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FINAL REPORT

Restoration / Enhancement Projects For the Port Townsend Boat Haven Diesel Spill; April 25, 1993

May 1999

Submitted to:

**Resource Damage Assessment Committee
Richard Logan, Chair
Spill Policy and Planning Section
Washington Department of Ecology
Olympia, WA 98504**

By:

**Port of Port Townsend
Larry Crockett, General Manager
Ken Radon, Operations Manager
Port Townsend, WA 98368**



MEMORANDUM

From the Desk Of
Ken Radon
Operations Manager

KR

Date: May 12, 1999

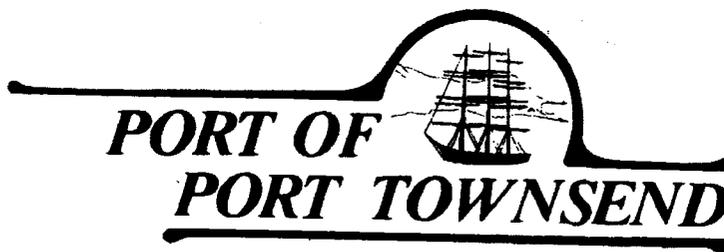
To: RDA COMMITTEE

SUBJECT: PRESENTATION FOLDERS

THIS PRESENTATION FOLDER DOES NOT INCLUDE APPENDICES.

APPENDICES REFERENCED IN THIS FOLDER ARE AVAILABLE IN THE FINAL REPORT PRESENTED TO THE RDA COMMITTEE CHAIR.

APPENDICES REFERENCED IN THIS FOLDER ARE ALSO AVAILABLE FROM THE PORT OF PORT TOWNSEND (Copy Fee Applies; Please Phone for Current Rates: 360-385-2355).



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May 6, 1999

Mr. Richard Logan, RDA Committee Chair
Department of Ecology, SPPR Program
P.O. Box 47600
Olympia, WA 98504-7600

Dear Mr. Logan:

On behalf of our Port commissioners and our great staff at the Port of Port Townsend, I wanted to take this opportunity to express our commitment to ensuring a clean viable environment here in Port Townsend and Jefferson County.

Enclosed is our final report relating to remediation/enhancement and water quality monitoring resulting from the spill of diesel fuel of the Port Townsend Boat Haven on April 25, 1993. Since that incident we have spent over \$2 million - 9 times more than the original amount allocated to mitigation of the spill. The improvements noted in our report have helped us to create a port facility that is now recognized throughout Puget Sound as a clean and environmentally sound port. We want to continue this hard won reputation and hope to always be considered the example of how to "do it right".

I want to thank you and your staff for assisting us in our efforts and sincerely hope we can continue our excellent working relationship. Please feel free to contract me directly if you have any questions. If you have the opportunity to visit Port Townsend - please let me know. I would welcome the chance to show you our operation.

Sincerely,

Larry C. Crockett
General Manager

LCC:mt c:\files\Logan.doc

cc: Commissioner Pirner, Sokol, and Beck

EXECUTIVE SUMMARY

Background: Remediation / enhancement and water quality monitoring projects were approved by the Washington Resource Damage Assessment (RDA) Committee to mitigate any environmental damage that may have been caused by the spill of diesel fuel (the spill) in the Port Townsend Boat Haven on April 25, 1993.

Scope: This report summarizes final project outcomes, project completion dates, and final project costs:

I. Remediation / Enhancement Projects

- 1. Hazardous Waste Collection Center**
- 2. Pumpout Station: Port Townsend Boat Haven**
- 3. Washdown Facilities: Boatyard and Shipyard**
- 4. Stormwater: Infrastructure and Management Program**
- 5. Sandblast Facility**
- 6. Spill Response Plan and Training**
- 7. Lease Modification Adding Environmental Amendments**
- 8. Creosote Pile Debris Removal: Urban Wetlands**
- 9. Pumpout Station: Quilcene Boat Haven**

Summary of Project Results: Completed projects include a Moderate Risk Waste Facility that serves all residents and small quantity generators in Jefferson County, sanitary marine pumpout stations in the Port Townsend and Quilcene Boat Havens, washdown facilities for the Port's boatyard and shipyard, and a comprehensive stormwater infrastructure and management system. Additionally, the Port remains committed to spill response planning and employee training, enforcing environmental lease modifications, enforcing containment policies for sandblasting operations, and working with other agencies to enhance or mitigate effects to urban wetlands.

We appreciate the opportunity to share these successes with the Resource Damage Assessment Committee. We remain committed to protection of human health and the environment. Originally the Port of Port Townsend allocated \$214,600 for projects identified to mitigate deleterious effects to the natural environment related to the April 25, 1993 diesel spill. Over the past 5 years the Port has completed several projects and spent \$2,007,056; nearly 9 times the original amount allocated to mitigation of the spill.

Summary Details of Project Results:

1) Hazardous Waste Collection Center

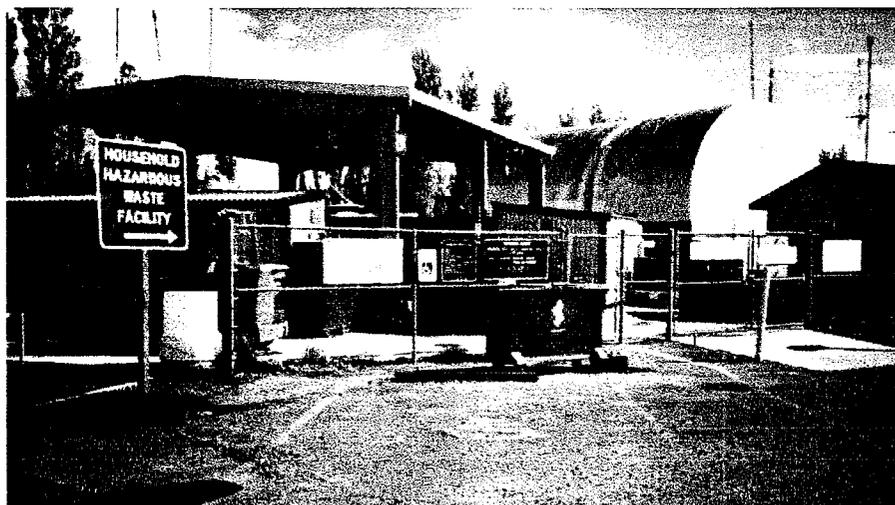
The goal of providing a working facility to collect household hazardous waste has been realized. In 1995 the Port of Port Townsend (Port), Jefferson County and Washington Department of Ecology worked cooperatively to complete a Moderate Risk Waste Facility (MRW) within the physical boundaries of the Port of Port Townsend Boatyard. The MRW serves Port patrons, City of Port Townsend residents, Jefferson County residents, and all qualified Jefferson County Small Quantity Generators (SQGs).

The MRW was owned and operated by the Port from August 1995 through most of 1997. On or about December 1997 the facility and its operation were transferred to Jefferson County. The facility was completed at a total cost of \$199,430. The Port's budgeted share of this cost, amounting to \$65,000, was allocated to mitigation of the spill.

Documentation of Port costs, location, and photographs of the MRW facility are provided in Appendices A and Photo as follows:

- Item 1: a) Summary: Port of Port Townsend, Moderate Risk Waste Facility, Total Project Cost, November 18, 1994. b) Project Control, Facility Construction.
- Item 2: Port of Port Townsend, Land Lease (Moderate Risk Waste Facility), November 21, 1997.
- Item 3: Photograph of MRW facility (SEE PHOTO APPENDIX).

NOTES:



2) **Pumpout Station: Port Townsend Boat Haven**

The goal of providing the public with simple, convenient, and legal sanitary waste disposal options within the Port of Port Townsend marina and boatyard has been realized. The Port constructed two sanitary waste marina pumpout stations and an upland "port-a-potty" dump station to serve the Port Townsend Boat Haven. These facilities were completed on or about June 1995 at a total cost of \$46,443. Of this cost, \$14,800 was allocated to mitigation of the spill.

Documentation of Port costs, location, and photographs of the pumpout / port-a-potty dump facilities are provided in Appendices B and Photo as follows:

Item 1: Project Control, Design of dump station at Port Townsend Boat Haven (PTBH): revised. August 1, 1994.

Item 2: Port of Port Townsend Boat Haven, Site Map with highlighted pumpout and port-a-potty dump locations. Not Dated.

Item 3: Photographs of pumpout facilities (SEE PHOTO APPENDIX).

NOTES:



3) Washdown Facilities: Boatyard and Shipyard

The goal of pre-treating boat hull washdown wastewater to reduce particulates and metals prior to additional treatment by Publicly Owned Treatment Works (POTW) has been realized. Boats that are hauled-out of the water and moved upland for the purpose of maintenance and repair typically need to remove marine organisms from their hulls. Construction of a hull washdown facility to meet NPDES requirements was completed in two phases. The first phase was for boats to be placed in our boatyard. The second phase was for ships to be placed in our shipyard. The phase one closed loop boatyard washdown was completed in 1993 at a total cost of \$75,159.97. Of this cost, \$50,000 was allocated to mitigation of the spill.

Ultimately, the boatyard closed loop washdown system did not meet the Port's requirements for reliability. In June 1997, the closed loop system was removed and replaced with an improved system. The improved system pretreats washdown wastewater through a solids settling vault, chemical flocculation tank, and sludge filter press. Concrete containment pads prevent infiltration to soil. Flow control valves route stormwater to our stormwater system. The additional expense of this improved system was not originally presented to the RDA Committee and therefore is not allocated to mitigation of the spill. However, closeout costs on these two improved facilities (boatyard and shipyard) came in at \$421,636. After industrial pre-treatment, boat hull washdown water is discharged to publicly owned treatment works operated by the City of Port Townsend.

Documentation of Port costs and photographs of the boatyard and shipyard washdown facilities are provided in Appendices C and Photo as follows:

- Item 1: Project Documents and cost spreadsheet, Boatyard closed loop treatment system. October 27, 1993.
- Item 2: Port of Port Townsend Final 1999 Operating Budget line items (highlighted; page 52). November 18, 1998. (These show the closeout costs of the improved washdown facilities).
- Item 3: Photographs of Boatyard and Shipyard Washdown facilities (SEE PHOTO APPENDIX).

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4) Stormwater: Infrastructure and Management Program

The goal of providing improved wetland capacity, stormwater treatment, and marine buffering has been realized. The Port's stormwater system, including an optional constructed wetland, was completed in 1997. Total cost of the system amounted to \$1,212,430. Of this cost, \$35,000 was allocated to mitigation of the spill. The constructed wetland, though not required, adds an additional buffer for adjacent natural wetlands and marine waters.

Documentation of Port costs, site map and photographs of the representative stormwater facilities are provided in Appendices D and Photo as follows:

Item 1: Port of Port Townsend Final 1999 Operating Budget line items (highlighted; page 52). November 18, 1998. (These show the closeout costs of the stormwater facilities).

Item 2: Site Map and System Layout. August 1996. (constructed wetland is labeled "Package Storm Treatment System; Sheet No. SD2, SE corner and highlighted).

Item 3: Photographs of representative stormwater facilities (SEE PHOTO APPENDIX).

NOTES:



5) Sandblast Facility

The Port underestimated the costs for providing a covered sandblast facility as submitted to the committee; the original estimate of \$25,000 is not reasonable. To better understand the true costs of such a facility, the Port applied for and was recently awarded a US Department of Agriculture (USDA) feasibility study grant. The sandblast facility feasibility study has not been completed. The costs of this feasibility study, including Port funds, is \$18,750. The cost originally allocated to mitigation of the spill was \$25,000.

Until such time that a sandblast facility is constructed, the Port will continued to protect the environment by enforcing a strict containment policy for sandblast operations. This policy has been in effect since 1991.

Documentation of Port sandblast facility feasibility study costs and current environmental containment policy is in Appendix E as follows:

Item 1: USDA Grant approval letter. September 29, 1998.

Item 2: Port of Port Townsend Sandblasting Agreement. Original: September 14, 1990, Terms updated September 14, 1996.

NOTES:

6) Spill Response Plan and Training

The Port remains committed to preventing, and when necessary, responding to hazardous material incidents. Hazardous material incident response planning and training is an ongoing project at the Port. We completed our first spill response operations manual in May of 1994. The manual focuses on product transfer operations, safety, and a prudent and timely response to minimizing the effects of pollutants spilled into waterways.

Initial spill response team members have received 40 hour "HAZWOPER" training supplemented by annual 8 hour refresher courses. To date, 10 Port employees, or nearly 50%, of our total workforce have received spill response training in "awareness" through "operations" levels. Spill equipment, such as sorbents, booms, and personal protective equipment are readily available near the waterfront at both Port and US Coast Guard facilities. Additional initial response resources, in terms of equipment and personnel, are available from the Port Townsend Fire Department, Port Townsend Paper Mill, Naval Detachment Indian Island, and private contractors. Joint employee spill response training has been conducted with Port Townsend Paper Mill. Since 1993, more than \$10,000 has been allocated to employee spill response training. Of this cost, \$5,000 was allocated to mitigation of the spill.

Prevention of hazardous material releases is one of the most important environmental protection goals at the Port. Public outreach through face-to-face contact and published best management practices is one means used to prevent hazardous material spills; safe and careful internal operations are another.

Documentation of Spill Prevention and Response, Port Best Management Practices (outreach materials) and sample employee training certificates are offered in Appendices F and Photo as follows:

- Item 1: Port of Port Townsend Marine Oil Transfer Facility Spill Response Operations Manual. R.L. Johnson, May 1994
- Item 2: Port of Port Townsend Boatyard Use. No Date Given.
- Item 3: Typical Employee Training Certificates. (Copies Only) Date Varies.
- Item 4: Photograph of Spill Response Trailer (SEE PHOTO APPENDIX).

NOTES:



7) Lease Modification Adding Environmental Amendments

Lease modifications as originally provided to the RDA committee in September of 1993 are still in effect. Additionally, an environmental / safety specialist was added to the Port payroll in 1998 to enhance and improve cooperation and compliance with tenants. At least \$5,000 of this person's annual salary is allocated to mitigation of the spill.

Documentation of Lease Modifications and Environmental Safety Specialist duties offered in Appendix G as follows:

Item 1: Port of Port Townsend Lease Modifications.

Item 2: Port of Port Townsend Environmental / Safety Compliance Specialist Job Description. No Date Given.

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8) Creosote Pile Debris Removal: Urban Wetlands

The Port remains committed to working cooperatively with local and state agencies to enhance or mitigate environmental disturbances to these urban wetlands.

The Port was not able to acquire this property in order to remove debris. The Port's constructed wetland and stormwater system work to reduce runoff pollutants into these urban wetlands and surrounding marine waters. Port costs and allocations to the spill were not originally specified.

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9) Pumpout Station: Quilcene Boat Haven

The goal of providing the public with simple, convenient, and legal sanitary waste disposal options within the Quilcene Boat Haven have been realized. The Port constructed a sanitary waste marina pumpout station at the Quilcene Boat Haven. This facility was completed in 1995 at a total cost of \$18,208. Of this cost, \$14,800 was allocated to mitigation of the spill.

Documentation of Port costs for the Quilcene Boat Haven facilities are provided in Appendix H as follows:

Item 1: Port of Port Townsend Project Control Form. Revised February 20, 1995.

NOTES:

RDA Water Quality Data Summary

Port of Port Townsend RDA Water Quality Analysis Results

YEAR/QUARTER	1996/3RD	1996/4TH	1996/2ND	1996/3RD	1997/1ST	1997/2ND	1997/4TH	1998/1ST	1998/3RD	1998/4TH	YEAR/QUARTER
PARAMETER											PARAMETER
FOG*	3.1 mg/L	0.95 mg/L	1.2 mg/L	1.4 mg/L	2.0 mg/L	1.0 mg/L	1.4 mg/L	1.1 mg/L	1.0 mg/L	2.7 mg/L	FOG*
TSS	14 mg/L	16.75 mg/L	30 mg/L	19 mg/L	15 mg/L	16 mg/L	10 mg/L	8 mg/L	11 mg/L	11 mg/L	TSS
F.COLLIFORM	45 CFU/100 mL	8 CFU/100 mL	2 CFU/100 mL	20 CFU/100 mL	5 CFU/100 mL	25 CFU/100 mL	11 CFU/100 mL	9 CFU/100 mL	246 CFU/mL	148 CFU/100 mL	F.COLLIFORM
ARSENIC	0.1 mg/L	0.2 mg/L	0.1 mg/L	0.2 mg/L	0.1 mg/L	0.1 mg/L	0.1 mg/L	0.2 mg/L	0.1 mg/L	0.1 mg/L	ARSENIC
COPPER	.005 mg/L	0/01 mg/L	0.006 mg/L	0.01 mg/L	0.004 mg/L	0.005 mg/L	0.004 mg/L	0.01 mg/L	0.004 mg/L	0.01 mg/L	COPPER
LEAD	0.04 mg/L	0.1 mg/L	0.04 mg/L	0.1 mg/L	0.04 mg/L	0.04 mg/L	0.04 mg/L	0.1 mg/L	0.04 mg/L	0.04 mg/L	LEAD
ZINC	.014 mg/L	0.02 mg/L	0.02 mg/L	0.03 mg/L	0.011 mg/L	0.013 mg/L	0.011 mg/L	0.02 mg/L	0.01 mg/L	0.03 mg/L	ZINC

* FOG= Fats, Oil and Grease
 Concentration values are arithmetic averages of five marina sampling sites for the quarter indicated.