

ANDREA BEATTY RINKER
Director



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

MAY 02 1986

CERTIFIED MAIL

Mr. Denis W. Ray
Northwest Area and Works Manager
Aluminum Company of America
P.O. Box 120
Vancouver, WA 98666

Dear Mr. Ray:

Enclosed is Order No. DE 86-419. All correspondence relating to this document should be directed to the enforcement officer. If you have any questions concerning the content of the document, please call Ted Mix, Olympia, telephone (206) 459-6033.

A form entitled "Acknowledgment of Service" is also enclosed. Please sign this form and return it to this office.

This order is issued under the provisions of RCW 90.48.120. Any person feeling aggrieved by this order may obtain review thereof by application, within 30 days of receipt of this order, to the Pollution Control Hearings Board, Mail Stop PY-21, Olympia, WA 98504-8921, with a copy to the Director, Department of Ecology, Mail Stop PV-11, Olympia, Washington, 98504-8711, pursuant to the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Sincerely,

A handwritten signature in cursive script that reads "Philip E. Miller".

Philip E. Miller
Enforcement Officer

PEM:vlm

Enclosures

DEPARTMENT OF ECOLOGY

IN THE MATTER OF THE COMPLIANCE BY)
ALUMINUM COMPANY OF AMERICA'S)
VANCOUVER OPERATIONS)
with Chapter 90.48 RCW and the)
Rules and Regulations of the)
Department of Ecology)

ORDER
No. DE 86-419

To: Mr. Denis W. Ray
Northwest Area and Works Manager
Aluminum Company of America
P.O. Box 120
Vancouver, WA 98666

RCW 43.21A.020 establishes the Department of Ecology as the state water pollution control agency for carrying out all powers, duties, and functions authorized under Chapter 90.48 RCW and Chapter 90.54 RCW. Whenever the department determines that the waters of the state are being polluted or about to be polluted, the department has the power to issue such orders as it deems necessary to carry out the provisions of said chapters.

The Aluminum Company of America (ALCOA) operates a primary aluminum smelter and ancillary facilities at Vancouver, Washington. As part of the operation at the smelter, ALCOA generates waste potlining which, through department procedures, has been designated as an extremely hazardous waste under state dangerous waste regulations. Although presently disposed of at an out-of-state disposal facility, past practices on site have resulted in ground water contamination from cyanide leaching into the soil and ground water from previous potlining practices, and potlining presently stored on site. Such contamination constitutes violation of RCW 90.48.080.

ALCOA and the Department of Ecology desire that an investigation program be developed and implemented by ALCOA to determine the extent of contamination, an assessment of the risks involved due to said contamination, and a plan of action to prevent further contamination and clean up the site/ground water.

In view of the foregoing and in accordance with RCW 90.48.120(2): it is ordered that Aluminum Company of America comply with the following:

A. Preliminary Assessment Study

No later than August 1, 1986, ALCOA shall submit a Preliminary Assessment Report which identifies and evaluates all existing geological and hydrological information pertaining to the site.

This report shall additionally identify all data gaps and future investigative tasks that will be undertaken to further characterize the extent of contamination. The Preliminary Assessment Report, at a minimum, shall contain the following information:

1. A historical overview of the site that identifies the locations, types, physical and chemical characteristics, and volumes of all wastes stored or disposed of in the general vicinity of the spent potlining and reclaimed alumina insulation storage piles. This overview shall summarize the scope and conclusions of all environmental assessments, if any, conducted by ALCOA or their contractors on these sites.
2. A detailed description of all current and historic potlining and reclaimed alumina insulation storage/disposal practices at the plant site. Additionally, this description shall identify the procedures used during the placement of the synthetic liners over the spent potlining and reclaimed alumina insulation storage piles. Construction techniques, bedding characteristics, liner properties, seaming methods, quality control, inspection procedures, and run-on control procedures must all be identified.
3. A detailed evaluation of all information pertaining to the spent potlining and reclaimed alumina insulation storage piles. This evaluation shall consider site topography, surface water hydrology including runoff and tidal influences, climatology, geology, ground water hydrology, waste characteristics, all contaminant pathways, possible receptors, and all ground water wells within a 3 mile radius, including monitoring data generated to date. Ground water hydrology should address site specific and regional aquifer systems, inter-aquifer exchange, horizontal flow, vertical flow, velocities, transmissivities, hydraulic conductivity, and recharge and discharge areas. Also, it should address sewers, pipelines, and other conduits which may influence contaminant or plume movement. Documentation of the methodologies, where appropriate, must be provided.
4. Concurrent with items 1, 2, and 3 above, ALCOA shall identify data gaps at the site which must be filled in order to completely characterize the extent of contamination at the site. This shall be developed, at a minimum, in consideration of the following:
 - a. The potential impacts on human health and the environment.
 - b. All contaminant pathways.
 - c. The geohydrological setting of the site.
 - d. Safety of investigating personnel.
 - e. Data management needs.

- f. The chemical and physical characteristics of the wastes, including a discussion of the toxicity of the pollutants of concern to humans, flora, and fauna.
- g. Ground water modeling informational needs.
- h. Sampling and analytical limitations.

B. Final Assessment Report

No later than June 1, ¹⁹⁸⁷1986, ALCOA shall submit to the Department of Ecology a Final Assessment Report which fully characterizes the extent of contamination and possible public exposure at the site. This report shall be based, at a minimum, on item A of this Order.

to be amended

C. Remedial Action Plan

No later than June 1, ¹⁹⁸⁷1986, ALCOA shall submit to the Department for approval a Remedial Action Plan. This plan shall contain, at a minimum, the following:

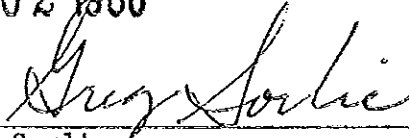
- 1. A detailed description of the remedial action alternatives considered in the development of the Remedial Action Plan. This shall include a description of their methodologies and the predicted results of each alternative course of action. In addition, ALCOA shall rank all remedial actions on the basis of public health concerns, environmental concerns, technical feasibility, time frames, and costs. Documentation supporting projected costs for specific alternatives shall be appended.
- 2. A detailed description of the steps necessary to conduct the remedial action. This shall include, at a minimum, the following:
 - a. A review of what the remedial action will and will not accomplish.
 - b. Engineering plans, specifications, and considerations.
 - c. Operation, maintenance, and monitoring requirements.
 - d. Off-site disposal needs and transportation plans, if applicable.
 - e. Temporary storage requirements.
 - f. Sampling and analysis plan.
 - g. Treatment technologies, if applicable.
 - h. Site restoration specifications.
 - i. Decontamination procedures.
 - j. Personnel safety.
 - k. Consideration of all federal and state laws that are applicable.

The Department of Ecology will endeavor to complete its review of each document within 30 days of receipt, working within the constraints of workload and manpower available, but will accomplish the review in the

shortest time frame possible. The department and ALCOA will conduct periodic progress review meetings at least every 30 days. The department reserves the right to disapprove all or portions of each document submitted for review and approval, however, each item of dispute will be discussed with ALCOA prior to exercising that right. All department disapprovals will be in the form of an administrative order. ALCOA will have the right of appeal of each such order to the Pollution Control Hearings Board as per applicable regulations.

Any person who fails to comply with any provision of this Order shall be liable for a penalty of up to ten thousand dollars for each day of continuing noncompliance. This order could be modified if mutually agreeable to all parties.

DATED at Olympia, Washington **MAY 02 1986**



Greg Sorlie
Central Operations Program Manager