

## TECHNICAL MEMORANDUM

---

TO: Jing Liu, Sonia Fernandez, Washington State Department of Ecology

FROM: Larry Beard, P.E.

CC: Mike Stoner, Port of Bellingham

DATE: February 5, 2013

**RE: INTERIM ACTION COMPLETION REPORT  
EMERGENCY BULKHEAD REPAIR  
BLAINE MARINA INC SITE  
BLAINE, WASHINGTON**

This technical memorandum presents the completion report for the interim action conducted by the Port of Bellingham (Port) to repair a failing section of bulkhead along the shoreline of the Blaine Marina Inc. Site (Site) in Blaine, Washington, as shown on Figure 1. The Site is being cleaned up to comply with the Washington State Model Toxics Control Act (MTCA) regulations (WAC 173-340) under an agreed order between the Port and the Washington State Department of Ecology (Ecology). The agreed order (No. DE 9000) requires the Port to conduct a remedial investigation and feasibility study for the Site, and to implement an interim action to repair the failing section of bulkhead. The bulkhead repair was conducted prior to other remedial activities as an interim action, due to the potential that additional failure of the bulkhead could have resulted in the release of contamination.

The interim action addressed an approximately 60-foot section of failing bulkhead located along the alignment shown on Figure 2. The details of the interim action were described in the Interim Action Plan (Landau Associates 2012<sup>1</sup>), and compared with two other alternatives for repairing the bulkhead. The selection of the preferred alternative was reviewed and approved by Ecology. The fuel office building was deconstructed to the finished floor level by the tenant in advance of the interim action. The interim action was implemented between August 20, 2012 and October 16, 2012 without any significant deviations from the interim action plan. Photographs taken during construction of the interim action are provided on Figures 3 through 5. The photographs show the trench excavated along the bulkhead, installation of the bulkhead sheetpiles, construction of the pile cap, and the completed repair.

The fuel lines supplying the fuel dock were rerouted and installed through the steel sheetpile by a specialty fuel line contractor retained by the tenant (Blaine Marina Inc.). The new fuel lines are routed south along the east side of Sigurdson Avenue, and then west to the northeast corner of the fuel dock

---

<sup>1</sup> Landau Associates. 2012. *Interim Action Plan, Blaine Marina Inc. Site, Blaine, Washington*. Prepared for the Port of Bellingham. July 9.

where they are routed to the fuel dock through pipe sleeves installed in the new sheetpile wall. The fuel lines have been reactivated and the fuel dock is operational at the time this technical memorandum was prepared.

The Port is currently implementing other cleanup actions at the Site in accordance with the agreed order. Initial RI activities are complete and a preliminary report presenting upland data will be submitted to Ecology in February 2013. The data report will present the results of initial RI activities, propose locations for additional groundwater monitoring wells, and identify any additional data gaps that need to be filled during the RI.

\* \* \* \* \*

This technical memorandum has been prepared for the use of the Port of Bellingham and the Washington State Department of Ecology for specific application to the Blaine Marina Inc. Site. The reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

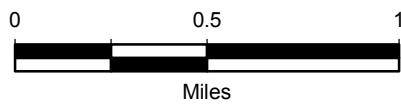
LDB/ccy

Attachments:

- Figure 1: Vicinity Map
- Figure 2: Blaine Marina Inc. Site Plan
- Figures 3 through 5: Selected Site Photographs



Y:\Projects\001034\010.0151\AP\Mapdocs\Figure 1.mxd



Data Source: ESRI 2008



Blaine Marina Inc.  
Blaine Harbor  
Blaine, Washington

**Vicinity Map**

Figure  
**1**



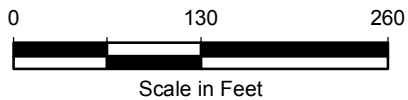
**Legend**

- Approximate Blaine Marina Inc. Site Boundary; Site Limits to be Determined in the RI/FS
- Historical Building Location
- Existing Building Location

Data Sources: Wilson Engineering; Port of Blaine 2011; Walker and Associates, Inc; Google Earth Professional 2011

**Note**

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.



Blaine Marina Inc. Blaine Harbor Blaine, Washington	<b>Blaine Marina Inc.</b> <b>Site Plan</b>	Figure <span style="font-size: 2em; font-weight: bold;">2</span>
---	---	---



1. Construction trench for bulkhead installation.



2. Installation of bulkhead sheetpiles.

02/06/13 P:\001034\010\Files\m\ria Completion Report\ria Completion Report\_fig3.docx



3. Installed bulkhead.



4. Pile cap form in front of fuel dock.

02/06/13 P:\001034\010\Files\RM\RIA Completion Report\IA Completion Report\_fig4.docx



5. Completed pile cap.



6. Completed construction.

02/06/13 P:\001034\010\Files\m\RIA Completion Report\IA Completion Report\_fig5.docx