FOR THE COUNTY OF SPOKANE

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY,

Defendant.

NO. 01202037-9

DECLARATION OF KEN LEDERMAN IN SUPPORT OF MOTION FOR ENTRY OF CONSENT DECREE

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I, Ken Lederman, declare under penalty of perjury under the laws of the State of Washington that the following is true and correct.

1. I am over twenty-one years of age and am competent to testify herein. The facts set forth in this Declaration are from my personal knowledge.

2. I am an Assistant Attorney General assigned to represent the Washington State Department of Ecology and the Attorney General's Office on legal matters relating to the Site in Spokane, Washington referred to as Aluminum Recycling Corporation.

3. On behalf of Ecology and the Attorney General's Office, I took part in the negotiations that led to the Consent Decree that is being presented to the court.

4. The Consent Decree was the subject of public notice and public comment as required by RCW 70 105D.040(4)(a)

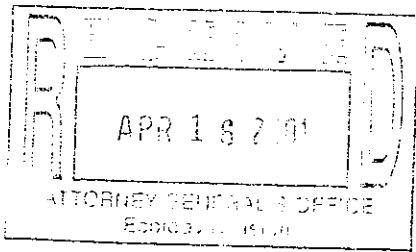
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5. Ecology has determined that the proposed remedial action will lead to a more expeditious cleanup of hazardous substances in compliance with cleanup standards under RCW 70.105D.030(2)(e).

DATED this 5th day of April, 2001, in Olympia, Washington.


KEN LEDERMAN

F:\ALUMINUM RECYCLING\KEN LEDERMAN DEC



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APR 12 2001
SUPERIOR COURT
SPOKANE COUNTY, WA

**IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF SPOKANE**

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant

NO *01-2-02037-9*

ORDER ENTERING CONSENT
DECREE

Having reviewed the Consent Decree signed by the parties to this matter, the Motion for Entry of the Consent Decree, the Declaration of Ken Lederman, and the file herein, it is hereby

ORDERED AND ADJUDGED that the Consent Decree in this matter is entered and that the Court shall retain jurisdiction over the Consent Decree to enforce its terms

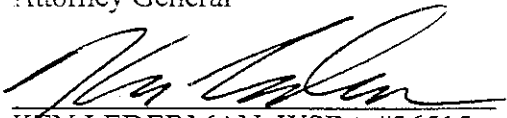
DATED this *11th* day of *April*, 2001.

**ROYCE H. MOE
COURT COMMISSIONER**

JUDGE
Spokane County Superior Court

1 Presented by:

2 CHRISTINE O. GREGOIRE
Attorney General

3 

4 KEN LEDERMAN, WSBA #26515
5 Assistant Attorney General

6 Attorneys for Plaintiff
7 State of Washington
8 Department of Ecology
9 (360) 586-4607

10 DATED: 4/5/01

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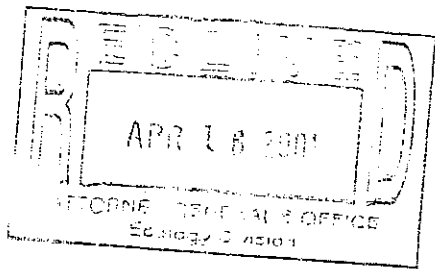
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ALUMINUM RECYCLING ORDER ENTERING CD



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APR 12 2001

SUPERIOR COURT
SPOKANE COUNTY, WN

IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF SPOKANE

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY,

Plaintiff,

v.

THE BURLINGTON NORTHERN
AND SANTA FE RAILWAY
COMPANY

Defendant.

NO. 01202037-9

CONSENT DECREE

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1 I. INTRODUCTION

2 A. In entering into this Consent Decree (Decree), the mutual objective of the
3 Washington State Department of Ecology (Ecology) and The Burlington Northern and Santa
4 Fe Railway Company (BNSF) is to provide for remedial action at a facility where there has
5 been a release or threatened release of hazardous substances. BNSF shall be referred to herein
6 as the "Defendant." This Decree requires the Defendant to undertake the following remedial
7 action(s):

- 8 (1) Regrading of dross materials on the Site;
- 9 (2) Installation of a multi-media cover system according to design
10 specifications approved by Ecology;
- 11 (3) Groundwater monitoring through the quarterly sampling of existing
12 wells; and
- 13 (4) Institutional controls in the form of restrictive covenants, fences, signs,
14 and the maintenance of these controls.

15 Ecology has determined that these actions are necessary to protect public health and the
16 environment.

17 B. The Complaint in this action is being filed simultaneously with this Decree. An
18 answer has not been filed, and there has not been a trial on any issue of fact or law in this case.
19 However, the parties wish to resolve the issues raised by Ecology's Complaint. In addition, the
20 parties agree that settlement of these matters without litigation is reasonable and in the public
21 interest and that entry of this Decree is the most appropriate means of resolving these matters.

22 C. In signing this Decree, Defendant agrees to its entry and agrees to be bound by
23 its terms.

24 D. By entering into this Decree, the parties do not intend to discharge nonsettling
25 parties from any liability they may have with respect to matters alleged in the complaint. The

1 parties retain the right to seek reimbursement, in whole or in part, from any liable persons for
2 sums expended at the Site, including but not limited to sums expended under this Decree.

3 E. This Decree shall not be construed as proof of liability or responsibility for any
4 releases of hazardous substances or cost for remedial action nor an admission of any facts;
5 provided, however, that the Defendant shall not challenge the jurisdiction of Ecology in any
6 proceeding to enforce this Decree.

7 F. The Court is fully advised of the reasons for entry of this Decree, and good
8 cause having been shown;

9 IT IS HEREBY ORDERED, ADJUDGED, AND DECREED AS FOLLOWS:

10 **II. JURISDICTION**

11 A. This Court has jurisdiction over the subject matter and over the parties pursuant
12 to chapter 70.105D RCW, the Model Toxics Control Act (MTCA).

13 B. Authority is conferred upon the Washington State Attorney General by RCW
14 70.105D.040(4)(a) to agree to a settlement with any potentially liable person if, after public
15 notice and hearing, Ecology finds the proposed settlement would lead to a more expeditious
16 cleanup of hazardous substances. RCW 70.105D.040(4)(b) requires that such a settlement be
17 entered as a consent decree issued by a court of competent jurisdiction.

18 C. Ecology has determined that a release or threatened release of hazardous
19 substances has occurred at the Site that is the subject of this Decree.

20 D. Ecology has given notice to Defendant, as set forth in RCW 70.105D.020(16),
21 of Ecology's determination that the Defendant is a potentially liable person for the Site and that
22 there has been a release or threatened release of hazardous substances at the Site.

23 E. The actions to be taken pursuant to this Decree are necessary to protect public
24 health, welfare, and the environment.

1 F Defendant has agreed to undertake the actions specified in this Decree and
2 consents to the entry of this Decree under the MTCA.

3 III. PARTIES BOUND

4 This Decree shall apply to and be binding upon the signatories to this Decree (Parties),
5 their successors and assigns. The undersigned representative of each party hereby certifies that
6 he or she is fully authorized to enter into this Decree and to execute and legally bind such party
7 to comply with the Decree. Defendant agrees to undertake all actions required by the terms
8 and conditions of this Decree and not to contest state jurisdiction regarding this Decree. No
9 change in ownership or corporate status shall alter the responsibility of the Defendant under
10 this Decree. Defendant shall provide a copy of this Decree to all agents, contractors and
11 subcontractors retained to perform work required by this Decree and shall ensure that all work
12 undertaken by such contractors and subcontractors will be in compliance with this Decree.

13 IV. DEFINITIONS

14 Except for as specified herein, all definitions in WAC 173-340-200 apply to the terms in
15 this Decree.

16 A. Site: The Site, referred to as Aluminum Recycling Corporation, is located at
17 East 3412 Wellesley Avenue, Spokane, Washington. The Site is more particularly described in
18 Exhibit A to this Decree that is a detailed site diagram. The Site is a "facility" under RCW
19 70.105D 020(4).

20 B. Parties: Refers to the Washington State Department of Ecology and The
21 Burlington Northern and Santa Fe Railway Company.

22 C. Defendant: Refers to The Burlington Northern and Santa Fe Railway Company.

23 D. Consent Decree or Decree: Refers to this Consent Decree and each of the
24 exhibits to the Decree. All exhibits are integral and enforceable parts of this Consent Decree
25 and are hereby incorporated by reference. The terms "Consent Decree" or "Decree" shall

1 include all Exhibits to the Consent Decree. In the event of a conflict between an Exhibit and
2 the Decree, the Decree shall prevail.

3 V. STATEMENT OF FACTS

4 Ecology makes the following finding of facts without any express or implied
5 admissions by Defendant.

6 1. The Burlington Northern and Santa Fe Railway Company (BNSF), formerly
7 known as Burlington Northern Railroad Company (BN), is the owner of the property at East
8 3412 Wellesley Avenue, Spokane, Washington on which the facility is located (Exhibit A,
9 Figure 1).

10 2. Kaiser Aluminum and Chemical Corporation (Kaiser) owned or possessed
11 hazardous substances and arranged for disposal or treatment of the hazardous substances at the
12 facility.

13 3. Alumax Incorporated (Alumax) is the corporate successor to Hillyard
14 Aluminum Recovery Corporation, which was an operator of the facility.

15 4. An aluminum dross reprocessing facility was operated on the land leased from
16 BN. Aluminum reprocessing reportedly began at the Site in 1954 by the Hillyard Processing
17 Company. This company was sold to Hillyard Aluminum Recovery Corporation in 1976,
18 which was again sold to Aluminum Recycling Corporation in 1979. Aluminum Recycling
19 Corporation operated the facility until 1987 when the property was abandoned. All three
20 companies operating the facility continued the same aluminum reprocessing operations.

21 5. The facility processed aluminum scrap materials and aluminum skim called
22 white dross, obtained from aluminum smelters, in a batch process. This secondary processing
23 of aluminum dross involved addition of sodium and potassium chloride salts. Molten
24 aluminum metal was extracted during the process, poured into ingots and sold. Spent dross
25 process waste called black dross, along with non-reprocessed white dross waste, remain on the

1 Site. A total of 65,000 cubic yards of these wastes occur in piles A through R and an
2 abandoned pit on-site (Exhibit A, Figure 2).

3 6 Ground water beneath the Site occurs in the Spokane Valley-Rathdrum Prairie
4 Aquifer. In 1978 the United States Environmental Protection Agency (EPA) designated this
5 aquifer as a "Sole Source" Aquifer. The aquifer serves as the main drinking water supply for
6 approximately 400,000 people in the City and County of Spokane.

7 7. Ecology completed the Phase I Site Inspection Report, Aluminum Recycling
8 Corporation, Wellesley, Spokane, Spokane County, Washington, WAD 043005651, in
9 December 1987 (Phase I SI Report) to assess the hazards of the Site. As a result of that report
10 the Site was evaluated through the Washington Ranking Method (WARM) and placed on the
11 Hazardous Sites List with a ranking of 2.

12 8. The Phase I SI Report states that in 1955 chloride and other hazardous
13 substances from the dross waste had contaminated a BN (now BNSF) well near the Site.
14 Complaints of windblown particulates and ammonia odors generated from the Site were
15 reported. The occurrence of a thermite fire in the waste materials was also noted in the report.

16 9. In 1988, BNSF initiated a dust suppression program to stabilize piled waste
17 material. A fence was also constructed by BNSF around the facility to limit Site access.

18 10. Environmental Management Resources, Inc. (EMR) prepared a Summary
19 Report BNRR Hillyard Aluminum Dross Site Spokane, Washington, for BNSF in June 1996.
20 The report indicates that the dross contains high concentrations of chloride, fluoride and
21 nitrogen compounds. The report also indicates that dross waste materials generate ammonia
22 gas when exposed to atmospheric moisture and water.

23 11. Ammonia, and the decomposition products of these dross wastes including
24 chloride, fluoride and nitrate, are hazardous substances as defined in RCW 70.105D.020(7)(a)
25 and (7)(e).

1 12 BNSF installed a monitoring well (MW3) in June 1997, and collected
2 groundwater samples from MW3 and from previously sampled monitoring wells. Sample
3 results presented in the Groundwater Sampling Report Hillyard Aluminum Dross Site
4 Spokane, Washington, 1997, indicate that a release of hazardous substances has contaminated
5 groundwater with nitrate, fluoride, and chloride beneath the Site in concentrations exceeding
6 drinking water standards

7 13 In certified correspondence dated July 29, 1997, Ecology notified BNSF of the
8 preliminary finding of potential liability and requested comment on that finding.

9 14. In certified correspondence dated November 6, 1997, Ecology notified BNSF of
10 its status as a potentially liable person with regard to the release of hazardous substances at the
11 Site.

12 15. Correspondence from EMR (February 5, 1998) indicates that BNSF has made
13 numerous and ongoing efforts beginning in 1988 to find a reuse for the dross material.

14 16. On November 16, 1998, Ecology and BNSF entered into Agreed Order No.
15 98TC-E105, under which BNSF conducted a remedial investigation to determine the extent of
16 contamination at the Site and prepared a feasibility study of remedial alternatives for the Site.

17 17. In certified correspondence dated December 10, 1998, Ecology notified Kaiser
18 of the preliminary finding of potential liability and requested comment on that finding.

19 18. In certified correspondence dated May 11, 1999, Ecology notified Kaiser of its
20 status as a potentially liable person with regard to the release of hazardous substances at the
21 Site.

22 19. In certified correspondence dated April 5, 2000, Ecology notified the Aluminum
23 Company of America (Alcoa) of the preliminary finding of potential liability and requested
24 comment on that finding. After reviewing Alcoa's responsive comments to the preliminary
25

1 finding, Ecology determined that Alumax was the corporation responsible for the release of
2 hazardous substances at the Site

3 20 In certified correspondence dated April 25, 2000, Ecology notified Alumax of
4 its status as a potentially liable person with regard to the release of hazardous substances at the
5 Site

6 21. Under the Agreed Order, BNSF submitted the Final Remedial
7 Investigation/Feasibility Study for the Hillyard Dross Site, East 3412 Wellesley Avenue,
8 Spokane, Washington (August 1999) (RI/FS). The RI/FS presents the results of soil,
9 groundwater and dross sampling. Ecology approved the RI/FS on November 29, 1999.

10 22. A Cleanup Action Plan was prepared for the Site by Ecology that determined
11 the contaminants of concern, selected the cleanup alternative, and outlined the remedial actions
12 to be taken.

13 VI. WORK TO BE PERFORMED

14 This Decree contains a program designed to protect public health, welfare and the
15 environment from the known release, or threatened release, of hazardous substances or
16 contaminants at, on, or from the Site through implementation of the Cleanup Action Plan
17 (Exhibit B).

18 1. Defendant shall implement the Cleanup Action Plan (Exhibit B).

19 2. Defendant shall perform all tasks and submit to Ecology all deliverables set
20 forth in the Scope of Work and Schedule (Exhibit C). The Scope of Work and Schedule
21 (Exhibit C) will serve as a detailed description of the work elements outlined in the Cleanup
22 Action Plan.

23 3. The Engineering Design Report, Construction Plans and Specification, and
24 Operations and Maintenance Plan are subject to review and approval by Ecology before the
25 Defendant performs work under those plans. The Defendant shall incorporate Ecology's

1 comments on the drafts into the final versions of these documents. Upon approval, these
2 documents shall become integral and enforceable parts of this Decree, and shall be complied
3 with by the Defendant.

4 4. Within sixty (60) days of entry of this Decree, BNSF shall record with the
5 Spokane County Auditor's Office the Restrictive Covenant attached to this Decree as Exhibit
6 D and provide Ecology with proof of such recording.

7 5. Defendant agrees not to perform any remedial actions outside the scope of this
8 Decree unless the parties agree to amend the scope of work to cover these actions. All work
9 conducted under this decree shall be done in accordance with Ch. 173-340 WAC unless
10 otherwise provided herein.

11 VII. DESIGNATED PROJECT COORDINATORS

12 The project coordinator for Ecology is:

13 Sandra Treccani
14 Department of Ecology
15 Eastern Regional Office
16 4601 N. Monroe, Suite 202
17 Spokane, WA 99205-1295

18 The project coordinator for the Defendant is:

19 Bruce Sheppard
20 The Burlington Northern And Santa Fe Railway Company
21 2454 Occidental Avenue, Suite 1A
22 Seattle, WA 98134-1451

23 Each project coordinator shall be responsible for overseeing the implementation of this
24 Decree. The Ecology project coordinator will be Ecology's designated representative at the
25 Site. To the maximum extent possible, communications between Ecology and the Defendant
and all documents, including reports, approvals, and other correspondence concerning the
activities performed pursuant to the terms and conditions of this Decree, shall be directed
through the project coordinators. The project coordinators may designate, in writing, working

1 level staff contacts for all or portions of the implementation of the remedial work required by
2 this Decree. The project coordinators may agree to minor modifications to the work to be
3 performed without formal amendments to this Decree. Minor modifications will be
4 documented in writing by Ecology.

5 Any party may change its respective project coordinator. Written notification shall be
6 given to the other parties at least ten (10) calendar days prior to the change.

7 VIII. PERFORMANCE

8 All work performed pursuant to this Decree shall be under the direction and
9 supervision, as necessary, of a professional engineer or hydrogeologist, or equivalent, with
10 experience and expertise in hazardous waste site investigation and cleanup. Any construction
11 work must be under the supervision of a professional engineer. Defendant shall notify Ecology
12 in writing as to the identity of such engineer(s) or hydrogeologist(s), or others and of any
13 contractors and subcontractors to be used in carrying out the terms of this Decree, in advance
14 of their involvement at the Site.

15 IX. ACCESS

16 Ecology or any Ecology authorized representatives shall have the authority to enter and
17 freely move about all property at the Site at all reasonable times for the purposes of, inter alia:
18 inspecting records, operation logs, and contracts related to the work being performed pursuant
19 to this Decree; reviewing Defendant's progress in carrying out the terms of this Decree;
20 conducting such tests or collecting such samples as Ecology may deem necessary; using a
21 camera, sound recording, or other documentary type equipment to record work done pursuant
22 to this Decree; and verifying the data submitted to Ecology by the Defendant. All parties with
23 access to the Site pursuant to this paragraph shall comply with approved health and safety
24 plans.

1 **X. SAMPLING, DATA REPORTING, AND AVAILABILITY**

2 With respect to the implementation of this Decree, Defendant shall make the results of
3 all sampling, laboratory reports, and/or test results generated by it, or on its behalf available to
4 Ecology and shall submit these results in accordance with Section XI of this Decree.

5 In accordance with WAC 173-340-840(5), sampling data shall be submitted by the
6 Defendant in an electronic format agreeable to Ecology's site coordinator. These submittals
7 shall be provided to Ecology in accordance with Section XI of this Decree.

8 If requested by Ecology, Defendant shall allow split or duplicate samples to be taken by
9 Ecology and/or its authorized representatives of any samples collected by Defendant pursuant
10 to the implementation of this Decree. Defendant shall notify Ecology seven (7) days in
11 advance of any sample collection or work activity at the Site. Ecology shall, upon request,
12 allow split or duplicate samples to be taken by Defendant or its authorized representative of
13 any samples collected by Ecology pursuant to the implementation of this Decree provided it
14 does not interfere with the Department's sampling. Without limitation on Ecology's rights
15 under Section IX, Ecology shall endeavor to notify Defendant prior to any sample collection
16 activity.

17 **XI. PROGRESS REPORTS**

18 Defendant shall submit to Ecology written progress reports that describe the actions
19 taken during the previous month to implement the requirements of this Decree. The progress
20 reports shall include the following:

21 A. A list of on-site activities that have taken place during the month;

22 B. Detailed description of any deviations from required tasks not otherwise
23 documented in project plans or amendment requests;

24 C. Description of all deviations from the schedule (Exhibit C) during the current
25 month and any planned deviations in the upcoming month;

1 D. For any deviations in schedule, a plan for recovering lost time and maintaining
2 compliance with the schedule;

3 E. All raw data (including laboratory analysis) received by the Defendant during
4 the past month and an identification of the source of the sample; and

5 F. A list of deliverables for the upcoming month if different from the schedule.

6 All progress reports shall be submitted monthly from the effective date of this Decree
7 until three (3) months after implementation of the cleanup action is completed. Thereafter,
8 Defendant shall submit progress reports annually. All progress reports shall be submitted by
9 the tenth (10) day of the month in which they are due after the effective date of this Decree.
10 Progress reports shall be sent to Ecology's project coordinator by facsimile and first class U.S.
11 mail. Unless otherwise specified, any other documents submitted pursuant to this Decree shall
12 be sent by certified mail, return receipt requested, to Ecology's project coordinator.

13 XII. RETENTION OF RECORDS

14 Defendant shall preserve, during the pendency of this Decree and for ten (10) years
15 from the date this Decree is no longer in effect as provided in Section XXV, all records,
16 reports, documents, and underlying data in its possession relevant to the implementation of this
17 Decree and shall insert in contracts with project contractors and subcontractors a similar record
18 retention requirement. Upon request of Ecology, Defendant shall make all non-archived
19 records available to Ecology and allow access for review. All archived records shall be made
20 available to Ecology within a reasonable period of time.

21 XIII. TRANSFER OF INTEREST IN PROPERTY

22 No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold,
23 or other interest held by a Defendant in any portion of the Site shall be consummated without
24 provision for continued operation and maintenance of any containment system, treatment
25 system, and monitoring system installed or implemented pursuant to this Decree.

1 Prior to transfer of any legal or equitable interest in all or any portion of the property,
2 and during the effective period of this Decree, Defendant shall serve a copy of this Decree
3 upon any prospective purchaser, lessee, transferee, assignee, or other successor in interest of
4 the property; and, at least thirty (30) days prior to any transfer, Defendant shall notify Ecology
5 of said contemplated transfer.

6 XIV. RESOLUTION OF DISPUTES

7 A. In the event a dispute arises as to an approval, disapproval, proposed
8 modification or other decision or action by Ecology's project coordinator, the parties shall
9 utilize the dispute resolution procedure set forth below.

10 (1) Upon receipt of the Ecology project coordinator's decision, the
11 Defendant has fourteen (14) days within which to notify Ecology's project coordinator of their
12 objection to the decision.

13 (2) The parties' project coordinators shall then confer in an effort to resolve
14 the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days,
15 Ecology's project coordinator shall issue a written decision.

16 (3) Defendant may then request Ecology management review of the
17 decision. This request shall be submitted in writing to the Toxics Cleanup Program Manager
18 within seven (7) days of receipt of Ecology's project coordinator's decision.

19 (4) Ecology's Program Manager shall conduct a review of the dispute and
20 shall issue a written decision regarding the dispute within thirty (30) days of the Defendant's
21 request for review. The Program Manager's decision shall be Ecology's final decision on the
22 disputed matter

23 B. If Ecology's final written decision is unacceptable to Defendant, Defendant has
24 the right to submit the dispute to the Court for resolution. The parties agree that one judge
25 should retain jurisdiction over this case and shall, as necessary, resolve any dispute arising

1 under this Decree. In the event Defendant presents an issue to the Court for review, the Court
2 shall review the action or decision of Ecology on the basis of whether such action or decision
3 was arbitrary and capricious and render a decision based on such standard of review.

4 C The parties agree to only utilize the dispute resolution process in good faith and
5 agree to expedite, to the extent possible, the dispute resolution process whenever it is used.
6 Where either party utilizes the dispute resolution process in bad faith or for purposes of delay,
7 the other party may seek sanctions.

8 Implementation of these dispute resolution procedures shall not provide a basis for
9 delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule
10 extension or the Court so orders.

11 **XV. AMENDMENT OF CONSENT DECREE**

12 This Decree may only be amended by a written stipulation among the parties to this
13 Decree that is entered by the Court or by order of the Court. Such amendment shall become
14 effective upon entry by the Court. Agreement to amend shall not be unreasonably withheld by
15 any party to the Decree.

16 Defendant shall submit any request for an amendment to Ecology for approval.
17 Ecology shall indicate its approval or disapproval in a timely manner after the request for
18 amendment is received. If the amendment to the Decree is substantial, Ecology will provide
19 public notice and opportunity for comment. Reasons for the disapproval shall be stated in
20 writing. If Ecology does not agree to any proposed amendment, the disagreement may be
21 addressed through the dispute resolution procedures described in Section XIV of this Decree.

22 **XVI. EXTENSION OF SCHEDULE**

23 A. An extension of schedule shall be granted only when a request for an extension
24 is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the
25 deadline for which the extension is requested, and good cause exists for granting the extension

1 All extensions shall be requested in writing. The request shall specify the reason(s) the
2 extension is needed.

3 An extension shall only be granted for such period of time as Ecology determines is
4 reasonable under the circumstances. A requested extension shall not be effective until
5 approved by Ecology or the Court. Ecology shall act upon any written request for extension in
6 a timely fashion. It shall not be necessary to formally amend this Decree pursuant to Section
7 XV when a schedule extension is granted.

8 B. The burden shall be on the Defendant to demonstrate to the satisfaction of
9 Ecology that the request for such extension has been submitted in a timely fashion and that
10 good cause exists for granting the extension. Good cause includes, but is not limited to, the
11 following.

12 (1) Circumstances beyond the reasonable control and despite the due
13 diligence of Defendant including delays caused by unrelated third parties or Ecology, such as
14 (but not limited to) delays by Ecology in reviewing, approving, or modifying documents
15 submitted by Defendant; or

16 (2) Acts of God, including fire, flood, blizzard, extreme temperatures,
17 storm, or other unavoidable casualty; or

18 (3) Endangerment as described in Section XVII.

19 However, neither increased costs of performance of the terms of the Decree nor
20 changed economic circumstances shall be considered circumstances beyond the reasonable
21 control of Defendant.

22 C. Ecology may extend the schedule for a period not to exceed ninety (90) days,
23 except where an extension is needed as a result of:

24 (1) Delays in the issuance of a necessary permit which was applied for in a
25 timely manner; or

1 (2) Other circumstances deemed exceptional or extraordinary by Ecology;
2 or

3 (3) Endangerment as described in Section XVII.

4 Ecology shall give Defendant written notification in a timely fashion of any extensions
5 granted pursuant to this Decree.

6 **XVII. ENDANGERMENT**

7 In the event Ecology determines that activities implementing or in noncompliance with
8 this Decree, or any other circumstances or activities, are creating or have the potential to create
9 a danger to the health or welfare of the people on the Site or in the surrounding area or to the
10 environment, Ecology may order Defendant to stop further implementation of this Decree for
11 such period of time as needed to abate the danger or may petition the Court for an order as
12 appropriate. During any stoppage of work under this section, the obligations of Defendant
13 with respect to the work under this Decree which is ordered to be stopped shall be suspended
14 and the time periods for performance of that work, as well as the time period for any other
15 work dependent upon the work which is stopped, shall be extended, pursuant to Section XVI of
16 this Decree, for such period of time as Ecology determines is reasonable under the
17 circumstances.

18 In the event Defendant determines that activities undertaken in furtherance of this
19 Decree or any other circumstances or activities are creating an endangerment to the people on
20 the Site or in the surrounding area or to the environment, Defendant may stop implementation
21 of this Decree for such period of time necessary for Ecology to evaluate the situation and
22 determine whether Defendant should proceed with implementation of the Decree or whether
23 the work stoppage should be continued until the danger is abated. Defendant shall notify
24 Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after
25 such stoppage of work, and thereafter provide Ecology with documentation of the basis for the

1 work stoppage. If Ecology disagrees with the Defendant's determination, it may order
2 Defendant to resume implementation of this Decree. If Ecology concurs with the work
3 stoppage, the Defendant's obligations shall be suspended and the time period for performance
4 of that work, as well as the time period for any other work dependent upon the work which was
5 stopped, shall be extended, pursuant to Section XVI of this Decree, for such period of time as
6 Ecology determines is reasonable under the circumstances. Any disagreements pursuant to the
7 clause shall be resolved through the dispute resolution procedures in Section XIV.

8 **XVIII. OTHER ACTIONS**

9 Ecology reserves its rights to institute remedial action(s) at the Site and subsequently
10 pursue cost recovery, and Ecology reserves its rights to issue orders and/or penalties or take
11 any other enforcement action pursuant to available statutory authority under the following
12 circumstances:

13 1. Where Defendant fails, after notice, to comply with any requirement of this
14 Decree;

15 2. In the event or upon the discovery of a release or threatened release not
16 addressed by this Decree;

17 3. Upon Ecology's determination that action beyond the terms of this Decree is
18 necessary to abate an emergency situation which threatens public health or welfare or the
19 environment; or

20 4. Upon the occurrence or discovery of a situation beyond the scope of this Decree
21 as to which Ecology would be empowered to perform any remedial action or to issue an order
22 and/or penalty, or to take any other enforcement action. This Decree is limited in scope to the
23 geographic Site described in Exhibit A and to those contaminants that Ecology knows to be at
24 the Site when this Decree is entered.

1 Ecology reserves all rights regarding the injury to, destruction of, or loss of natural
2 resources resulting from the release or threatened release of hazardous substances from the
3 Aluminum Recycling Corporation Site

4 Ecology reserves the right to take any enforcement action whatsoever, including a cost
5 recovery action, against potentially liable persons not party to this Decree

6 **XIX. INDEMNIFICATION**

7 Defendant agrees to indemnify and save and hold the State of Washington, its
8 employees, and agents harmless from any and all claims or causes of action for death or
9 injuries to persons or for loss or damage to property arising from or on account of acts or
10 omissions of Defendant, its officers, employees, agents, or contractors in entering into and
11 implementing this Decree. However, the Defendant shall not indemnify the State of
12 Washington nor save nor hold its employees and agents harmless from any claims or causes of
13 action arising out of the negligent acts or omissions of the State of Washington, or the
14 employees or agents of the State, in implementing the activities pursuant to this Decree

15 **XX. COMPLIANCE WITH APPLICABLE LAWS**

16 A. All actions carried out by Defendant pursuant to this Decree shall be done in
17 accordance with all applicable federal, state, and local requirements, including requirements to
18 obtain necessary permits, except as provided in paragraph B. of this section.

19 B. Pursuant to RCW 70.105D.090(I), the substantive requirements of chapters
20 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW and of any laws requiring or authorizing
21 local government permits or approvals for the remedial action under this Decree that are
22 known to be applicable at the time of entry of the Decree have been included in Exhibit B, the
23 Cleanup Action Plan, and are binding and enforceable requirements of the Decree. Defendant
24 has a continuing obligation to determine whether additional permits or approvals addressed in
25

1 RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree
2 In the event either Defendant or Ecology determines that additional permits or approvals
3 addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under
4 this Decree, it shall promptly notify the other party of this determination Ecology shall
5 determine whether Ecology or Defendant shall be responsible to contact the appropriate state
6 and/or local agencies. If Ecology so requires, Defendant shall promptly consult with the
7 appropriate state and/or local agencies and provide Ecology with written documentation from
8 those agencies of the substantive requirements those agencies believe are applicable to the
9 remedial action. Ecology shall make the final determination on the additional substantive
10 requirements that must be met by Defendant and on how Defendant must meet those
11 requirements. Ecology shall inform Defendant in writing of these requirements. Once
12 established by Ecology, the additional requirements shall be enforceable requirements of this
13 Decree. Defendant shall not begin or continue the remedial action potentially subject to the
14 additional requirements until Ecology makes its final determination.

15 Ecology shall ensure that notice and opportunity for comment is provided to the public
16 and appropriate agencies prior to establishing the substantive requirements under this section.

17 C Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the
18 exemption from complying with the procedural requirements of the laws referenced in RCW
19 70.105D.090(1) would result in the loss of approval from a federal agency which is necessary
20 for the State to administer any federal law, the exemption shall not apply and the Defendant
21 shall comply with both the procedural and substantive requirements of the laws referenced in
22 RCW 70.105D.090(1), including any requirements to obtain permits.

23 **XXI. REMEDIAL AND INVESTIGATIVE COSTS**

24 The Defendant agrees to pay costs incurred by Ecology pursuant to this Decree. These
25 costs shall include work performed by Ecology or its contractors for, or on, the Site under Ch.

1 70 105D RCW both prior to and subsequent to the issuance of this Decree for investigations,
2 remedial actions, and Decree preparation, negotiations, oversight and administration. Ecology
3 costs shall include costs of direct activities and support costs of direct activities as defined in
4 WAC 173-340-550(2). The Defendant agrees to pay the required amount within ninety (90)
5 days of receiving from Ecology an itemized statement of costs that includes a summary of
6 costs incurred, an identification of involved staff, and the amount of time spent by involved
7 staff members on the project. A general statement of work performed will be provided upon
8 request. Itemized statements shall be prepared quarterly. Failure to pay Ecology's costs within
9 ninety (90) days of receipt of the itemized statement will result in interest charges

10 **XXII. IMPLEMENTATION OF REMEDIAL ACTION**

11 If Ecology determines that Defendant has failed without good cause to implement the
12 remedial action, Ecology may, after notice to Defendant, perform any or all portions of the
13 remedial action that remain incomplete. If Ecology performs all or portions of the remedial
14 action because of the Defendant's failure to comply with its obligations under this Decree,
15 Defendant shall reimburse Ecology for the costs of doing such work in accordance with
16 Section XXI, provided that Defendant is not obligated under this section to reimburse Ecology
17 for costs incurred for work inconsistent with or beyond the scope of this Decree.

18 **XXIII. FIVE YEAR REVIEW**

19 As remedial action, including ground water monitoring, continues at the Site, the
20 parties agree to review the progress of remedial action at the Site, and to review the data
21 accumulated as a result of site monitoring as often as is necessary and appropriate under the
22 circumstances. At least every five years the parties shall meet to discuss the status of the Site
23 and the need, if any, of further remedial action at the Site. Ecology reserves the right to require
24 further remedial action at the Site under appropriate circumstances. This provision shall
25 remain in effect for the duration of the Decree.

1 **XXV. DURATION OF DECREE**

2 This Decree shall remain in effect and the remedial program described in the Decree
3 shall be maintained and continued until the Defendant has received written notification from
4 Ecology that the requirements of this Decree have been satisfactorily completed.

5 **XXVI. CLAIMS AGAINST THE STATE**

6 Defendant hereby agrees that it will not seek to recover any costs accrued in
7 implementing the remedial action required by this Decree from the State of Washington or any
8 of its agencies; and further, that the Defendant will make no claim against the State Toxics
9 Control Account or any Local Toxics Control Account for any costs incurred in implementing
10 this Decree. Except as provided above, however, Defendant expressly reserves its right to seek
11 to recover any costs incurred in implementing this Decree from any other potentially liable
12 person.

13 **XXVII. COVENANT NOT TO SUE / REOPENERS**

14 A. In consideration of the Defendant's compliance with the terms and conditions of
15 this Decree, Ecology agrees that compliance with this Decree shall stand in lieu of any and all
16 administrative, legal, and equitable remedies and enforcement actions available to the State
17 against the Defendant regarding all matters within the scope of this Decree.

18 B. Reopeners: In the following circumstances, Ecology may exercise its full
19 legal authority to address releases of hazardous substances at the Site, notwithstanding the
20 Covenant Not To Sue set forth above:

21 (1) In the event Defendant fails to comply with the terms and conditions of
22 this Decree, including all Exhibits, and after written notice of non-compliance, such failure is
23 not cured by Defendant within thirty (30) days of receipt of notice of non-compliance.

24 (2) In the event factors not known at the time of entry of this Decree and not
25 disclosed to Ecology are discovered and such factors present a previously unknown threat to

1 human health or the environment and are not addressed by the Cleanup Action Plan, attached
2 hereto as Exhibit B.

3 (3) Upon Ecology's determination that actions beyond the terms of this
4 Decree are necessary to abate an emergency or endangerment situation which threatens public
5 health, welfare, or the environment.

6 (4) In the event that the results of groundwater monitoring indicate that
7 cleanup standards are being exceeded.

8 C. Applicability: The Covenant Not To Sue set forth above shall have no
9 applicability whatsoever to:

- 10 (1) Criminal Liability;
- 11 (2) Actions against PLP's who are not parties to this Decree;
- 12 (3) Liability for damages for injury to, destruction of, or loss of natural
13 resources;
- 14 (4) Determinations pursuant to groundwater monitoring that show that
15 cleanup levels are being exceeded.

16 D. Ecology retains all of its legal and equitable rights against all persons except as
17 otherwise provided in this Decree.

18 **XXVIII. CONTRIBUTION PROTECTION**

19 With regard to claims for contribution against the Defendant, the parties intend that the
20 Defendant will obtain protection against claims for contribution for matters addressed in this
21 Decree pursuant to RCW 70.105D.040(4)(d).

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XXIX. EFFECTIVE DATE

This Decree is effective upon the date it is entered by the Court.

XXX. PUBLIC NOTICE AND WITHDRAWAL OF CONSENT

This Decree has been the subject of public notice and comment under RCW 70.105D.040(4)(a). As a result of this process, Ecology has found that this Decree will lead to a more expeditious cleanup of hazardous substances at the Site.

If the Court withholds or withdraws its consent to this Decree, it shall be null and void at the option of any party and the accompanying Complaint shall be dismissed without costs and without prejudice. In such an event, no party shall be bound by the requirements of this Decree.

1 STATE OF WASHINGTON
2 DEPARTMENT OF ECOLOGY

CHRISTINE O. GREGOIRE
Attorney General

3
4 FLORA GOLDSTEIN
5 Section Manager
6 Toxics Cleanup Program

KEN LEDERMAN, WSBA #26515
Assistant Attorney General

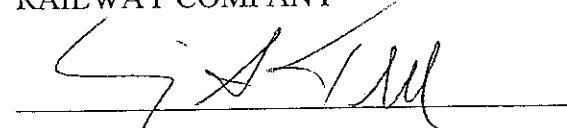
7
8 Date: _____

Date: _____

9
10 THE BURLINGTON NORTHERN AND
11 SANTA FE RAILWAY COMPANY

ATTORNEY FOR THE BURLINGTON
NORTHERN AND SANTA FE
RAILWAY COMPANY

12
13 



14 Title: VP General Counsel

CRAIG S. TRUEBLOOD, WSBA #18357
PRESTON GATES & ELLIS LLP

15 Date: Feb. 1, 2001

Date: Feb. 1, 2001

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17
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21 DATED this _____ day of _____, 2001.

22
23 JUDGE
24 Spokane County Superior Court
25

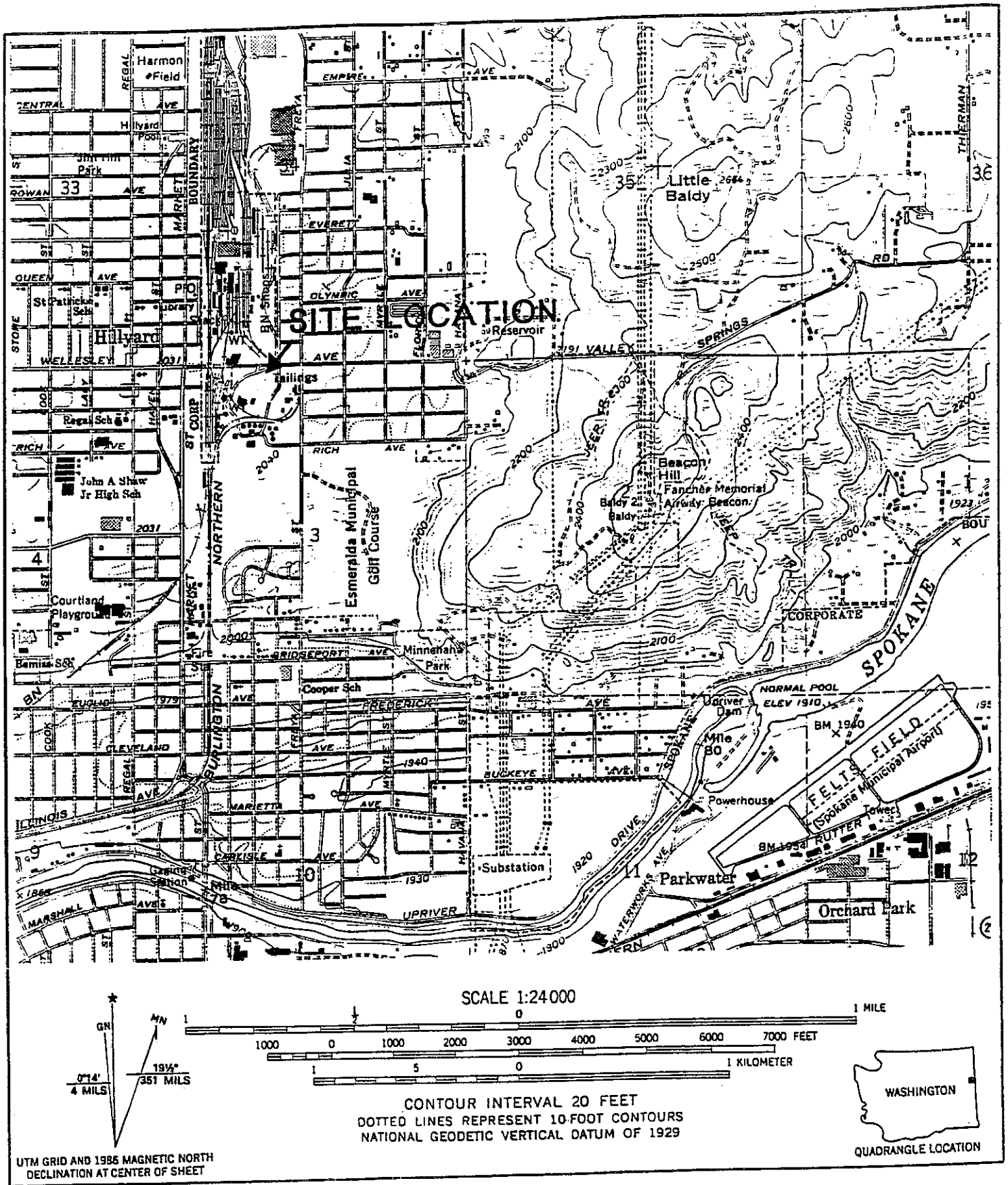


EXHIBIT A
 Aluminum Recycling Corporation Site Diagram



WASHINGTON STATE
DEPARTMENT OF
E C O L O G Y

EXHIBIT B
FINAL CLEANUP ACTION PLAN

Aluminum Recycling Corporation Site
Spokane, WA

Washington Department of Ecology
Toxics Cleanup Program
Eastern Regional Office
Spokane, WA

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FIGURE 3. ISOCONTOURS OF CHLORIDE CONCENTRATIONS	7

1.0 INTRODUCTION

This report presents Ecology's selected cleanup action for the Aluminum Recycling Corporation (Site), located at East 3412 Wellesley Avenue, Spokane, Washington (figure 1). This Draft Cleanup Action Plan (DCAP) is required as part of the site cleanup process established by Washington State Department of Ecology (Ecology) under Ch.70.105D RCW Model Toxics Control Act (MTCA). The cleanup action decision is based on the Phase I Remedial Investigation/Feasibility Study (RI/FS) conducted by Environmental Management Resources (EMR) on behalf of Burlington Northern Santa Fe Railway (BNSF), the potentially liable person (PLP).

This cleanup action plan will outline the following:

- The history of operations, ownership, and disposal activities at the Site;
- The nature and extent of contamination as presented in the RI;
- Establish cleanup levels for the Site that are protective of human health and the environment; and
- Determine the appropriate remediation strategy.

1.1 DECLARATION

Ecology has selected this remedy because it will be protective of human health and the environment. Furthermore, the selected remedy is consistent with the preference of the State of Washington as stated in RCW 70.105D.030(1)(b) for permanent solutions.

1.2 APPLICABILITY

Cleanup levels specified in this cleanup action plan are applicable only to the Aluminum Recycling Corporation Site. They were developed as a part of an overall remediation process under Ecology oversight using the authority of MTCA, and should not be considered as setting precedents for other sites.

1.3 ADMINISTRATIVE RECORD

The documents used to make the decisions discussed in this cleanup action plan are on file in the administrative record for the Site. These documents are listed in the reference section. The administrative record for the Site is available for public review by appointment at Ecology's Eastern Regional Office, located at N 4601 Monroe Street, Spokane, WA 99205-1295.

2.0 SITE BACKGROUND

The information presented in this section was provided by historical site documents and BNSF or their consultants.

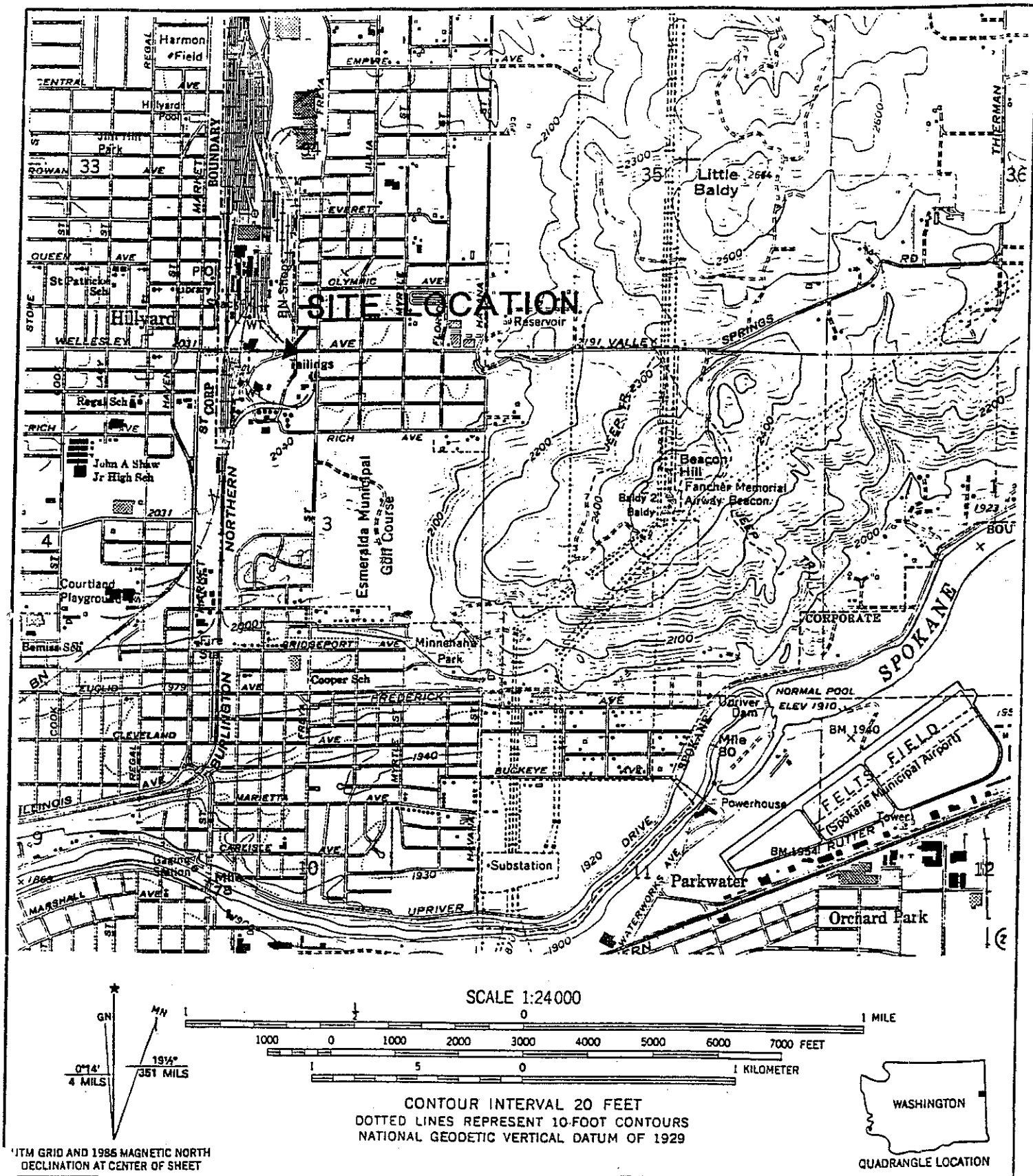


Figure 1. Location of Aluminum Recycling Corporation Site

2.1 SITE HISTORY

The eight-acre Site was initially used as a gravel pit for an asphalt plant. Hillyard Processing Corporation leased the Site from BNSF in 1954 to operate an aluminum reprocessing facility using scrap aluminum and aluminum dross. A new lessee renamed the company in 1976 to Hillyard Aluminum Recovery Corporation, which continued the same operations. That company was then sold to Aluminum Recycling Corporation in 1979. In 1987, the property was abandoned by all lessees with an estimated 65,000 cubic yards of dross material remaining on-site. BNSF still retained ownership of the property throughout that timeframe.

The facility processed white dross, which was composed of aluminum skim and other materials derived from primary smelting operations. White dross contains various oxides, aluminum metal, carbides, and nitrides. This white dross was treated in the secondary recycling plant through a batch process which, through the addition of salts, cryolite, and heat, separated out the molten aluminum metal. The metal was cast into ingots and sold. The resulting residue after the secondary treatment was high salt black dross. This material was deposited on-site in various waste piles and in the former gravel pit. Also, a volume of semi-processed white dross remained on-site.

Between 1979 and 1983, several complaints were made to the City about wind blown particulates and ammonia odors, caused when the dross became wet. Smoke and ammonia fumes were also generated by a fire in 1979 caused by heat from a metal oxide reaction. In August 1988, a polyvinyl acetate/wood fiber solution called Marloc was applied to the piles as part of a dust suppression and site characterization program by BNSF. The product forms a thin film on the surface of the piles and controls dust.

2.2 SITE INVESTIGATIONS

On July 17, 1985, the Department of Ecology completed a Preliminary Assessment (PA) of the property, and recommended that dust and fumes be controlled, the dross materials be appropriately disposed of, and local water supply wells be sampled to ensure they hadn't been contaminated. Through an agreement with the Environmental Protection Agency, Ecology then followed up with a Preliminary Assessment/Site Inspection (PA/SI) on October 13, 1987. These investigations were limited to surficial examination and sampling of the piles. The PA/SI Phase I Site Inspection Report concluded that the Site was potentially contaminated with hazardous substances. No dangerous waste designation was completed at that time. The City of Spokane also requested improvements in dust suppression and site security.

In 1988, BNSF performed a Site characterization study. Samples of the dross were collected from deeper within the piles, groundwater samples were collected from under the piles through soil borings, and the Marloc was applied to the dross surface. Although it ultimately breaks down under ultraviolet radiation, the Marloc was estimated to remain effective for a minimum of two years. An eight-foot high chain link fence was also installed around the dross piles and former gravel pit.

In 1989, Chemical Processors, Inc (Chempro) conducted a stabilization and characterization study on the Site for BNSF. Their results showed that about 95% of the dross on-site could be considered a dangerous waste under Washington State regulations due to high concentrations of chloride, fluoride, and nitrate. Also, groundwater under the dross piles contained chloride, fluoride, and nitrate at levels exceeding state drinking water standards

In August of 1991, a Site ranking was completed by Ecology using the Washington Ranking Method (WARM); the Site received a rank of 2 on a scale of 1 to 5, with 1 representing the greatest threat to human health and the environment

In June of 1996, EMR produced a Summary Report which reviewed the information and data generated through previous work, and provided information on the physical and chemical properties of the dross. These results contradicted the work of Chempro, indicating that the dross was not a dangerous waste according to bioassay testing and that the remaining salts were encapsulated in the dross, limiting their ability to be leached.

A Work Plan for a remedial investigation at the Site was completed by EMR on behalf of BNSF in August of 1998. An agreed order was then signed between BNSF and Ecology on November 16, 1998, implementing the Work Plan. BNSF began the Remedial Investigation/Feasibility Study (RI/FS) of the Site to determine the nature and extent of contamination at the Site and suggest potential cleanup actions. The RI/FS was completed and finalized after public comment in November of 1999.

2.3 PHYSICAL SITE CHARACTERISTICS

2.3.1 Hydrogeology

Geology in the vicinity of the Site consists of Columbia basalts overlain by Quaternary flood deposits. The flood deposits are composed of poorly sorted boulders, cobbles, gravel and sand. The coarse nature of the deposits results in very high permeabilities. Depth to bedrock below the Site ranges from 250-300 feet below ground surface. (EMR, 1999)

The Site overlies the Spokane Valley Rathdrum Prairie Aquifer, which is the sole source of water for almost 400,000 people in the greater Spokane area. The aquifer flows from Northern Idaho to the west and southwest down the Spokane Valley at an estimated rate of 60 to 90 ft/day. In the area of the Site, the flow divides around a protrusion of basalt at Fivemile Prairie and flows to the northwest through the Hillyard Trough. The flow rate in this region is about 46 ft/day. Depth to groundwater at the Site is approximately 178 feet below ground surface.

2.3.2 Aluminum Dross

The dross varies in composition and texture across the Site, but generally appears dark to medium gray in color with a coarse sandy texture. Many piles have larger conglomerates

of material which can be as large as boulders. Below the leached surface layer, the dross is often a pinkish brown color with streaks of red, black, or green from metallic oxides. These interior portions of the piles are often moist with a distinct ammonia odor. Some piles contain irregularly shaped nodules of aluminum metal. Within the pit, the dross is dark gray to black in color and is found consolidated into a dense, sandstone-like mass.

3.0 NATURE AND EXTENT OF CONTAMINATION

3.1 ALUMINUM DROSS

The aluminum dross is the source material for contaminants in groundwater and soils at the Site. Approximately 65,000 cubic yards of dross are present on-site in the form of large piles and deposits within the 20-ft deep gravel pit (figure 2). The dross has been the subject of numerous physical and chemical investigations to determine its characteristics. Several different laboratories tested the dross for its composition of chloride, fluoride, nitrite, nitrate, phosphate, and sulfate. In addition, sodium, potassium, and certain metals were tested to determine potential reuses of the material. Results indicated that the dross contained about 5.6% aluminum metal. The results from two different labs showed maximum concentrations of 104,000 ppm and 57,000 ppm chloride, and 375 ppm and 6400 ppm fluoride. The differences are attributed to the inhomogeneous nature of the material and lab differences. Samples were also crushed in varying degrees and tested to determine the quantities of leachable metals only. No metals were detected in the leachate.

Aluminum dross samples were collected from five soil borings on and around the piles, and four test pits in the old gravel pit as a part of the RI investigation (figure 2). The concentrations of chloride, fluoride, nitrate, ammonia, and various metals were measured, and leaching tests were performed on intact samples.

3.2 SOILS

Soil was also sampled as part of the RI/FS investigation. Samples were taken along with the dross from the same borings and test pits. The maximum depth of soil samples was five feet below the soil/dross interface at each sample location. With the exception of chloride, concentrations were generally lower in the soils than in the dross. The presence of these contaminants in soil is due to the downward leaching of contaminants through the dross piles. Leaching has occurred throughout the lifetime of the piles, and does continue to occur.

3.3 GROUNDWATER

Groundwater beneath the Site is contaminated through the leaching of contaminants as a result of precipitation and runoff through the dross piles and soil. The groundwater contains chloride, fluoride, and nitrate at concentrations above cleanup levels. Maximum concentrations measured in investigations prior to and during the RI were 1400 ppm chloride, 14 ppm fluoride, and 83 ppm nitrate. Figure 3 shows the distribution of

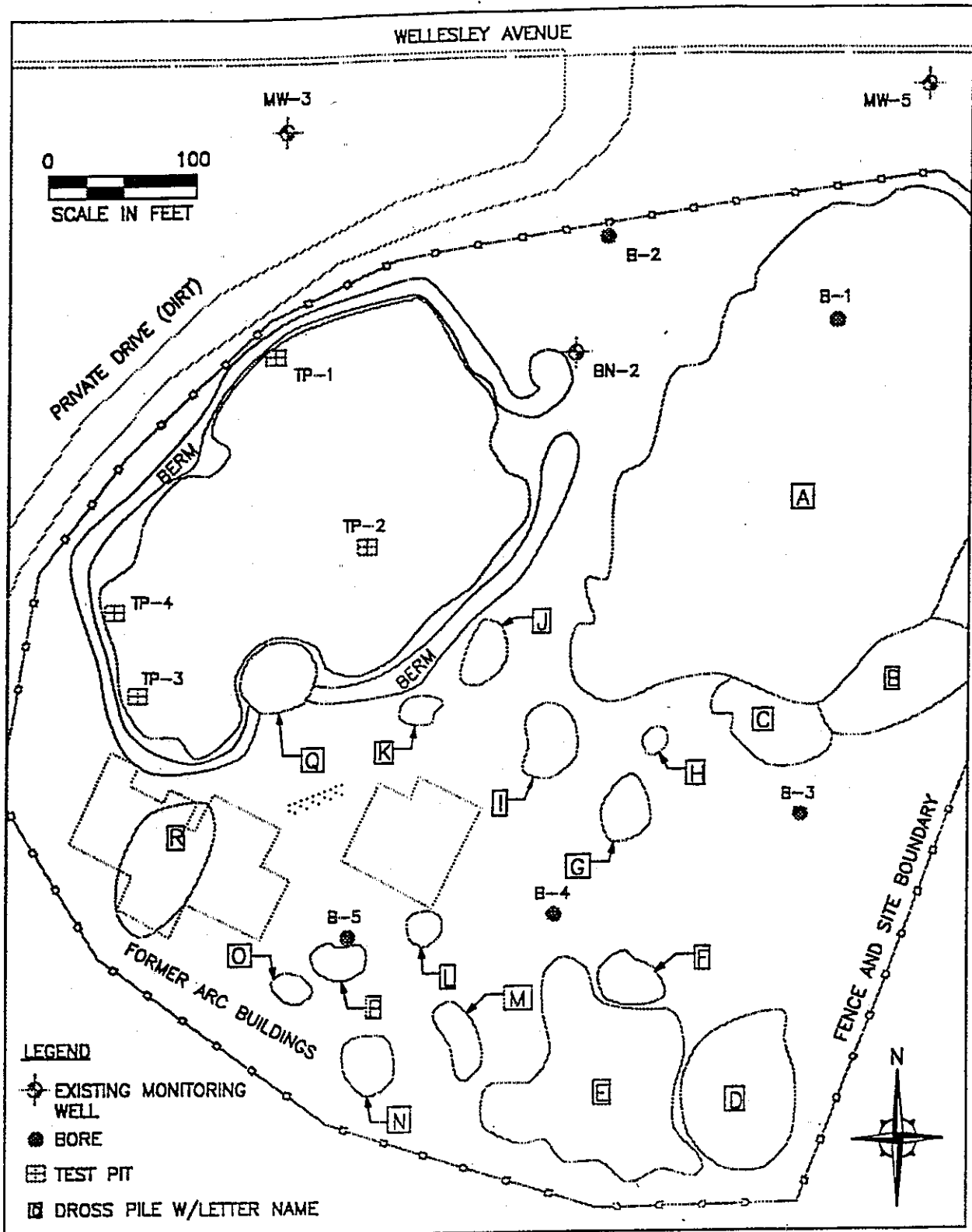


Figure 2. Locations of Aluminum Dross Piles

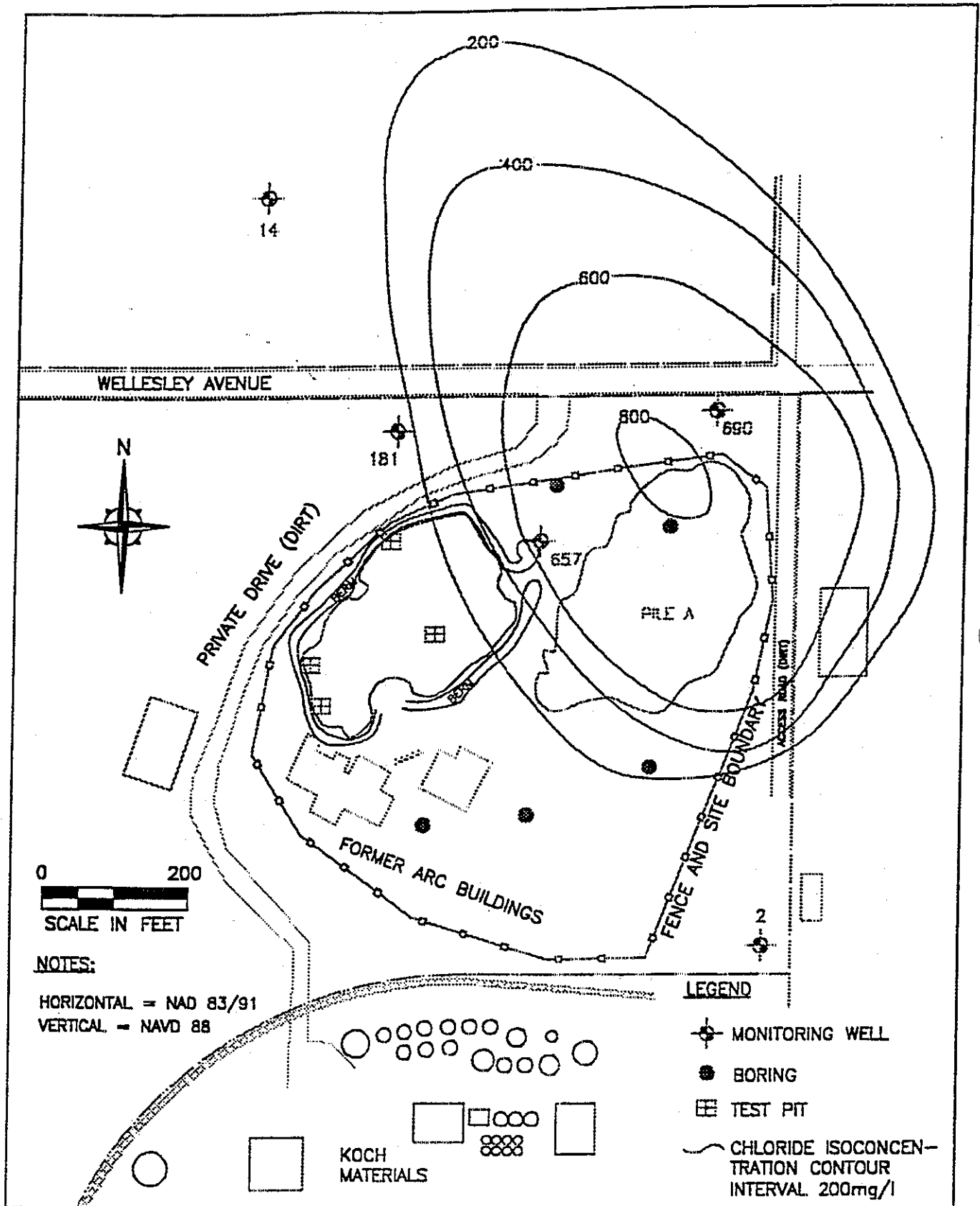


Figure 3. Isocontours of Chloride Concentrations

chloride in groundwater. Because chloride is a conservative tracer, it is expected to move readily in groundwater and represents the maximum extent groundwater contamination might occur. Therefore, other parameters are not plotted but are assumed to have the same general pattern of distribution.

3.4 RISKS TO HUMAN HEALTH AND THE ENVIRONMENT

The Spokane Valley-Rathdrum Prairie Aquifer is the drinking water supply for the greater Spokane area. Sampling has shown that the aquifer has been impacted by contaminants from the Site. Consumers of drinking water from the aquifer may potentially be exposed to these contaminants via ingestion or direct contact.

Both soil and dross pose a risk to potential on-site populations (workers, trespassers) and off-site populations (residents, passersby). These populations may be exposed to these media through accidental ingestion, inhalation or dermal contact. Air quality has also been impacted in the past through the generation of dust and ammonia from the piles. The Site is located in an area adjacent to commercial and residential properties. Although currently managed through fencing and the Marloc, these controls are only temporary and need to be permanently addressed.

4.0 CLEANUP STANDARDS

A requirement of MICA (WAC 173-340) is the establishment of cleanup standards for individual sites. Cleanup standards are comprised of cleanup levels and the point of compliance. Cleanup level development involves the selection of indicator hazardous substances which meet the criteria of WAC 173-340-720 through 173-340-760. Cleanup levels are based on the concentrations of those indicator substances above which human health and the environment are threatened. Those concentrations are determined using risk-based exposure equations defined in MICA (WAC 173-340-720 through 173-340-760). Three methods are available for establishing site-specific cleanup levels: Method A, Method B, and Method C. Method A is used for routine sites or sites that involve relatively few hazardous substances which have available numerical levels in the Method A tables of MICA. Method B is the standard method for determining cleanup levels and is applicable to all sites. Method C is a conditional method used when a cleanup level under Method A or B is technically impossible to achieve or may cause greater environmental harm. Method C may also be applied to qualifying industrial properties. The point of compliance is then established as the location where the cleanup levels must be achieved before the Site is no longer considered a threat to human health and the environment.

4.1 CLEANUP LEVELS

MICA defines the factors used to determine whether a substance should be retained as an indicator for the Site. When defining cleanup levels at a site contaminated with several

hazardous substances, Ecology may eliminate from consideration those contaminants that contribute a small percentage of the overall threat to human health and the environment. WAC 173-340-708(2)(b) outlines that a substance may be eliminated from consideration based on:

- The frequency of detection. If a compound is detected at a frequency of 5% or less, it may be appropriate to eliminate it;
- The concentration of the substance. Substances with concentrations marginally above their cleanup standards may not be important in considerations of overall hazard and risk;
- The toxicity of the substance. It may be suitable to delete substances of low toxicity;
- Environmental fate. Substances that readily degrade in the environment may not be of importance to overall hazard or risk. Conversely, those with highly-toxic degradation products should be included in an analysis of overall hazard and risk;
- The natural background levels of the substance. MTCA regulates risks due to substances found at contaminated waste sites. The risks caused by substances at background concentrations are not addressed by MTCA;
- The mobility and potential for exposure to the substance. Substances may be eliminated if the values for these factors are low.

4.2 SITE CLEANUP LEVELS

The Remedial Investigation has documented the presence of contamination in soils and groundwater at the Site. Therefore, site cleanup levels are developed for each of these contaminated media. Groundwater cleanup levels are first developed, with soil cleanup levels calculated next to ensure that levels do not violate the groundwater standard. Cleanup levels are shown in Tables 1 through 6.

4.2.1 Groundwater

Table 1 shows the applicable cleanup criteria of analytes for which Site groundwater was tested. The most stringent of these criteria is the selected Method B cleanup level for each substance. Method B is the appropriate method for groundwater cleanup levels because there are multiple contaminants and multiple pathways of exposure.

Table 2 shows the analytes detected in groundwater along with the maximum concentrations and frequencies of detection. Maximum concentrations are based on water sampling completed in 1988, 1995, 1997, and 1998. Contaminants with concentrations less than the individual cleanup level, those with 5% or less detection frequency, and those with no toxicity data are eliminated from consideration as indicator substances. Four indicator contaminants were identified for the Site: chloride, fluoride, nitrate-nitrogen, and nitrite-nitrogen.

Analyte	Federal MCL		MTCA			
	Primary MCL, ug/L	Secondary MCL, ug/L	Method A Concentration, ug/L	Basis	Method B Concentration, ug/L	Basis
alkalinity					272,000	BNCAR
ammonia						
arsenic	50		5	background	0.0583	BCAR
barium	2000				1120	BNCAR
bromide						
cadmium	5				8	BNCAR
calcium						
chloride		250,000				
chromium	100				80	BCAR
copper	1300				592	BNCAR
fluoride	4000				960	BNCAR
iron						
lead			5	blood levels		
magnesium						
mercury	2				4.8	BNCAR
nitrate-nitrogen	10,000				25,600	BNCAR
nitrite-nitrogen	1000				1600	BNCAR
organophosphate-phosphorous						
potassium						
selenium					80	BNCAR
silver	50				80	BNCAR
sodium						
sulfate		250,000				
bold - the selected criteria for that analyte BNCAR - MTCA Method B non-carcinogen BCAR - MTCA Method B, carcinogen MCL - Federal Maximum Contaminant Level						

Table 1. Applicable Groundwater Cleanup Criteria

Analyte	Frequency of Detection	Maximum Concentration, ug/L	Method B Cleanup Level, ug/L	Basis	Screening Results
alkalinity	1.0	240,000			no toxicity data
ammonia	1.0	7340	272,000	BNCAR	below cleanup level
arsenic	1.0	1.48	5	A- background	below cleanup level
barium	1.0	134	1120	BNCAR	below cleanup level
bromide	0.83	724			no toxicity data
cadmium	0.0	ND	5	MCL	<=5% detection frequency
calcium	1.0	120,000			no toxicity data
chloride	1.0	1,400,000	250,000	SMCL	indicator
chromium	1.0	1.54	80	BNCAR	below cleanup level
copper	0.0	ND	592	BNCAR	<=5% detection frequency
fluoride	0.45	14,000	960	BNCAR	indicator
iron	0.67	80,100			no toxicity data
lead	0.0	ND	5	A - blood lead	<=5% detection frequency
magnesium	1.0	72,300			no toxicity data
mercury	0.0	ND	2	MCL	<=5% detection frequency
nitrate-nitrogen	1.0	83,800	10,000	MCL	indicator
nitrite-nitrogen	0.09	1500	1000	MCL	indicator
organophosphate-phosphorous	0.0	ND			no toxicity data
potassium	1.0	255,000			no toxicity data
selenium	1.0	1.5	80	BNCAR	below cleanup level
silver	0.0	ND	50	MCL	<=5% detection frequency
sodium	1.0	420,000			no toxicity data
sulfate	1.0	74,800	250,000	SMCL	below cleanup level

BNCAR - MTCA Method B non-carcinogen
 BCAR - MTCA Method B carcinogen
 A - MTCA Method A
 MCL - Federal Maximum Contaminant Level
 SMCL - Federal Secondary Maximum Contaminant Level
 ND - not detected

Table 2. Indicator Substance Screening, Groundwater

Table 3 presents the calculations of cancer risk and hazard quotient for groundwater. Final Method B cleanup levels are shown, along with the hazard quotient for each contaminant separated by its toxic effect. Each contaminant's hazard quotient is listed by its toxic effect; the total for each toxic effect must be less than or equal to one. If the hazard quotient for a toxic effect is greater than one, the cleanup level for contaminants with that toxic effect must be adjusted downward. Table 4 shows the adjusted groundwater cleanup levels. The chloride cleanup level is a secondary maximum contaminant level, which is based on aesthetics and therefore has no toxic effect. The cleanup level for nitrite was lowered so that the hemotoxicity effect hazard quotient was equal to one. These adjusted values are the groundwater cleanup levels for the four indicators.

4.2.2 Soil

Applicable soil cleanup criteria for the Site are shown in Table 5. Since the Site does not meet the requirements of an industrial property as defined in WAC 173-340-745, Method B residential cleanup levels were applied. Method A levels were used for arsenic since it is based on background levels, and for lead because of the absence of a Method B cleanup level.

Table 6 presents the screening for indicator substances in soils. All substances are either below their cleanup level, detected at a frequency of less than 5%, or have no toxicity data, except arsenic and lead. Both these contaminants exceed their respective cleanup levels. However, of the nineteen results for arsenic levels in soil, the two exceedances of 22.2 and 23.4 mg/kg are only 17% above the cleanup level. Ecology has determined that the two samples do not represent significant exceedances. Additionally, although arsenic was detected in 84% of the soil samples, the majority of the concentrations were under 10 mg/kg. Lead will be the only contaminant with a cleanup level in soil.

4.3 POINT OF COMPLIANCE

MICA defines the Point of Compliance as the point or points where cleanup levels shall be attained. Once cleanup levels are met at the point of compliance, the Site is no longer considered a threat to human health or the environment. For soils, the point of compliance shall be from the ground surface to fifteen feet below ground surface. This is based on exposure through direct contact.

The point of compliance for groundwater is defined in WAC 173-340-720(6). Groundwater points of compliance are established for the entire Site from the top of the saturated zone to the lowest affected portion of the aquifer, which is bedrock at this Site.

5.0 PROPOSED CLEANUP ACTIONS

5.1 REMEDIAL ACTION GOALS

The remedial action goals are intended to protect human health and the environment by

Indicator	Method B Cleanup Level, ug/L	Basis	Hazard Quotient	
			Dental Fluorosis (sign of fluoride poisoning)	Hemotoxicity (toxic to blood)
chloride	250,000	SMCL		
fluoride	960	BNCAR	1	
nitrate-nitrogen	10,000	MCL		0.391
nitrite-nitrogen	1000	MCL		0.625
Total Hazard Quotient:			1	1.016
MCL - Federal Maximum Contaminant Level SMCL - Federal Secondary Maximum Contaminant Level BNCAR - MTCA Method B, non-carcinogen				

Table 3. Risk/Hazard Quotient Calculations for Groundwater Indicators

Indicator	Method B Cleanup Level, ug/L	Basis	Hazard Quotient	
			Dental Fluorosis (sign of fluoride poisoning)	Hemotoxicity (toxic to blood)
chloride	250,000	SMCL		
fluoride	960	BNCAR	1	
nitrate-nitrogen	10,000	MCL		0.391
nitrite-nitrogen	974	MCL		0.609
Total Hazard Quotient:			1	1.000
MCL - Federal Maximum Contaminant Level SMCL - Federal Secondary Maximum Contaminant Level BNCAR - MTCA Method B, non-carcinogen				

Table 4. Groundwater Cleanup Levels Adjustments

Analyte	MTCA				Protection of Groundwater, mg/kg	Background, mg/kg
	Method A, mg/kg	Basis	Method B, mg/kg	Basis		
ammonia			2,720,000	BNCAR		
arsenic	20	background	1.67	BCAR	0.5	
barium			5600	BNCAR		
cadmium			80	BNCAR		1
chloride					25,000	
chromium			400	BNCAR		18
copper			2960	BNCAR		22
fluoride			4800	BNCAR	96	
lead	250	blood levels				15
mercury			24	BNCAR		0.02
nitrate-nitrogen			128,000	BNCAR	1000	
nitrite-nitrogen			8000	BNCAR	97.4	
organophosphate-phosphorous						
potassium						
selenium			400	BNCAR		
silver			400	BNCAR		
sodium						
sulfate						

bold - the selected criteria for that analyte
 BNCAR - non-carcinogen
 BCAR - carcinogen

Table 5. Applicable Soil Cleanup Criteria

Analyte	Frequency of Detection	Maximum Concentration, mg/kg	MTCA Cleanup Level, mg/kg	Basis	Screening Results
ammonia	0.0	ND	2,720,000		<=5% detection frequency
arsenic	0.84	23.4*	20	A - background	below cleanup level*
barium	1.0	149	5600	BNCAR	below cleanup level
cadmium	0.32	1.46	80	BNCAR	below cleanup level
chloride	0.74	17,500	25,000	100xGW	below cleanup level
chromium	1.0	49.3	400	BNCAR	below cleanup level
copper	1.0	441	2960	BNCAR	below cleanup level
fluoride	0.89	88.2	96	100xGW	below cleanup level
lead	0.89	485	250	A	indicator
mercury	0.63	0.0344	24	BNCAR	below cleanup level
nitrate-nitrogen	0.67	5.29	1000	100xGW	below cleanup level
nitrite-nitrogen	0.0	ND	97.4	100xGW	<=5% detection frequency
organophosphate-phosphorous	0.0	ND			<=5% detection frequency
potassium	1.0	24,300			no toxicity data
selenium	0.21	18.2	400	BNCAR	below cleanup level
silver	0.05	5.27	400	BNCAR	<=5% detection frequency
sodium	0.95	25,900			no toxicity data
sulfate	0.0	ND			<=5% detection frequency

* - maximum value for arsenic determined not to be significantly different from cleanup level; see text for a more detailed explanation
 BNCAR - MTCA Method B non-carcinogen
 A - Method A
 100xGW - 100 times groundwater cleanup level

Table 6. Indicator Substance Screening, Soils

eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route. They are developed considering the characteristics of the contaminated medium, the characteristics of the hazardous substances present, migration and exposure pathways, and potential receptor points.

Both groundwater and soil have been contaminated by the former Site activities and the continued storage of dross at the Site. Populations may be exposed to contaminated soil or dross via windblown dust or direct dermal contact. Since the aquifer is a drinking water source, contact or ingestion of groundwater is also possible. Potential populations include on-site workers, trespassers, residents of nearby neighborhoods, passersby, and off-site workers.

Given these potential exposure pathways, the following are the remedial action goals for the Site:

- Prevent direct contact, inhalation or ingestion of contaminated soil by humans
- Prevent direct contact, inhalation or ingestion of contaminated dross by humans
- Prevent direct contact or ingestion of contaminated groundwater by humans
- Prevent further contamination of soil
- Prevent further contamination of groundwater

5.2 CLEANUP ACTION ALTERNATIVES

Cleanup alternatives are evaluated as part of the RI/FS for the Site. All contaminated media are required to be addressed as part of each cleanup alternative. The following alternatives are as proposed by BNSF.

5.2.1 Alternative 1: Limited Action/Institutional Controls

Semi-annual groundwater monitoring would take place at the four monitoring wells for chloride, fluoride, nitrate and nitrite. This data would only be used to evaluate the movement and concentration of these contaminants in groundwater. No remedial action would take place.

The chain link fence currently surrounding the property would continue to be maintained. A deed restriction would be placed on the property because indicator substances would remain in contaminated Site media above cleanup levels. Five year reviews would take place to evaluate the status of contaminated media.

5.2.2 Alternative 2: Removal and Off-Site Disposal

All dross and soil exceeding cleanup levels would be removed and transported off-site for disposal at a permitted facility. As part of this work, the fence would need to be removed and temporary roads installed. Dust and odor-suppression materials would be available to limit off-site impacts. Excavated materials would be characterized and then transported via rail car to a permitted landfill. The Site would then be filled with clean

materials, regraded, and the fence reinstalled. Semi-annual groundwater monitoring would take place at the four monitoring wells for chloride, fluoride, nitrate and nitrite, to determine the effectiveness of the remedy. Five-year reviews would also be performed by Ecology.

5.2.3 Alternative 3: On-Site Containment

Contaminated soil and dross would remain on-site, and be covered with an engineered multimedia cover system. For this remedial action, the fence would be removed and the materials regraded to specifications required for the cover. Dust and odor suppression materials would be available to limit off-site impacts. The multimedia cover would then be installed to the specifications of the engineering design, and the fence reinstalled. Deed restrictions would be imposed to limit the potential for future Site activities to break through the cover and/or expose the dross. Semi-annual groundwater monitoring would take place at the four monitoring wells for chloride, fluoride, nitrate and nitrite, to determine the effectiveness of the remedy. Long-term cover system maintenance would take place to ensure that the cover remains effective. Five-year reviews would be performed by Ecology to ensure that the remedy remains protective of human health and the environment.

6.0 CLEANUP ACTION CRITERIA

The requirements for selection cleanup actions are given in the Model Toxics Control Act (WAC 173-340-360). Outlined here are the specific criteria and hierarchy for selecting cleanup actions.

6.1 THRESHOLD REQUIREMENTS

All cleanup actions shall:

- Protect human health and the environment;
- Comply with cleanup standards;
- Comply with applicable state and federal laws; and
- Provide for compliance monitoring.

6.2 OTHER REQUIREMENTS

In addition, the cleanup action shall:

- Use permanent solutions to the maximum extent practicable, including;
 - Long-term effectiveness;
 - Short-term effectiveness;
 - Permanent reduction of toxicity, mobility, and volume;
 - Ability to be implemented;
 - Cleanup costs, and

- Degree to which community concerns are addressed.
- Provide for a reasonable restoration time frame; and
- Consider public concerns raised during public comment on the draft cleanup action plan

6.3 CLEANUP TECHNOLOGIES

Cleanup of contaminated sites shall be conducted using technologies which minimize the amount of untreated hazardous substances remaining at a site. The following technologies shall be considered in order of descending preference:

- Reuse or recycling;
- Destruction or detoxification;
- Separation or volume reduction followed by reuse, recycling, destruction, or detoxification of the residual hazardous substance;
- Immobilization of hazardous substances;
- On-site or off-site disposal at an engineering facility;
- Isolation or containment with attendant engineering controls; and
- Institutional controls and monitoring.

7.0 EVALUATION OF PROPOSED REMEDIAL ALTERNATIVES

7.1 THRESHOLD REQUIREMENTS

Alternative 1 only provides for compliance monitoring; it does not meet any state or federal laws nor complies with cleanup standards. Since no cleanup would be done under this alternative, human health and the environment would not be protected.

Alternatives 2 and 3 would meet all four of the threshold criteria. The removal/off-site disposal and on-site containment would meet the first three requirements, and institutional controls and monitoring would be required for both.

7.2 OTHER REQUIREMENTS

7.2.1 Use Permanent Solutions to the Maximum Extent Practicable

Cleanup actions are selected in part by their preference for permanent solutions. A permanent solution is defined as one where cleanup levels can be met without further action being required at the Site other than the disposal of residue from the treatment of hazardous substances. The following criteria are used to determine the permanence of a cleanup action: long-term effectiveness, short-term effectiveness, permanent reduction of toxicity, mobility, or volume, implementability, and cleanup cost. The details of these criteria are presented in WAC 173-340-360(5). Ranking of the alternatives under each criteria is summarized in Table 7.

Long-term Effectiveness: Long-term effectiveness addresses the following: degree of certainty that the alternative will be successful, long-term reliability, magnitude of

	Alternative 1 Limited Action/ Institutional Controls	Alternative 2 Removal and Off-Site Disposal	Alternative 3 On-Site Containment
Threshold Requirements			
Protect human health and the environment	No	Yes	Yes
Comply with cleanup standards	No	Yes	Yes
Comply with applicable state and federal laws	No	Yes	Yes
Provide for compliance monitoring	Yes	Yes	Yes
Other Requirements*			
Use permanent solutions			
Overall protectiveness	Low	High	Medium
Long term effectiveness	Low	High	Medium-low
Short term effectiveness	Low	High	Medium
Reduction in toxicity, mobility, and volume	Low	Medium	Medium-low
Implementability	High	High	High
Cost	Low	High	Medium
Restoration time frame	>20 years	5-10 years	10-20 years
Consider public concerns	No	Yes	Yes
Cleanup Technology Preference			
Reuse or recycling	No	No	No
Destruction or detoxification	No	No	No
Separation or volume reduction	No	No	No
Immobilization	No	No	No
On-site or off-site disposal	No	Yes	No
Isolation or containment	No	Yes	Yes
Institutional controls and monitoring	Yes	Yes	Yes
* - alternatives are given a ranking in each category relative to the other alternatives.			

Table 7. Comparison of Proposed Cleanup Action Alternatives

residual risk, and effectiveness of management controls. Alternative 1 is ranked low because none of these measures are attained. Alternative 2 is ranked high because the removal of the dross would provide a reliable and successful long-term solution with low residual risk. Alternative 3 is given a medium-low ranking because the long-term reliability is unknown due to the dependence on cover integrity, along with an unknown amount of residual risk. The risk due to soil would be removed, but the recovery of groundwater is dependent upon the reduction of leaching and infiltration, which is again dependent on cover system integrity.

Short-term Effectiveness: Criteria for short-term effectiveness include protection of human health and the environment during implementation, and the degree of risk prior to attainment of cleanup standards. Alternative 1 is ranked low because neither criteria are satisfied to any degree. Alternative 2 and 3 would rank similarly for the first criteria; both would require similar controls for dust and odor, and would require the temporary removal of the fence. However, alternative 2 would have a shorter time frame before attaining cleanup standards, so it is ranked high while alternative 3 is ranked medium.

Permanent Reduction in Toxicity, Mobility, or Volume: Alternative 1 is again ranked low since nothing will be done with the stockpiled materials. Neither alternatives 2 nor 3 have a destruction or waste treatment process involved, so the only remaining applicable criteria is the reduction or elimination of hazardous substances or sources. Since alternative 2 would remove dross materials, but still not destroy them, it receives a medium ranking, while alternative 3 ranks medium-low.

Implementability: All three alternatives are equally implementable with regard to the criteria listed in WAC 173-340-360(5)(d)(v). Therefore, all alternatives received a high ranking.

Cost: Relative to each other, alternative 1 is the least expensive, alternative 3 was intermediate, and alternative 2 was most expensive. Cost is only factored in if one

alternative has a large cost increase with only a minimal improvement in the degree of protection offered. Details on the cost of each alternative are provided in the RI/FS

7.2.2 Provide a Reasonable Restoration Time Frame

Alternative 1 would require a significant restoration time frame since no remedial action would be performed. Alternatives 2 and 3 would be shorter because they both involve the removal of contaminant transport pathways. Alternative 2 would achieve cleanup levels in the shortest time because contaminated materials would be entirely removed from the Site.

7.2.3 Consider Public Concerns

All three alternatives would be required to address public comments and concerns. A 30-day public comment period is required for the draft cleanup action plan.

7.3 CLEANUP TECHNOLOGIES

Alternative 1 ranks the lowest because only institutional controls and monitoring would take place. Alternative 3 ranks higher because it utilizes on-site containment. The highest ranking is alternative 2 which requires off-site disposal.

8.0 SITE CLEANUP ACTION

Alternative 3 will be selected for implementation at the Site. It meets all the threshold requirements and represents an effective remedy for protection of human health and the environment while balancing costs and restoration time frame. Ecology has made some modifications to the alternative from that proposed by BNSF; the following outlines the details of the final selected alternative.

8.1 SOIL AND DROSS

Soil and dross will be addressed through the construction of a multimedia cover system over the dross and affected soil. Components of this work include:

- Site Preparation – The existing chain link fence will be removed and the site regraded. Currently, the dross exists as large piles on-site and in a gravel pit. The land will be graded to remove these features and also to direct surface water runoff away from the covered dross. Since regrading will likely generate dust and expose moist weathered dross and ammonia, a non-water based foaming agent will be available as a control measure.
- Installation of Cover System – A cover system will be installed over the regraded dross to prevent infiltration and leaching of surface water through the dross. The cover system shall consist of an HDPE liner at the base, to act as a barrier to infiltrating water and to help distribute loading. One foot of lightly compacted gravel would cover the liner to assist in drainage and to further help prevent subsidence. A woven geotextile fabric would cover the gravel to help filter migrating soil from above and prevent clogging of the gravel layer. Finally, a three foot layer of soil would complete the cover. Details on the design and composition of the cover will be outlined in the Engineering Design Report to be completed by the PLPs. This document will undergo review by Ecology and a public comment period.
- Site Maintenance – The fence will be reinstalled and monitoring of the cover system will take place. Expected concerns would be subsidence and erosion; to repair this, the addition of soil to the cover would periodically take place. The details of such maintenance requirements will be outlined in an Operation and Maintenance Plan that will be submitted with the Engineering Design Report.

8.2 GROUNDWATER

Concentrations of several contaminants have exceeded cleanup standards in the past, but concentrations have been decreasing steadily since the exceedances have occurred. Therefore, groundwater shall be addressed through long-term monitoring. With the

installation of the impermeable cover, leaching is expected to decrease. Thus the need for active remediation of the groundwater will be significantly diminished. The PLPs shall monitor groundwater on a quarterly basis for five years. At that point, a five-year review shall take place as required by MTCA.

8.3 FIVE YEAR REVIEW

WAC 173-340-420 states that at sites where a cleanup action results in hazardous substances remaining on-site at concentrations exceeding cleanup levels, a periodic review shall be completed no less frequently than every five years. Since the contaminated soil and dross will remain on-site and the groundwater will not be actively remediated, a five year review shall take place at this Site. Groundwater monitoring data shall be reviewed to assess the effectiveness of the cover system in reducing leaching. If it is determined that concentrations of contaminants in groundwater are not decreasing, then the necessity of further remedial action will be addressed.

8.4 INSTITUTIONAL CONTROLS

Under WAC 173-340-360(8)(b), institutional controls shall be required at sites where containment is the selected cleanup action. Institutional controls will be required at the Site because the integrity of the cover system must be maintained. At this site, they will take the form of fences and signs at the property, and restrictive covenants placed with the deed. The restrictive covenants will limit site use with the purpose of minimizing disturbance to the cover system, and will also prevent any excavation, well installation, or withdrawal of water for any purpose other than monitoring on the property.

9.0 EVALUATION OF CLEANUP ACTION WITH MTCA CRITERIA

9.1 EVALUATION WITH RESPECT TO THRESHOLD CRITERIA

9.1.1 Protection of Human Health and the Environment

Direct contact with contaminated soil or dross and inhalation/contact with airborne dust are the major routes of exposure. By consolidating the materials and covering them with an impermeable cover, these pathways will be eliminated. The cover will also prevent further contamination of the groundwater by reducing leaching through contaminated media.

9.1.2 Compliance with Cleanup Standards

The selected cleanup action will comply with cleanup standards for both soil and groundwater through on-site containment.

9.1.3 Compliance with State and Federal Laws

The selected cleanup action will comply with applicable state and federal laws as identified in Table 8. Local laws, which may be more stringent than specified state and federal laws, will govern where applicable.

9.1.4 Provision for Compliance Monitoring

Compliance monitoring will be performed under the selected cleanup action. A compliance monitoring plan will be completed by the PLP and submitted to Ecology to meet MTCA requirements.

9.2 EVALUATION WITH RESPECT TO OTHER REQUIREMENTS

9.2.1 Use of Permanent Solutions to the Maximum Extent Practicable

On-site containment represents a permanent solution as detailed in WAC 173-340-360(5).

9.2.1.1 Long-Term Effectiveness

The selected cleanup action achieves long-term effectiveness through the installation of the impermeable cover system. Long-term effectiveness remains dependent on the integrity of this cover.

9.2.1.2 Short-Term Effectiveness

Risks in the short-term would be caused by dust and odor generation from materials movement. On-site workers and surrounding populations would potentially be exposed to these materials during the construction of the cover. Mitigation of these risks would provide short-term effectiveness for the selected cleanup action.

9.2.1.3 Permanent Reduction of Toxicity, Mobility and Volume

Consolidation and covering of contaminated materials will provide a permanent reduction in toxicity, mobility and volume of hazardous substances. Groundwater monitoring will confirm that this is taking place at the Site.

9.2.1.4 Implementability

The selected cleanup action employs remedies that are readily implementable.

9.2.1.5 Cleanup Costs

The cost for the selected cleanup action is less than other alternatives, and yet provides a similar level of protection for human health and the environment. The cover system will

Cleanup Action Implementation	Ch. 18.104 RCW; WAC 173-160	Water Well Construction; Minimum Standards for Construction and Maintenance of Water Wells
	WAC 173-162	Rules and Regulations Governing the Licensing of Well Contractors and Operators
	Ch. 70.105D RCW; WAC 173-340	Model Toxics Control Act
	Ch. 43.21C RCW; WAC 197-11	State Environmental Policy Act; SEPA Rules
	29 CFR 1910	Occupational Safety and Health Act
Groundwater	42 USC 300	Safe Drinking Water Act
	33 USC 1251; 40 CFR 131	Clean Water Act of 1977; Water Quality Standards
	Ch. 70.105D RCW; WAC 173-340	Model Toxics Control Act
	40 CFR 141; 40 CFR 143	National Primary Drinking Water Standards; National Secondary Drinking Water Standards
	WAC 246-290	Department of Health Standards for Public Water Supplies
	WAC 173-154	Protection of Upper Aquifer Zones
	WAC 173-200	Water Quality Standards for Ground Waters of the State of Washington
Air	42 USC 7401; 40 CFR 50	Clean Air Act of 1977; National Ambient Air Quality Standards
	Ch. 70.94 RCW and Ch. 43.21A RCW; WAC 173-400	Washington Clean Air Act; General Regulations for Air Pollution
	WAC 173-460	Controls for New Sources of Air Pollution
	WAC 173-470	Ambient Air Quality Standards for Particulate Matter
	SCAPCA Regulation 1 Article VI	Control of Fugitive Emissions
	Ch. 70.105D RCW; WAC 173-340	Model Toxics Control Act
Soil and Dross	Ch. 70.95 RCW; WAC 173-304	Solid Waste Management Recovery and Recycling Act; Minimum Functional Standards for Solid Waste Handling
	Ch. 70.105D RCW; WAC 173-340	Model Toxics Control Act
	42 USC 9601; 40 CFR 260	CERCLA; Resource Conservation and Recovery Act
	WAC 173-216	State Waste Discharge Program

Table 8. Applicable or Relevant and Appropriate Requirements for the Selected Cleanup Action

reduce potential exposure routes and limit the migration of contaminants

9.2.2 Provision for a Reasonable Restoration Time Frame

The restoration time frame for the selected cleanup action is believed by Ecology to be reasonable according to criteria outlined in WAC 173-340-360(6).

9.2.3 Consideration of Public Concerns

The public will have an opportunity to review this Draft Cleanup Action Plan and provide comments to Ecology. These comments will be taken into account when preparing the Final Cleanup Action Plan. If needed, a Responsiveness Summary will be prepared to address comments received on this document.

10.0 REFERENCES CITED

EMR, 1996, Summary Report, BNRR Hillyard Aluminum Dross Site, Spokane WA

EMR, 1997, Groundwater Sampling Report, Hillyard Aluminum Dross Site, Spokane WA

EMR, 1999, Final Remedial Investigation/Feasibility Study for the Hillyard Dross Site, East 3412 Wellesley Avenue, Spokane WA

EXHIBIT C
Scope of Work and Schedule for the Cleanup Action at the
Aluminum Recycling Corporation Site, Spokane WA

This Scope of Work will be used to perform a cleanup action at the Aluminum Recycling Corporation Site (Site). This Scope of Work prepared by the Department of Ecology is to be used by the potentially liable persons (PLPs) to develop Work Plans in order to implement the Cleanup Action Plan (CAP) for the Site. The PLPs shall furnish all personnel, materials, and services necessary for, or incidental to, implementing the CAP at the Site

The cleanup action shall contain the following submittals:

A Remedial Action Plan

A work plan outlining procedures for the cleanup action shall be prepared which includes the following elements:

1. Remedial Action Work Plan Summary

The Remedial Action Work Plan shall contain the goals of the cleanup action, performance requirements, general facility information and site operational history, site characterization history, characteristics of the contaminants and contaminated media, summary of the remedial action, and schedule of deliverables

2. Institutional Controls Plan

As a component of the remedial action and as required by the Cleanup Action Plan, institutional controls will be placed on the Site. As described in WAC 173-340-440, institutional controls are to limit or prohibit activities that may interfere with the integrity of a cleanup action. This plan shall include documents listing the proposed institutional controls.

3. Engineering Design Plan

The Engineering Design Plan shall include a soil containment plan with technical specifications for the cover system, including material and design specifications and construction schedules.

4. Compliance Monitoring Plan

As described in WAC 173-340-410, compliance monitoring is required at all cleanup sites. It consists of protection monitoring, performance monitoring, and confirmational monitoring. Protection monitoring confirms that human health and the environment are adequately protected during construction and operation of a cleanup action. Performance monitoring confirms that the cleanup action has attained cleanup and/or performance standards. Confirmational monitoring confirms the long-term effectiveness of the cleanup action once cleanup standards are attained.

a. Groundwater Monitoring, Sampling & Analysis Plan

Groundwater monitoring represents protection, performance, and confirmational monitoring. A reviewed and possibly revised Sampling and Analysis Plan from the RI/FS shall be applicable.

b. Soil Compliance Monitoring Plan

Soil monitoring represents protection, performance, and confirmational monitoring. A reviewed and possibly revised Sampling and Analysis Plan from the RI/FS shall be applicable.

c. Air Compliance Monitoring Plan

Air monitoring represents protection and performance monitoring. An Air Compliance Monitoring Plan shall be implemented due to the dust and ammonia gas issues that need to be addressed. The document shall include:

- Sample locations and intervals;
- Sampling procedures and method of analysis;
- List of parameters to be measured; and
- Action levels triggering additional sampling or mitigative measures.

5. Quality Assurance Project Plan

The Quality Assurance Project Plan from the RI/FS shall be reviewed and revised, if necessary.

6. Data Management Plan

A Data Management Plan shall be included which lists procedures for analyzing and evaluating all collected data. Statistical procedures to be used in the analysis of data are given in WAC 173-340-410.

7. Health and Safety Plan

A Health and Safety Plan is required for all remedial actions under WAC 173-340-820. This plan shall include emergency information, characteristics of waste, levels of protection, hazard evaluation, and any other site specific information.

B. Cleanup Action Report

A final cleanup action report shall be submitted after the completion of all elements of the Remedial Action Plan. The report shall include, but not be limited to:

- all aspects of facility construction, including any drawings or design documents;
- all compliance monitoring data gathered;
- a stamped statement from a professional engineer as to whether the cleanup action was completed in substantial compliance with the plans and specifications for the site;
- copies of property deeds, documenting that institutional controls are in place; and
- long term operation & maintenance plans.

C. Remedial Action Performance and Groundwater Compliance Monitoring Report

To track the performance of the cleanup action, quarterly reports presenting the results of monitoring shall be completed and submitted to Ecology.

Schedule of Deliverables

<u>Deliverables</u>	<u>Date Due</u>
Effective date of Decree (date signed by Ecology)	Start
TASK A	
Draft Remedial Action Plan, including all elements listed in this Scope of Work	60 days after start
Final Remedial Action Plan, including all elements listed in this Scope of Work	30 days after Ecology approval of draft
TASK B	
Draft Remedial Action Report	90 days after completion of remedial action
Final Remedial Action Report	30 days after Ecology approval of draft
TASK C	
Completion of remedial action	Start date
Remedial Action Performance and Groundwater Compliance Monitoring Reports	60 days after completion of each quarterly monitoring event
Five Year Review	60 months after Task C start

EXHIBIT D

**ALUMINUM RECYCLING
CORPORATION**

**DRAFT
PUBLIC PARTICIPATION PLAN
FOR
PROPOSED CONSENT DECREE**

PREPARED BY:

WASHINGTON STATE DEPARTMENT OF ECOLOGY

JANUARY 2001

INTRODUCTION

OVERVIEW OF PUBLIC PARTICIPATION PLAN

This Public Participation Plan (Plan) is an amendment to the August, 1998 Plan which focused on the Remedial Investigation through Feasibility Study phases of cleanup at the Aluminum Recycling Corporation Site. The current Plan has been developed by the Washington Department of Ecology. The Plan complies with the Washington State Model Toxics Control Act (MTCA) regulations (Chapter 173-340-600 WAC) and outlines proposed public participation for the Aluminum Recycling Corporation for final stages of cleanup to be implemented under the Consent Decree. Ecology will determine final approval of the Plan as well as any amendments.

The Site is located at 3412 East Wellsley in the City of Spokane, Spokane County, Washington. The potentially liable persons for the Site are Burlington Northern Santa Fe Railway (BNSF), Kaiser Aluminum and Chemical Corporation (Kaiser) and Alumax Inc. (Alumax). Kaiser and Alumax have declined to sign the Consent Decree.

The purpose of the Plan is to promote public understanding of the Washington Department of Ecology and BNSF's responsibilities, planning activities, and cleanup activities at hazardous waste sites. It also serves as a way of gathering information from the public that will help Ecology and BNSF complete cleanup of the Site that is protective of human health and the environment. Additionally, it provides information on how the public may be involved in the decision making process.

Documents relating to the cleanup may be reviewed at the repositories listed on Page 6 of this Plan. If individuals are interested in knowing more about the Site or have comments regarding the Public Participation Plan, please contact one of the individuals listed below:

Ms. Sandra Treccani
Site Manager
Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe
Spokane, WA 99205
(509) 456-2740
E-mail: satr461@ecy.wa.gov

Mr. Bruce Sheppard
Burlington Northern Santa Fe Railway
2454 Occidental Ave. Suite 1A
Seattle, WA 98134-1451
(206) 625-6035

Carol Bergin
Public Involvement
Washington State Department of Ecology
Toxics Cleanup Program
4601 North Monroe
Spokane, WA 99205
(509) 456-6360
E-mail: cabe461@ecy.wa.gov

Johnnie Harris
Public Disclosure Coordinator
Washington State Department of Ecology
4601 North Monroe
Spokane, WA 99205
(509) 456-2751
E-mail: johh461@ecy.wa.gov

PUBLIC PARTICIPATION AND THE MODEL TOXICS CONTROL ACT

The Model Toxics Control Act (MTCA) is a citizens' initiative which passed in the November 1988 general election. It provides guidelines for the clean up of contaminated sites in Washington State. This law sets up strict standards to make sure the cleanup of sites is protective of human health and the environment. The Department of Ecology's Toxic Cleanup Program investigates reports of contamination that may threaten human health or the environment. If an investigation confirms the presence of contaminants, the site is ranked and placed on a Hazardous Sites List. Current or former owner(s) or operator(s), as well as any other potentially liable persons (PLPs), of a site may be held responsible for cleanup of contamination according to the standards set under MTCA. The PLPs are notified by Ecology that the site has contaminants and the process of cleanup begins with Ecology implementing and overseeing the project.

Public participation is an important part of the MTCA process during cleanup of sites. The participation needs are assessed at each site according to public interest and degree of risk posed by contaminants. Individuals who live near the site, community groups, businesses, organizations and other interested parties are provided an opportunity to become involved in commenting on the cleanup process. The Public Participation Plan includes requirements for public notice such as: identifying reports about the site and the repositories where reports may be read; providing public comment periods; and holding public meetings or hearings. Other forms of participation may be interviews, citizen advisory groups, questionnaires, or workshops. Additionally, citizen groups living near contaminated sites may apply for public participation grants to receive technical assistance in understanding the cleanup process and to create additional public participation avenues.

Ecology prepared the proposed Public Participation Plan for the Aluminum Recycling Corporation and maintains responsibility for public participation at the Site.

SITE BACKGROUND

SITE DESCRIPTION AND HISTORY

The Aluminum Recycling Corporation Site is located in the City of Spokane (near the northern city limits) at 3412 East Wellsley (Appendix A, Figure 1). It is bounded on the north by Wellsley Avenue, on the east by Freya Street and Market Street on the west. The Site encompasses approximately eight acres in an industrial zoned portion of the city. The Site is somewhat circular in shape.

An aluminum dross reprocessing facility was operated by Hillyard Processing Company on the land leased from Burlington Northern Railroad Company. Hillyard Processing Company reportedly began aluminum reprocessing at the Site in 1954, and the activities continued through several operator changes. Aluminum Recycling Corporation was the latest operator of the facility until 1987 when the property was abandoned.

The facility processed aluminum skim, called white dross, in a batch process. The white dross was obtained from aluminum smelters, including Kaiser. The process involved the addition of sodium and potassium chloride salts and the extraction of molten aluminum metal, which was poured into ingots and sold. The high chloride waste resulting from this process, known as black dross, remains on site along with non-reprocessed white dross waste. An estimated 65,000 cubic yards of wastes occur in piles A through R and in an abandoned pit on Site (Appendix A, Figure 2).

Ecology completed an inspection in December 1987 and the Site was ranked using the Washington Ranking Method (WARM) in August of 1991.

CONTAMINANTS OF CONCERN

The cleanup at this Site focuses on groundwater contaminated with chloride, fluoride, nitrate and nitrite and soil containing elevated levels of metals and dross. Actions have been taken to cleanup the Site and they are outlined under Site Cleanup Process on Page 5.

COMMUNITY BACKGROUND

COMMUNITY PROFILE

Spokane is the largest city between Seattle and Minneapolis, boasting an area wide population of more than 400,000. Nestled on the northeastern boundaries of Spokane is an area called Hillyard. This area is of modest economic means and has a growing population upwards of 30,000 households. In addition to the community housing, the neighborhood has a business district which houses a handful of local businesses, antique shops, restaurants, other quaint stores and an industrial zone. Aluminum Recycling Corporation is located in the industrially zoned portion of the Hillyard neighborhood.

COMMUNITY CONCERNS

Past concerns have focused on dust emissions and ammonia odors coming from the property. Current concerns focus primarily on groundwater contamination as explained under "Contaminants of Concern." Comments received during public comment periods have been mainly from other agencies such as the Spokane County Air Pollution Control Authority (SCAPCA), lawyers, consultants, and other interested environmental and technical representatives. While no comments have been received from the general public through the formal public process at Ecology, citizens have expressed concern about groundwater contamination in local neighborhood meetings.

The public hearing on the Consent Decree will provide an additional avenue for public concerns to be heard prior to implementation of the Cleanup Action Plan.

SITE CLEANUP PROCESS

AGREED ORDER

BNSF and Ecology entered into an Agreed Order to perform a Remedial Investigation/Feasibility Study (RI/FS) on November 16, 1998. The Agreed Order is a legal document formalizing the agreement between Ecology and the potentially liable persons (PLPs) to ensure cleanup activities are conducted appropriately. The Order is completed under the authority of the Model Toxics Control Act (MTCA) Chapter 70.105D RCW.

REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

The purpose of the RI/FS is to collect, develop and evaluate information regarding Site related contamination. The RI defines the type, extent and degree of soil and ground water contamination and the impacts to the affected areas. The FS identifies, evaluates and proposes alternative cleanup actions.

Results of the soil, dross, and groundwater sampling completed as part of the RI showed groundwater is contaminated with chloride, fluoride, nitrate, and nitrite; soil contains elevated levels of metals. Dross is the source of these contaminants. The PLPs proposed on-site containment as the preferred cleanup alternative in the FS, and Ecology agreed with that alternative. After public notice and opportunity to comment, this was the selected cleanup action.

CLEANUP ACTION PLAN (CAP)

The CAP is a document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology issues a final Cleanup Action Plan.

Ecology finalized the CAP after a 30-day public comment period. The contaminants of concern are identified to be: chloride, fluoride, nitrate and nitrite for groundwater, and lead for soils. The levels of these contaminants in each media will determine when the Site is considered clean.

The cleanup action selected by Ecology includes the following elements:

- regrading of site materials;
- installation of a multi-media cover system to prevent infiltration through the dross;
- cover system and fence maintenance;
- quarterly monitoring of groundwater;
- institutional controls, including fences, signs, and restrictive covenants; and
- five year reviews to determine the effectiveness of the selected remedy.

CONSENT DECREE

The Consent Decree is a legal document which formalizes the agreement between Ecology and BNSF and is entered and approved by a Court. It is used to implement the Cleanup Action Plan. After a 30-day comment period the draft Consent Decree will be modified, if necessary. After the Consent Decree is finalized, an Engineering Design will be prepared and the cleanup action work will be performed. The Engineering Design report will go through a 30-day public comment period before being finalized and implemented.

PUBLIC PARTICIPATION ACTIVITIES AND TIMELINE

The following are public participation efforts which have been occurring and will continue until the cleanup actions are completed:

- ❖ A **mailing list** was developed of all individuals who reside within the potentially affected area of the Site. Homes and/or businesses within a few blocks radius of the Site were added to the mailing list. These persons receive copies of all fact sheets developed regarding the cleanup process of the Site via first class mail. Additionally, individuals, organizations, local, state and federal governments, and any other interested parties will be added to the mailing list. Other interested persons may request to be on the mailing list at any time by contacting Sandra Treccani or Carol Bergin at the Department of Ecology (see page 2 for addresses/phone and e-mail).
- ❖ **Public Repositories** have been established and documents may be reviewed at the following offices:

Spokane Public Library Hillyard Branch 4005 North Cook Street Spokane, WA 99207-5879	Department of Ecology 4601 North Monroe Spokane, WA 99205-1295
---	--
- ❖ During each stage of cleanup **fact sheets** are created by Ecology and distributed to individuals on the mailing list. These fact sheets explain the stage of cleanup, the Site background, what happens next in the cleanup process and ask for comments from the public. A **30-day comment period** allows interested parties time to comment on the process. The information from these fact sheets is also published in a **Site Register** which is distributed to the public. Persons interested in receiving the Site Register should contact Sherrie Minnick of Ecology at (360) 407-7200 or e-mail smin461@ecy.wa.gov.
- ❖ **Display ads or legal notices** are published in the Spokesman Review to inform the general public. These notices correlate with the 30-day comment period and associated stage of cleanup. They are also used to announce public meetings and workshops or public hearings.

- ❖ **Public meetings, workshops, open houses and public hearings** are held based upon the level of community interest. If ten or more persons request a public meeting based on the subject of the public notice, Ecology will hold a meeting and gather comments. A public hearing will be held on the Consent Decree during the 30-day comment period.

Written comments which are received during the 30-day comment period will be responded to in a **Responsiveness Summary**. The Responsiveness Summary will be sent to those who make the written comments and will be available for public review at the Repositories.

ANSWERING QUESTIONS FROM THE PUBLIC

Individuals in the community may have questions they want to ask so they may better understand the cleanup process. Page 2 lists the contacts for the Aluminum Recycling Corporation Site. Interested persons are encouraged to contact these persons by phone or e-mail to obtain information about the Site, the process and potential decisions.

OBTAINING COMMUNITY INPUT ON SITE DECISIONS

Community input has been sought on Site decisions via the previously mentioned public participation activities. Mailings have been sent to the Hillyard Neighborhood Council and local Advocate newsletter to encourage community input. Recently, the Chairperson of the Hillyard Neighborhood Council provided an update on community concerns. As a result of that conversation, the location of the public hearing on the Consent Decree will be changed to better accommodate the community.

PUBLIC NOTICE AND COMMENT PERIODS

Time line

DATE	ACTION TAKEN
October 7 through November 9, 1998	Fact Sheet and 30-day public comment period on the Draft Agreed Order
October 8 through November 9, 1999	Fact Sheet and 30-day public comment period on the Draft Remedial Investigation/Feasibility Study
April 14 through May 15, 2000	Fact Sheet and 30-day public comment period on the Draft Cleanup Action Plan
To Be Determined	Public Hearing on the Consent Decree
To Be Determined	Fact Sheet and 30-day public comment period on the Consent Decree

APPENDIX A

FIGURES 1 and 2

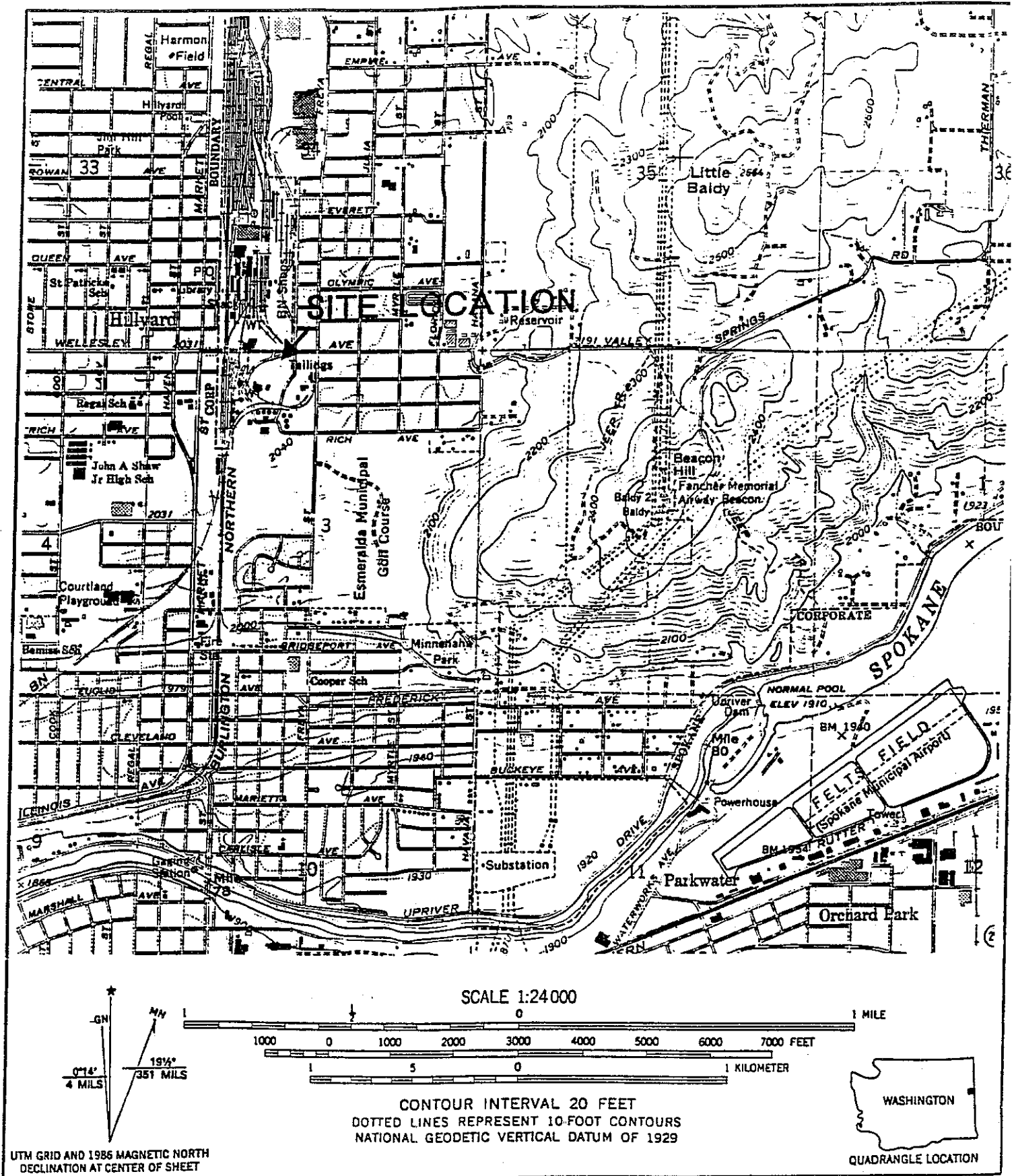


Figure 1. Location of Aluminum Recycling Corporation Site

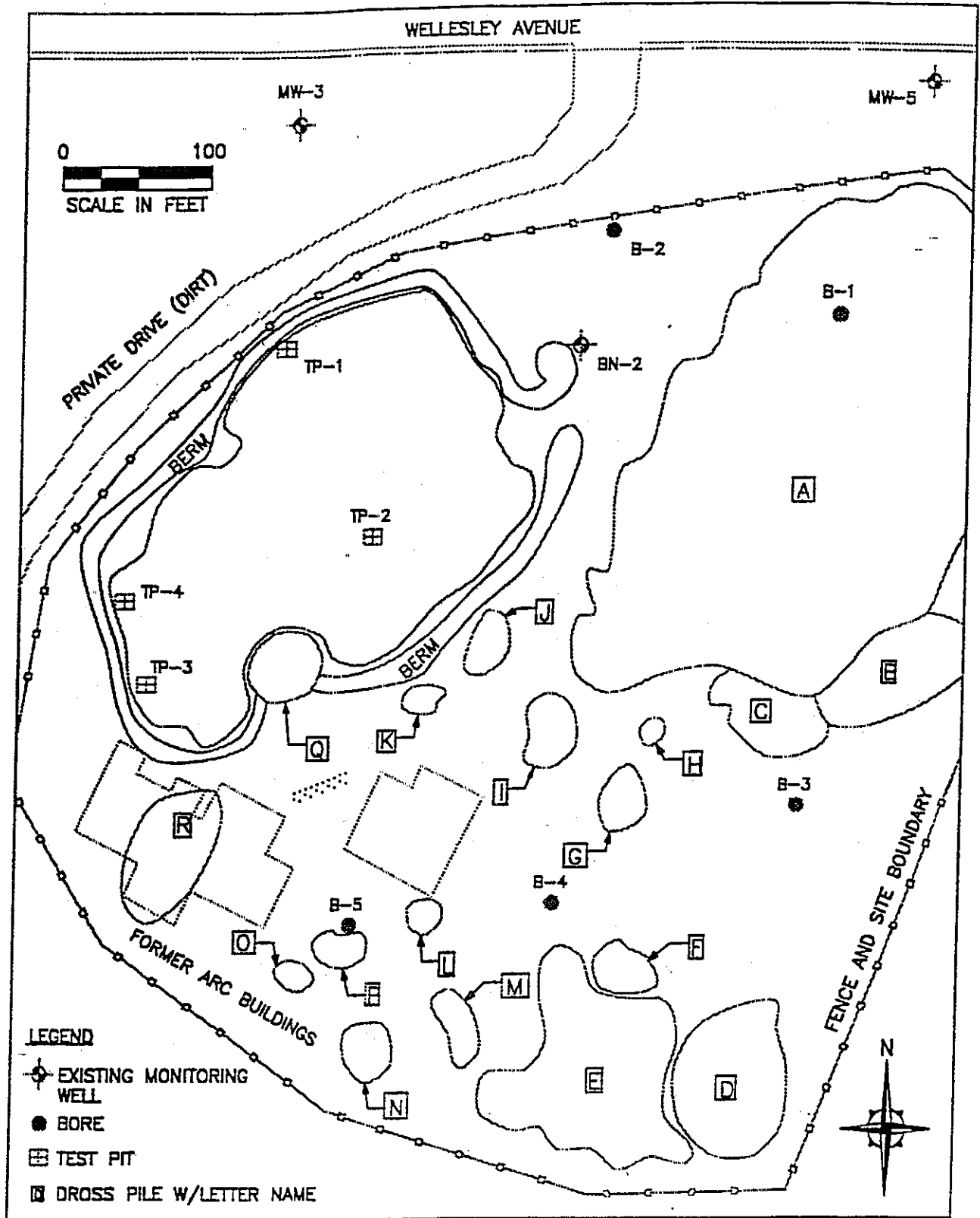


Figure 2. Locations of Aluminum Dross Piles

APPENDIX B

MAILING LIST

ALUMINUM RECYCLING CORPORATION

Aluminum Recycling Corporation Mailing Jan 2001

DALTON, OLMSTED & FUGLEVAND, INC.
11711 NORTHCREEK PKY S #D101
BOTHELL WA 98011-8224

ENVIRONMENTAL LAW CAUCUS
GONZAGA LAW SCHOOL
600 E SHARP AVENUE
SPOKANE WA 99202-1931

LEAGUE OF WOMEN VOTERS
315 W MISSION AVE #8
SPOKANE WA 99201-2325

SPOKANE COUNTY AIR POLLUTION
CONTROL AUTHORITY
1101 W COLLEGE AVE #230
SPOKANE WA 99201-2094

MR WILL ABERCROMBIE
HART CROWSER
1910 FAIRVIEW AVENUE E
SEATTLE WA 98102-3699

ASSIGNMENT EDITOR
KHQ TV
P O BOX 8088
SPOKANE WA 99203-0088

ASSIGNMENT EDITOR
KREM TV NEWS
P O BOX 8037
SPOKANE WA 99203-0037

ASSIGNMENT EDITOR
KXLY TV NEWS
500 W BOONE AVE
SPOKANE WA 99201-2497

ASSIGNMENT EDITOR
KXLY NEWSRADIO
500 W BOONE AVE
SPOKANE WA 99201-2497

ASSOCIATED PRESS
P O BOX 2173
SPOKANE WA 99210-2173

MS BETTY BINGHAM
4228 E RICH
SPOKANE WA 99217

MR WILLIAM R BLOOM
REMTECH, INC.
8924 W ELECTRIC AVE
SPOKANE WA 99224-9037

MR CHARLES BOYKEN, MANAGER
SPOKANE WATER DIST NO. 3
P O BOX 11187
SPOKANE WA 99211-1187

MR MALCOLM BOWIE
808 WEST SPOKANE FALLS BLVD
3RD FLOOR DEVELOPERS SERVICE
SPOKANE WA 99201

Aluminum Recycling Corporation Mailing Jan 2001

MS ANGEL BROWN
1111 ROAD 6 SE
WARDEN WA 98857-9608

HON LISA BROWN
WA STATE SENATOR
P O BOX 40482
OLYMPIA WA 98504-0482

MS DORIS CELLARIUS
WA ENVIRONMENTAL COUNCIL
1063 S CAPITOL SUITE 212
OLYMPIA WA 98501-1272

CITY EDITOR
THE SPOKESMAN REVIEW
P O BOX 2160
SPOKANE WA 99210-1615

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APPENDIX C

GLOSSARY

Agreed Order: A legal document issued by Ecology which formalizes an agreement between the department and potentially liable persons (PLPs) for the actions needed at a site. An agreed order is subject to public comment. If an order is substantially changed, an additional comment period is provided.

Applicable State and Federal Law: All legally applicable requirements and those requirements that Ecology determines are relevant and appropriate requirements.

Area Background: The concentrations of hazardous substances that are consistently present in the environment in the vicinity of a site which are the result of human activities unrelated to releases from that site.

Carcinogen: Any substance or agent that produces or tends to produce cancer in humans.

Chronic Toxicity: The ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document which identifies the cleanup action and specifies cleanup standards and other requirements for a particular site. After completion of a comment period on a Draft Cleanup Action Plan, Ecology will issue a final Cleanup Action Plan.

Cleanup Level: The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Consent Decree: A legal document, approved and issued by a court which formalizes an agreement reached between the state and potentially liable persons (PLPs) on the

actions needed at a site. A decree is subject to public comment. If a decree is substantially changed, an additional comment period is provided.

Containment: A container, vessel, barrier, or structure, whether natural or constructed, which confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Enforcement Order: A legal document, issued by Ecology, requiring remedial action. Failure to comply with an enforcement order may result in substantial liability for costs and penalties. An enforcement order is subject to public comment. If an enforcement order is substantially changed, an additional comment period is provided.

Environment: Any plant, animal, natural resource, surface water (including underlying sediments), ground water, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington.

Exposure: Subjection of an organism to the action, influence or effect of a hazardous substance (chemical agent) or physical agent.

Exposure Pathways: The path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from the site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the source exposure point differs from the source of the hazardous substance, exposure pathway also includes a transport/exposure medium.

Facility: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed or, placed, or otherwise come to be located.

Feasibility Study (FS): A study to evaluate alternative cleanup actions for a site. A comment period on the draft report is required. Ecology selects the preferred alternative after reviewing those documents.

Free Product: A hazardous substance that is present as a nonaqueous phase liquid (that is, liquid not dissolved in water).

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Sites List: A list of sites identified by Ecology that requires further remedial action. The sites are ranked from 1 to 5 to indicate their relative priority for further action.

Hazardous Substance: Any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) (any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes; (a) have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or (b) are corrosive, explosive, flammable, or may generate pressure through decomposition or other means,) and (6) (any dangerous waste which (a) will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may affect the genetic makeup of man or wildlife; and is highly toxic to man or wildlife; (b) if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment), or any dangerous or extremely dangerous waste as designated by rule under Chapter 70.105 RCW; any hazardous substance as defined in RCW 70.105.010 (14) (any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter,) or any hazardous substance as defined by rule under Chapter 70.105 RCW; petroleum products.

Hazardous Waste Site: Any facility where there has been a confirmation of a release or threatened release of a hazardous substance that requires remedial action.

Independent Cleanup Action: Any remedial action conducted without Ecology oversight or approval, and not under an order or decree.

Initial Investigation: An investigation to determine that a release or threatened release may have occurred that warrants further action.

Interim Action: Any remedial action that partially addresses the cleanup of a site.

Mixed Funding: Any funding, either in the form of a loan or a contribution, provided to potentially liable persons from the state toxics control account.

Model Toxics Control Act (MTCA): Washington State's law that governs the investigation, evaluation and cleanup of hazardous waste sites. Refers to RCW 70.105D. It was

approved by voters at the November 1988 general election and known as Initiative 97. The implementing regulation is WAC 173-340.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where groundwater can be sampled at selected depths and studied to determine the direction of groundwater flow and the types and amounts of contaminants present.

Natural Background: The concentration of hazardous substance consistently present in the environment which has not been influenced by localized human activities.

National Priorities List (NPL): EPA's list of hazardous waste sites identified for possible long-term remedial response with funding from the federal Superfund trust fund.

Owner or Operator: Any person with any ownership interest in the facility or who exercises any control over the facility; or in the case of an abandoned facility, any person who had owned or operated or exercised control over the facility any time before its abandonment.

Polynuclear Aromatic Hydrocarbon (PAH): A class of organic compounds, some of which are long-lasting and carcinogenic. These compounds are formed from the combustion of organic material and are ubiquitous in the environment. PAHs are commonly formed by forest fires and by the combustion of fossil fuels.

Potentially Liable Person (PLP): Any person whom Ecology finds, based on credible evidence, to be liable under authority of RCW 70.105D.040.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Recovery By-Products: Any hazardous substance, water, sludge, or other materials collected in the free product removal process in response to a release from an underground storage tank.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance and any health assessments or health effects studies.

Remedial Investigation: A study to define the extent of problems at a site. When combined with a study to evaluate alternative cleanup actions it is referred to as a Remedial Investigation/Feasibility Study (RI/FS). In both cases, a comment period on the draft report is required.

Responsiveness Summary: A compilation of all questions and comments to a document open for public comment and their respective answers/replies by Ecology. The Responsiveness Summary is mailed, at a minimum, to those who provided comments and its availability is published in the Site Register.

Risk Assessment: The determination of the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

Sensitive Environment: An area of particular environmental value, where a release could pose a greater threat than in other areas including: wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

Site: See Facility.

Site Characterization Report: A written report describing the site and nature of a release from an underground storage tank, as described in WAC 173-340-450 (4) (b).

Site Hazard Assessment (SHA): An assessment to gather information about a site to confirm whether a release has occurred and to enable Ecology to evaluate the relative potential hazard posed by the release. If further action is needed, an RI/FS is undertaken.

Site Register: Publication issued every two weeks of major activities conducted statewide related to the study and cleanup of hazardous waste sites under the Model Toxics Control Act. To receive this publication, please call (360) 407-7200.

Surface Water: Lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

TCP: Toxics Cleanup Program at Ecology

Total Petroleum Hydrocarbons (TPH): A scientific measure of the sum of all petroleum hydrocarbons in a sample (without distinguishing one hydrocarbon from another). The “petroleum hydrocarbons” include compounds of carbon and hydrogen that are derived from naturally occurring petroleum sources or from manufactured petroleum products (such as refined oil, coal, and asphalt).

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

Underground Storage Tank (UST): An underground storage tank and connected underground piping as defined in the rules adopted under Chapter 90.76 RCW.

Washington Ranking Method (WARM): Method used to rank sites placed on the hazardous sites list. A report describing this method is available from Ecology.