

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial)	Enforcement Order
Action by:)	
)	
Asarco Incorporated)	No. DE 95TC-N350
P.O. Box 1677)	
Tacoma, Washington 98401)	

To: Asarco Incorporated
P.O. Box 1677
Tacoma, Washington 98401

I.

Jurisdiction

This Order is issued pursuant to the authority of RCW 70.105D.050(1).

II.

Statement of Facts

1. The area in this matter is known as the "Everett Smelter" site. The Site is located in Everett, Washington, and is centered near the intersection of East Marine View Drive and State Route 529. A map of the general area is attached as Exhibit A. The Site includes residential and industrial areas and a major interchange. This area is the former location of a smelter that existed on the Site between approximately 1893 and 1914.

2. The smelter property included an area of about 44 acres. Some of the primary structures at the smelter included 8 railroad spurs, a sulfide mill, furnace and roaster buildings, flues and dust chambers, and two 100+ foot high smoke stacks. At the turn of the century, the smelter was one of the largest industrial facilities in Everett, employing up to 125 people.

3. In 1893, the Puget Sound Reduction Company began operating the smelter, refining ores primarily from the Monte Cristo mining district. Ores were delivered to the smelter by rail to be refined for lead, copper, gold, and silver. The smelter produced pig lead, most of which was shipped to Japan and China. The lead smelter operated until May 1907. Lead ore was refined on the Site until 1908.

4. Some of the ore from the Monte Cristo mining district contained over 25 percent total arsenic. To recover arsenic from the ore, an arsenic processing plant was constructed on the southern end of the Site. The plant consisted of several structures, including additional smoke stacks, flues, ovens and mills, and a large arsenic processing building. The plant operated from approximately 1908 until 1913.

5. In 1903, Asarco bought and began operating the smelter until it was dismantled in 1914. It is unclear how or when the smelter structures were razed. However, it is known that some of the arsenic processing equipment was salvaged and used in the Asarco smelter in Ruston, Washington.

6. Asarco sold the smelter property through a series of transactions that occurred between 1914 and 1936. The transactions are listed in the following table. The number of acres listed for each transaction is an approximation.

Year	No. of Acres	Property Sold To:
1914	1.32	Weyerhaeuser
1914	.92	Snohomish County
1916	.11	Mr. & Mrs. Cook
1924	4.19	State of Washington
1924	1.66	Weyerhaeuser
1924	10.28	Weyerhaeuser
1928	17.89	Mr. Spriestersbach
1932	6.01	Model Transfer & Storage
1936	6.01	City of Everett

The acreage bought by the State of Washington is now the interchange between East Marine View Drive and State Route

529. The 17.89 acres bought by Mr. Spriestersbach was developed into residential neighborhoods. There are presently about 25 houses built on the former smelter property, all of which are west of East Marine View Drive. Weyerhaeuser and Burlington Northern Railroad presently use the area east of East Marine View Drive for industrial and railroad purposes. Mr. Boyd Benson also owns approximately 5 acres of the industrial area along East Marine View Drive. Since the 1950s, the Benson property has been used for a rock wool insulation plant, which processed smelter slag left on the Site into insulation; a scrap metal yard; and, most recently, a bark and topsoil facility. The Benson property is currently vacant.

7. In 1990, an outcropping of slag was discovered on the hillside below East Marine View Drive. The slag was discovered during an environmental investigation being conducted by Hart-Crowser for Weyerhaeuser. As part of the investigation, slag, soil, and ground water samples were collected on Weyerhaeuser property and analyzed for the presence of heavy metals. After receiving the data, Weyerhaeuser notified Ecology in a letter to Mr. Greg Bean, dated October 30, 1990, that a release of a hazardous substance had occurred at the site.

8. Ecology conducted an initial investigation of the Site in December 1990. The investigation included a Site visit, historic research of the area, and a review of the data previously submitted by Weyerhaeuser.

9. Ecology conducted a Site Hazard Assessment (SHA) of the Site in February 1991. The SHA consisted of a magnetic survey, to attempt to locate the extent of buried slag, and collection of 20 surface soil samples that were analyzed for metals. Laboratory analysis demonstrated releases of arsenic, cadmium, and lead to the soil found in residential area on the site.

10. Ecology conducted a "Pre-Remedial Investigation" (Pre-RI) in May 1991. The Pre-RI consisted of the preparation of a Site map and collection of 285 additional soil samples. The purpose of the investigation was to further characterize the nature and extent of elevated concentrations of residual metals that were identified in the SHA. Results of the Pre-RI confirm releases of arsenic, cadmium, and lead in surface soils throughout the study area. The highest concentrations were detected in areas where the former smelter structures once stood. Generally, the concentration of the three metals in the soil decreases with increased distance from the former smelter property.

11. During the Pre-RI Ecology found areas of exposed soil throughout the Pre-RI study area, mainly in flower beds, vegetable gardens, and an unpaved alley. Some of these features were located in areas where the highest soil contamination was detected. Soil potentially provided a direct exposure route to people on the Site.

12. Based on the analytical data submitted with the letter referenced in item No. 7, there is evidence of arsenic and lead in the ground water.

13. Based on the analytical data collected during the SHA and Pre-RI, there is evidence of arsenic, cadmium, and lead in the soils.

14. In April 1992 Ecology issued Enforcement Order No. DE 92TC-N147 to Asarco. This Order required Asarco to perform a Remedial Investigation/Feasibility Study at the site and to perform certain Interim Actions to limit arsenic exposure of residents.

15. Subsequent to issuance of Enforcement Order No. DE 92TC-N147, Asarco purchased all but one of the residences south of Broadway which were located within the boundaries of the former smelter plant property. Since Asarco's purchase, the families have vacated each of these houses and moved to residences off-site.

16. The one residence on the former smelter property south of Broadway which remains occupied is the one at 520 East Marine View Drive, Everett, Washington 98201-1235. The residence at 534 East Marine View Drive is immediately adjacent to the south boundary of the former smelter property. These properties are located in the immediate vicinity of the former arsenic processing area. Consequently, demolition debris, containing arsenic concentrations between 10,000 and 800,000 parts per million have been detected on these two properties. The two properties and the former location of the arsenic processing buildings are shown on Exhibit A. Visual inspection of these residences combined with soil sampling data collected during the Pre-RI and the Remedial Investigation indicated areas of bare soil existed and that the soil contained elevated levels of arsenic. Ecology required Asarco to perform interim actions at these residences to reduce resident's exposure. The interim actions conducted at 520 East Marine View Drive consisted of placement of 4 inches of top soil followed by sod in much of the back yard, construction of a 36 inch high retaining wall built with pressure treated lumber, and construction of a 9 X 14 foot raised garden. The interim actions conducted at 534 East Marine View Drive consisted of

placement of 8 inches of top soil and re-vegetation of a 8 1/2 X 36 foot flower garden in the back yard.

17. The Washington State Department of Health (WDOH) and the Agency for Toxic Substances and Disease Registry (ATSDR) collected hair and urine samples from residents at the above two addresses in September 1994. Analysis of these samples indicated that at least one person from each household at the above addresses was exposed to greater than normal amounts of arsenic.

18. Subsequent to the hair and urine sampling, the ATSDR sampled soil and house dust at the above two residences to further define routes of exposure. The ATSDR forwarded a Health Consultation to Ecology dated August 31, 1995, regarding the soil and house dust sampling at the two homes of concern. This Health Consultation is attached as Exhibit B. Elevated concentrations of arsenic were found in the soil samples. Arsenic-contaminated dust in these homes constituted another source of exposure. ATSDR concluded that:

- -The residents of the two homes at the Everett Smelter site are being exposed to arsenic at concentrations

that represent an immediate threat to their health,
and

- Lead found at 980 mg/kg in surface soil at 534 East Marine View Drive may pose a threat to the health of young children or women of child-bearing age who live there.

ATSDR recommended:

- That exposure to arsenic be stopped as soon as possible, and
- That blood lead testing be performed for any young children and women of child-bearing age who may reside in or frequent the residence at 534 East Marine View Drive.

III.

Ecology Determinations

1. Asarco is a former "owner or operator" as defined at RCW 70.105D.020(11) of a "facility" as defined in RCW 70.105D.020(4). As described in RCW 70.105D.040(1)(c), Asarco formerly "owned or possessed" a hazardous substance and "arranged for disposal" of that hazardous substance at the facility. Asarco is also a "generator" as described in RCW 70.105D.040(1)(c), of a hazardous waste which was

disposed of, or has otherwise come to be located, at the "facility.

2. The facility is known as the Everett Smelter Site and is located in the area around the intersection of State Route 529 and East Marine View Drive in Everett, Washington. This area is shown in a Site Map which is attached as Exhibit A.

3. The substances found at the facility as described above are "hazardous substances" as defined at RCW 70.105D.020(7).

4. The presence of these hazardous substances at the facility constitutes a release as defined at RCW 70.105D.020(19).

5. By letter dated August 29, 1991, Ecology notified Asarco of its status as a "potentially liable person" under RCW 70.105D.040 after notice and opportunity for comment.

6. Pursuant to RCW 70.105D.030(1) and 70.105D.050, the Department may require potentially liable persons to investigate or conduct other remedial actions with respect to the release or threatened release of hazardous substances, whenever it believes such action to be in the public interest.

7. Based on the foregoing facts, Ecology believes the remedial action required by this Order is in the public interest.

8. This is an emergency order, and the remedial actions required by this Order are to be implemented by Asarco on an emergency basis.

IV.

Work to be Performed

Based on the foregoing Facts and Determinations, it is hereby ordered that Asarco take the following remedial actions and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein.

1. Immediately take action to stop the exposure to arsenic of residents, pets, and others who reside at or frequent the property at the following addresses:

- - 520 East Marine View Drive, Everett, WA 98201-1235
- - 534 East Marine View Drive, Everett, WA 98201-1235

2. Asarco shall implement the action required by paragraph 1 by taking the following actions:

a) Discuss alternatives for stopping exposure to arsenic of residents, pets, and others who reside at or frequent the property at the above two addresses with Ecology and current residents.

b) Develop a plan for stopping exposure to arsenic of residents, pets, and others who reside at or frequent the property at the above two addresses for Ecology review and approval. Alternatives to be considered in developing the plan shall include at a minimum the following two options:

- Permanent relocation of residents and pets from the property. Provision shall be made for payment of moving expenses, cleaning or replacement of soft furniture, cleaning or replacement of mattresses, cleaning or replacement of other moveable items which may be contaminated, and payment for other expenses attributable to the action required by Paragraph 1 this Section. Relocation expenses shall be paid until such time as residents have sold their property.

- Temporary relocation and cleaning of residences. Cleaning shall address carpets, soft furniture, mattresses, and other items as appropriate. Additional interim actions must be taken to prevent recontamination of residences. Such actions may include removal of contaminated soil and replacement with clean soil around the residences, as well as fencing to control pet movement. Other appropriate protection for pets shall be provided. Relocation for over 14 days shall be in a similar residence. A monitoring program shall be developed to evaluate whether cleaning and other interim actions have been effective. If cleaning and other interim actions are not effective, permanent relocation of residents and pets shall be required. Provision shall be made for payment of temporary relocation expenses, cleaning or replacement of soft furniture, cleaning or replacement of mattresses, cleaning or replacement of other moveable items which may be contaminated, and payment for other expenses attributable to the action required by Paragraph 1 this Section, including post-cleaning monitoring and subsequent permanent

relocation if monitoring shows that cleaning is not effective.

3. Fund blood lead testing by WDOH, Snohomish Health District, or another appropriate health provider, as directed by Ecology, for any young children and women of child-bearing age who may reside in or frequent the residence at 534 East Marine View Drive.

4. The schedule for performance of the above-required actions is:

Within five (5) calendar days after receipt of this Order Asarco shall meet with the affected residents and Ecology to propose alternative actions.

Within ten (10) calendar days after receipt of this Order Asarco shall forward a proposed plan to implement the actions required by the Order to Ecology for review and approval.

Within twenty-one (21) calendar days after receipt of this order Asarco shall have stopped exposure to arsenic of residents, pets, and others who reside at or frequent the property at the above two addresses and provided for blood lead testing.

5. Extensions of schedule: Ecology may grant a written extension of the schedule upon request by Asarco.

Ecology will consider the following factors in determining whether to grant a request for extension:

- a) Availability of residents to meet with Asarco, and
 - b) Degree of cooperation of residents in the implementation of this order.
6. Asarco shall report weekly on progress in implementing this order until such time as arsenic exposure is stopped and blood lead testing provided for. Weekly reports shall be due by noon Friday. The reports may be transmitted by facsimile machine, addressed to Ecology's Site Manager.

V.

Terms and Conditions of Order

1. Definitions

Unless otherwise specified, the definitions set forth in ch. 70.105D RCW and ch. 173-340 WAC shall control the meanings of the terms used in this Order.

2. Public Notice

RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent public notice. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which

indicate to Ecology that the Order is inadequate or improper in any respect.

3. Remedial Action Costs.

Asarco shall pay to Ecology costs incurred by Ecology pursuant to this Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order preparation, oversight and administration. Ecology costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). Asarco shall pay the required amount within 90 days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general description of work performed will be provided upon request.

Itemized statements shall be prepared quarterly. Failure to pay Ecology's costs within 90 days of receipt of the itemized statement of costs will result in interest charges.

4. Designated Project Coordinators.

The project coordinator for Ecology is:

Name Mr. David Nazy
Address Washington State Dept. of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

The project coordinator for Asarco is:

Name Mr. Thomas L. Aldrich
Address Asarco Incorporated
P.O. Box 1677
Tacoma, Washington 98401

The project coordinator(s) shall be responsible for overseeing the implementation of this Order. To the maximum extent possible, communications between Ecology and Asarco, and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed through the project coordinator(s). Should Ecology or Asarco change project coordinator(s), written notification shall be provided to Ecology or Asarco at least ten (10) calendar days prior to the change.

5. Performance.

All work performed pursuant to this Order shall be under the direction and supervision of appropriate professional personnel with experience/training in the actions they are

performing. Asarco shall notify Ecology as to the identity of such personnel, and of any contractors and subcontractors to be used in carrying out the terms of this Order, in advance of their involvement at the Site. Asarco shall provide a copy of this Order to all agents, contractors and subcontractors retained to perform work required by this Order and shall ensure that all work undertaken by such agents, contractors and subcontractors will be in compliance with this Order.

Except when necessary to abate an emergency situation, Asarco shall not perform any remedial actions at the Everett Smelter Site outside that required by this Order and Enforcement Order No. DE 92TC-N147 unless Ecology concurs, in writing, with such additional remedial actions.

WAC 173-340-400(7)(b)(i) requires that "construction" performed on the Site must be under the supervision of a professional engineer registered in Washington.

If cleaning is chosen as the method for stopping exposure, cleaning shall be done by a qualified firm experienced in cleaning houses contaminated with hazardous substances.

6. Access

Ecology or any Ecology authorized representative shall have the authority to enter and freely move about all property at the Site at all reasonable times for the purposes of, inter alia: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the progress in carrying out the terms of this Order; conducting such tests or collecting samples as Ecology or the project coordinator may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by Asarco. When entering the Site under ch. 70.105D RCW, Ecology shall provide reasonable notice prior to entering the Site unless an emergency prevents notice. Ecology shall allow split or replicate samples to be taken by Asarco during an inspection unless doing so would interfere with Ecology's sampling. Asarco shall allow split or replicate samples to be taken by Ecology and shall provide Ecology seven (7) days notice before any sampling activity.

7. Public Participation

Public participation shall be accomplished in accordance with the public participation plan for the Site developed under Enforcement Order No. DE 92TC-N147, except that Asarco

review of fact sheets, press releases, and public notices may be concurrent with their release due to the emergency nature of this Order.

8. Retention of Records

Asarco shall preserve in a readily retrievable fashion, during the pendency of this Order and for ten (10) years from the date of completion of the work performed pursuant to this Order, all records, reports, documents, and underlying data in its possession relevant to this Order. Should any portion of the work performed hereunder be undertaken through contractors or agents of Asarco, a record retention requirement meeting the terms of this paragraph shall be required of such contractors and/or agents.

9. Dispute Resolution

Asarco may request Ecology to resolve factual or technical disputes which may arise during the implementation of this Order. Such request shall be in writing and directed to the signatory, or his/her successor(s), of this Order. Ecology resolution of the dispute shall be binding and final. Asarco is not relieved of any requirement of this Order during the pendency of the dispute and remains responsible for timely compliance with the terms of the Order unless otherwise provided by Ecology in writing.

10. Reservation of Rights

Ecology reserves all rights to issue additional orders or take any action authorized by law in the event or upon the discovery of a release or threatened release of hazardous substances not addressed by this Order, upon discovery of any factors not known at the time of issuance of this Order, in order to abate an emergency, or under any other circumstances deemed appropriate by Ecology.

Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances from the Everett Smelter Site.

In the event Ecology determines that conditions at the Site are creating or have the potential to create a danger to the health or welfare of the people on the Site or in the surrounding area or to the environment, Ecology may Order Asarco to stop further implementation of this Order for such period of time as needed to abate the danger.

11. Transference of Property

No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by Asarco without provision for continued implementation of all requirements of

this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to transfer of any legal or equitable interest Asarco may have in the Site or any portions thereof, Asarco shall serve a copy of this Order upon any prospective purchaser, lessee, transferee, assignee, or other successor in such interest. At least thirty (30) days prior to finalization of any transfer, Asarco shall notify Ecology of the contemplated transfer.

12. Compliance With Applicable Laws

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

B. Pursuant to RCW 70.105D.090(1), the substantive requirements of chapters 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW and of any laws requiring or authorizing local government permits or approvals for the remedial action under this Order shall be included in an amendment to this order.

Asarco has an obligation to determine whether permits or approvals addressed in RCW 70.105D.090(1) would be required for the remedial action under this Order. In the event

Asarco determines that permits or approvals addressed in RCW 70.105D.090(1) would be required for the remedial action under this Order, it shall promptly notify Ecology of this determination. Ecology shall determine whether Ecology or Asarco shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Asarco shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by Asarco and on how Asarco must meet those requirements. Ecology shall inform Asarco in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. Asarco shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

Ecology shall ensure that notice and opportunity for comment is provided to the public and appropriate agencies in a manner which is consistent with the emergency nature of this Order.

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

VI.

Satisfaction of this Order

The provisions of this Order shall be deemed satisfied upon Asarco's receipt of written notification from Ecology that Asarco has completed the remedial activity required by this Order, as amended by any modifications, and that all other provisions of this Order have been complied with.

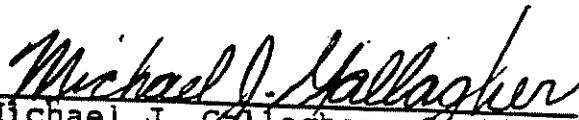
VII.

Enforcement

1. Pursuant to RCW 70.105D.050, this Order may be enforced as follows:
 - A. The Attorney General may bring an action to enforce this Order in a state or federal court.

- B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.
- C. In the event Asarco refuses, without sufficient cause, to comply with any term of this Order, Asarco will be liable for:
- (1) up to three times the amount of any costs incurred by the state of Washington as a result of its refusal to comply; and
 - (2) civil penalties of up to \$25,000 per day for each day it refuses to comply.
- D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

Effective date of this Order: September 11, 1995


Michael J. Gallagher, Section
Manager, NWRO Toxics Cleanup
Program

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FS 2244

DEPARTMENT OF ECOLOGY
Northwest Regional Office

June 10, 2002

To: Leann Ryser
Lydia Lindwall

From: David L. South

Subject: Orders

Enclosed are copies of three orders recently issued regarding the Everett Smelter site.

-3878 ordered Asarco to clean up the entire Everett Smelter site. Asarco did some legal stuff, so we issued:

-3933, which rescinded -3878. Then we issued

-4059, which requires Asarco to take interim actions on a portion of the site they currently own.

Let me know if I need to do something else. Sorry I did not get the first two to you in a more timely manner.

