

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action by)
)
Port of Tacoma) AGREED ORDER
Post Office Box 1837)
Tacoma, Washington 98401) No. DE 91-S199

TO: Port of Tacoma

I.

Jurisdiction

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

II.

Findings of Fact

The Department of Ecology ("Ecology") makes the following Findings of Fact, without admission of such facts by the Port of Tacoma ("Port").

1. The Port is the owner of a 18.57 acre parcel of land known as the Cascade Timber No. 3 Log Sort Yard ("Site"). The Site is located along Maxwell Way between Port of Tacoma Road and Thorne Road, Tacoma, Washington (Legal description: E 1/2 of the SE corner, Section 34, Township 21 N, Range 3 E, Pierce County; see site location map, Exhibit A).

2. The northern 8± acres of the Site were undeveloped, forested land until 1984.

3. From 1967 through June of 1978, Nichiman America Inc. leased the southern 10± acres of the Site for use as a log sort yard.

4. From 1978 through 1984 Cascade Timber Company leased the southern 10± acres of the Site for use as a log sort yard.

5. Between January and March of 1982, slag generated by ASARCO, Incorporated (Inc.) was placed on the southern 10± acres of the Site by Cascade Timber Company for use as ballast material.

6. In 1984 the Port prepared the northern 8± acres of the Site for use as a log sort yard, using gravel and rock material.

7. From 1984 through early 1987 Cascade Timber Company leased the entire 18.57 acres of the Site for use as a log sort yard.

8. The Site has not been used since early 1987.

9. It appears that runoff water that leaves the Northeastern end of the Site enters City of Tacoma storm drains and eventually is discharged into the Blair Waterway. It appears that runoff water that leaves the southwestern end of this site is conveyed via City of Tacoma storm drains to the Sitcum Waterway.

10. Ecology collected two surface water samples from the Site between November 1983 and June 1984 (Norton D. and Johnson A., 1985). The highest concentrations of metals measured from this sampling program were as follows: arsenic (As) 1,750 micrograms per liter (ug/L), copper (Cu) 138 ug/L, lead (Pb) 69 ug/L, zinc (Zn) 293 ug/L, nickel (Ni) 18 ug/L, antimony (Sb) 8 ug/L, and cadmium (Cd) 0.5 ug/L (see exhibit C). The levels of zinc and copper exceeded EPA marine water quality acute and chronic criteria. The levels of nickel and lead exceeded marine water quality acute criteria. Additionally, the level of copper exceeded marine water acute criteria and the level of zinc exceeded marine water acute and chronic criteria for surface waters of the State of Washington (WAC 173-201-047).

11. In the 1985 study Norton and Johnson conclude that in all probability the use of slag for ballast at log sort yards was the major source of elevated metals concentrations seen in log sort yard runoff, nearshore surface waters, and sediments (see exhibit C).

12. On January 5, 1990, Ecology took samples of standing water at the Site. One of the samples showed elevated levels of arsenic (2340 ug/l), copper (445 ug/l), zinc (972 ug/l), and lead (120 ug/l). The levels of copper, zinc, and lead in this sample exceeded the Environmental Protection Agency (EPA) marine water quality chronic criteria; and copper and zinc exceeded EPA marine water quality acute criteria. Additionally, copper exceeded marine water acute criteria, lead exceeded marine water chronic criteria, and zinc exceeded marine water acute and chronic criteria for surface waters of the State of Washington (WAC 173-201-047).

13. On January 6, 1991 a pipeline owned by U. S. Oil Company broke in a location east of the Site and released crude oil onto the northeastern 4± acres of the Site. Remedial action related to this release is being implemented through a separate Order between Ecology and US Oil Company (Agreed Order No. DE 91-S198).

14. On April 10, 1991, Ecology took samples of storm water runoff from within a catch basin at the southern perimeter (Thorne Road) of the Site. Runoff from the Site travelled toward this particular catch basin. Sample results showed the following: arsenic (As) 560 Parts per billion (ppb), copper (Cu) 160 ppb, lead (Pb) 320 ppb, and zinc (Zn) 868 ppb. The levels of copper, zinc, and lead in this sample exceeded the EPA marine water quality chronic and acute criteria. Additionally, copper exceeded marine water quality acute

criteria, and lead and zinc exceeded marine water quality acute and chronic criteria for surface waters of the State of Washington (WAC 173-201-047).

15. On April 10, 1991, Ecology took samples of storm water runoff flowing from the site towards a catch basin at the southwest corner of the property, near the intersection of Thorne Road and Maxwell Way. Sample results showed the following: As 730 ppb, Cu 160 ppb, Pb 88 ppb, Zn 350 ppb. Copper and zinc exceeded EPA marine water quality chronic and acute criteria and lead exceeded EPA marine water quality chronic criteria. Lead and zinc exceeded marine water quality acute and chronic criteria and copper exceeded marine water quality acute criteria for surface waters of the state of Washington (WAC 173-201-047).

16. On April 16, 1991, Ecology took a sediment sample from a catch basin near the southwest corner of the Site. The catch basin that was sampled collects runoff from the Cascade Timber No. 3 Sort Yard site only. The sample obtained was tested for As, Cu, Pb, and Zn. Test results indicate that the level of arsenic in this sample (400 mg/kg) exceeded Puget Sound Marine Sediment Cleanup Screening Levels (WAC 173-204-520), and Marine Sediment Quality Standards Chemical Criteria (WAC 173-204-320).

17. Information in Ecology files indicates that elevated levels of heavy metals at this Site are linked to the use of ASARCO slag as ballast.

18. Results of an Ecology study titled Assessment of Log Sort Yards as Metals Sources to Commencement Bay Waterways, November 1983-June 1984 reported elevated levels of heavy metals in surface water runoff from the Site, and in Sitcum Waterway sediment. These metals included arsenic, copper, zinc, and lead (see exhibit C).

19. Results of a Tetra Tech study titled Commencement Bay/Nearshore Tidelands Feasibility Study validated the earlier findings of Ecology. Tetra Tech researchers found arsenic, copper, zinc, and lead in the waters and sediment of the Sitcum waterway. The Tetra Tech study defined arsenic, copper, lead, and zinc as problem chemicals in the Sitcum Waterway (see Exhibit C).

20. The Site is located within the boundaries of the Commencement Bay/Nearshore Tidelands Superfund Site. This Site as well as other sites that drain to the Sitcum Waterway are suspected sources of elevated metals detected in bottom sediments of Sitcum Waterway.

21. Remedial action related to an oil spill on January 6, 1991 is described by a separate Order, Agreed Order No. DE 91-5198.

III.

Ecology Determinations

1. The Site is a facility as defined in RCW 70.105D.020(3). The Port is an "owner", as defined in RCW 70.105D.020(6).

2. ASARCO Inc. generated a hazardous waste defined in RCW 70.105D.020(5) which was placed on the site as ballast material.

3. Substances found at the site described above are "hazardous substances", as defined in RCW 70.105D.020(5).

4. Based on the presence of these hazardous substances at the site and all factors known to Ecology, there has been a release or threatened release of hazardous substances onto the Site, as defined at RCW 70.105D.020(10).

5. By letters dated March 27, 1990, to the Port and Cascade Timber Co., and June 27, 1990, to ASARCO, Ecology notified these companies of their status as "potentially liable persons" under RCW 70.105D.040 after notice and opportunity for comment.

6. Pursuant to RCW 70.105D.030(1) and 70.105D.050, Ecology may require the Port to investigate or conduct 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.

IV.

Work to be Performed

Based on the foregoing Facts and Determinations, it is hereby ordered and agreed that the Port conduct a Remedial Investigation/Feasibility Study (RI/FS)) at the Site, in accordance with WAC 173-340-350. Because of the fact that approximately four (4) acres of the Site will be characterized for oil contamination by US Oil Company, the Port shall share all data in mutual study areas. The specific tasks for this Order are described below in summary fashion and in more detail in Exhibit B.

1. First, this Order requires that draft and final RI/FS work plans be submitted to Ecology for review, comment, and finally, for approval.

2. Second, this Order requires full implementation and completion of the RI/FS tasks, as designated in the final, approved RI/FS work plans.

3. Third, this Order requires that draft and final RI/FS reports be submitted to Ecology for review, comment, and finally, for approval.

V.

Incorporation of Exhibits

All exhibits are hereby incorporated into this Order by reference and are integral and enforceable parts of this Order.

VI.

Terms and Conditions of Order

1. Definitions

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

2. Public Notices

RCW 70.105D.030 (2) (a) requires that, at a minimum, this Order be subject to concurrent public notice. WAC 173-340-600(10)(c) requires that, for agreed orders covering an RI/FS, the public comment period shall be at least thirty days in duration and shall be completed before the Order becomes effective. 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. The Port reserves the right to withdraw their consent to this Order in the event Ecology modifies any provision without their written consent.

3. Remedial Action Costs

The Port agrees to pay to Ecology costs incurred by Ecology pursuant to this Agreed Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order preparation, negotiations, oversight, and administration. Ecology costs shall include

costs of direct activities (e.g., employee salary, laboratory costs, travel costs, contractors fees) and agency indirect costs of direct activities. The Port agrees to pay the required amount within 90 days of receiving, from Ecology on a quarterly basis, 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. Failure to pay Ecology's costs within 90 days of receipt of the itemized quarterly statement of costs may result in interest charges.

4. Designated Project Coordinators

The project coordinator for Ecology is:

Marc McKenna
Department of Ecology
Southwest Regional Office
LU 11
Post Office Box 47775
Olympia, Washington 98504-7775

The project coordinator for the Port is:

Suzanne Dudziak
Port of Tacoma
Post Office Box 1837
Tacoma, Washington 98401-1837

The project coordinators shall be responsible for overseeing the implementation of this Order. To the maximum extent possible, communications between Ecology and the Port, 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 coordinators. Should Ecology or the Port change project coordinators, written notification shall be provided to Ecology and the Port 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, as necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate training, experience, and expertise in hazardous waste site investigation and cleanup. The Port shall notify Ecology as to the identity of such engineer(s) or hydrogeologist(s), 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.

6. Access

Ecology or any Ecology authorized representative shall have the authority to enter and freely move about the Site at all reasonable times for the purpose 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 the Port. By signing this Agreed Order, the Port agrees that this Order constitutes reasonable notice of access, and agrees to allow access to the Site at all reasonable times for purposes of overseeing work performed under this Order. Ecology shall allow split or replicate samples to be taken by the Port during an inspection, unless doing so interferes with Ecology's sampling. The Port shall allow split or replicate samples to be taken by Ecology and shall provide seven (7) days notice before any sampling activity.

7. Public Participation

Pursuant to WAC 173-340-600, the Port shall prepare a public participation plan for the Site. Ecology shall maintain the responsibility for public participation at the Site. The Port shall help coordinate and implement public participation for the Site.

8. Retention of Records

The Port 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 the Port, then the Port agrees to include in its contract with such contractors or agents a record retention requirement meeting the terms of this paragraph.

9. Dispute Resolution

The Port may request Ecology to resolve disputes which may arise during the implementation of this Order. Such requests shall be in writing and directed to the Project Manager who will subsequently forward the request to the Southwest Regional Office Toxics Cleanup Program Section Head. A decision from the Section Head shall be issued to the Port within thirty (30) days of receipt of the request. Ecology resolution of the dispute shall be binding and final. The Port is not relieved of any requirement of this Order during the pendency of the dispute and will remain responsible for timely compliance with the terms of the Order unless otherwise provided by Ecology in writing.

10. Reservation of Rights/No Settlement

This Agreed Order is not a settlement under Chapter 70.105D RCW. This Agreed Order does not cover Natural Resource Damages nor contribution for Natural Resources Damages should these releases constitute such damage. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority. Ecology will not, however, bring an action against the Port to recover remedial action costs paid to and received by Ecology under this Agreed Order. In addition, Ecology will not take additional enforcement actions against the Port to require those remedial actions required by this Agreed Order, provided the Port complies with this Agreed Order. Ecology reserves the right, however, to require additional remedial actions at the Site, should it deem such actions necessary.

11. Endangerment

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 the Port to stop further implementation of this Order for such period of time as needed to abate the danger. Ecology will notify the Port when implementation of the Order shall be resumed.

Conversely, if the Port determines that conditions at the Site are creating or have the potential to create danger to the health and welfare of the people on the Site or in the surrounding area or to the environment, the Port has the right to cease implementation of this Order. If the conditions at the Site do not appear to present, or have the potential to present, an immediate danger to life, health, and/or the environment, then the Port must

notify Ecology of the decision to cease activities 24 hours prior to stopping work. However, if conditions at the Site present, or have the potential to present, an immediate danger to life, health, and/or the environment, then the Port may cease activities at the Site without delay. The Port must inform Ecology of this decision within 24 hours from the time it was made. In either case, Ecology will evaluate the situation to determine the magnitude of the danger and whether or not a period of work stoppage is needed to abate the danger. Ecology will notify the Port when implementation of the Order shall be resumed.

12. 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 the Port 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 the Port may have in the Site or any portions thereof, Port 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, the Port shall notify Ecology of the contemplated transfer.

13. Compliance with Other Applicable Laws

All actions carried out by the Port pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements.

VII.

Satisfaction of this Order

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

VIII.

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 the Port refuse(s), without sufficient cause, to comply with any term of this Order, the Port may be liable for:

(1) Up to three times the amount of any costs incurred by the State of Washington as a result of their/its refusal to comply; and

(2) Civil penalties of up to \$25,000 per day for each day they/it refuse(s) to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided by RCW 70.105D.060.

Effective date of this Order: October 7, 1991

PORT OF TACOMA

STATE OF WASHINGTON
Department of Ecology

By John Teyssie 10/3/91
Date

By Megan White 10/7/91
Megan White, P.E. Date
Southwest Region Supervisor
Toxics Cleanup Program

STATE OF WASHINGTON
OFFICE OF THE ATTORNEY GENERAL

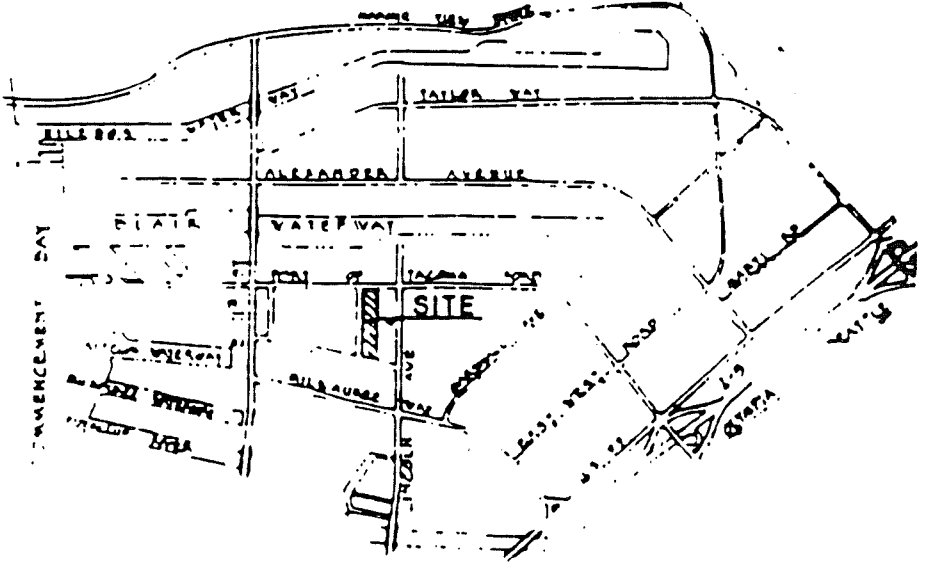
By Jay Phillips 10-8-91
Date

MAXWELL WAY

CASCADE TIMBER
NO. 3 LOG
SORT YARD
SITE

CITY UTILITY RW

THORNE ROAD



VICINITY MAP

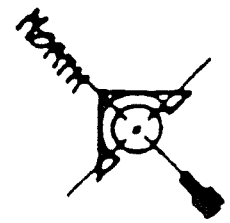


EXHIBIT A
SITE LOCATION MAP
CASCADE TIMBER NO. 3 LOG SORT YARD

EXHIBIT B

CASCADE TIMBER NO. 3 LOG SORT YARD
SCOPE OF WORK AND SCHEDULE FOR RI/FS
PORT OF TACOMA

All work performed at and around the Site pursuant to this Agreed Order shall be accomplished in accordance with Chapter 173-340 WAC. All submittals shall be in accordance with the requirements in WAC 173-340-840.

TASK 1 - DRAFT RI/FS WORK PLAN: Prepare a remedial investigation/feasibility study (RI/FS) work plan per the requirements of WAC 173-340-350. Incorporate the following sub-tasks as elements of the work plan. Include a detailed scope and schedule of tasks, up to and including submittal of the draft RI/FS report. Submit the work plan to Ecology for review and comment.

Schedule: This task, sub-tasks included, shall be executed within seven (7) weeks after the effective date of this Agreed Order.

SUB-TASK 1.1 - DRAFT SAMPLING AND ANALYSIS PLAN: Prepare a draft sampling and analysis plan to identify the vertical and horizontal extent of the inorganic contamination of soil, surface water, and groundwater at the site, and sediment immediately off-site. The sampling and analysis plan shall be prepared in accordance with the requirements of WAC 173-340-820. Proposed analytical procedures shall be in accordance with WAC 173-340-830.

SUB-TASK 1.2 - DRAFT SAFETY AND HEALTH PLAN: All work performed at the site shall be in accordance with the provisions specified in WAC 173-340-810(1). A safety and health plan shall be prepared per WAC 173-340-810(2). Although the health and safety plan must be submitted to Ecology for review and comment, Ecology does not have the authority to approve the plan.

SUB-TASK 1.3 - DRAFT PUBLIC PARTICIPATION PLAN: A public participation plan shall be prepared per WAC 173-340-600(8). The plan will be submitted to Ecology independently of Sub-task 1.1 and 1.2.

TASK 2 - FINAL RI/FS WORK PLAN: Submit a final RI/FS work plan to Ecology for review and approval. The final RI/FS work plan shall address Ecology's comments on the draft RI/FS work plan.

Schedule: Submit the final RI/FS work plan within three (3) weeks after Ecology provides comments on the draft work plan.

TASK 3 - RI/FS: Carry out the specific tasks of the RI/FS as designated in the approved final RI/FS work plan.

Schedule: The specific tasks of the RI/FS shall be completed in accordance with the schedule in the approved final RI/FS work plan.

TASK 4 - DRAFT RI/FS REPORT: Compile and interpret data from pertinent investigations and sampling at the Cascade No. 3 Site. Submit the report to Ecology for review and comment. The draft RI/FS report shall, at a minimum, provide a discussion of the following issues.

1.0 INTRODUCTION

- 1.1 PURPOSE AND SCOPE
- 1.2 FACILITY DESCRIPTION AND HISTORY
- 1.3 RESULTS OF PREVIOUS INVESTIGATIONS
- 1.4 HISTORY OF REGULATORY ACTIONS

2.0 METHODOLOGY

- 2.1 GROUNDWATER INVESTIGATION
- 2.2 SURFACE WATER INVESTIGATION
- 2.3 SOIL/WOOD WASTE/SLAG INVESTIGATION
- 2.4 QUALITY ASSURANCE AND QUALITY CONTROL
- 2.5 DATA VALIDATION

3.0 GROUNDWATER

- 3.1 HYDROSTRATIGRAPHIC UNITS
- 3.2 AQUIFER HYDRAULIC CHARACTERISTICS
- 3.3 GROUNDWATER RECHARGE, DISCHARGE AND MOVEMENT
- 3.4 QUALITY OF GROUNDWATER

4.0 SURFACE WATER

- 4.1 FLOW ESTIMATES
- 4.2 QUALITY OF SURFACE WATER

5.0 SOILS

- 5.1 BACKGROUND SOILS
- 5.2 QUALITY OF SOILS

7.0 CONTAMINANT FATE AND TRANSPORT

- 7.1 POTENTIAL ROUTES OF MIGRATION
- 7.2 ENVIRONMENTAL CHEMISTRY OF CONTAMINANTS
- 7.3 CLEANUP STANDARDS OF THE MODEL TOXICS CONTROL ACT
- 7.4 SURFACE WATER
- 7.5 GROUNDWATER
- 7.6 SOILS/SEDIMENT
- 7.7 AIR

8.0 FEASIBILITY STUDY

- 8.1 PHASE I PRELIMINARY FEASIBILITY STUDY
- 8.2 INITIAL SCREENING OF ALTERNATIVES - PHASE II FS
- 8.3 POST-SCREENING INVESTIGATIONS
- 8.4 DETAILED ANALYSIS OF ALTERNATIVES - PHASE III
- 8.5 DETAILED ALTERNATIVE DESCRIPTIONS - PHASE III FS
- 8.6 DETAILED ANALYSIS OF ALTERNATIVES - PHASE III FS
- 8.7 LIMITED MODIFICATIONS OF ALTERNATIVES AND SENSITIVITY ANALYSIS
- 8.8 COMPARATIVE ANALYSIS OF ALTERNATIVES
- 8.9 CONCLUSIONS AND RECOMMENDED ALTERNATIVE

9.0 REFERENCES

Schedule: The draft RI/FS shall be submitted in accordance with the schedule in the approved final RI/FS work plan.

TASK 5 - FINAL RI/FS REPORT: Submit a final RI/FS report to Ecology for review and approval. The Final RI/FS report shall address Ecology's comments on the draft report.

Schedule: This task shall be executed within four (4) weeks after Ecology provides comments on the draft RI/FS report.

EXHIBIT C
REFERENCES

1. Dale Norton, Art Johnson, Assessment of Log Sort Yards as Metals Sources to Commencement Bay Waterways, November 1983-June 1984, Department of Ecology, 1985
2. ibid.
3. Tetra Tech, 1986. Commencement Bay/Nearshore Tidelands Feasibility Study, (Final Report No. TC-3218-05, prepared for Washington State Department of Ecology and US EPA)
4. Tetra Tech, 1985. Commencement Bay/Nearshore Tidelands Remedial Investigation, (Report No. TC-3752, vol. 2, prepared for Washington State Department of Ecology and US EPA)
5. U.S. Environmental Protection Agency, 1987. Site Inspection Report for Commencement Bay Nearshore/Tidelands, Tacoma, Washington, (Report No. TDD F10-8612-12, prepared by Ecology and Environment, under US EPA contract no. 68-01-7347).
6. U.S. Environmental Protection Agency, Region 10, 1989 Commencement Bay Nearshore/Tidelands, Record of Decision;
7. Port of Tacoma Map. Lease Exhibit 'A', Plum Creek Log Yard, Maxwell Way Site, Drawing No. CP-4229-3A, 1983