



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

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OFFICE OF
ENVIRONMENTAL CLEANUP

October 14, 2011

Captain Pete Dawson
Commanding Officer
Naval Base Kitsap
120 South Dewey Street
Bremerton, Washington 98314

RE: Final Third Five Year Review, Naval Base Kitsap Bangor Superfund Sites, Silverdale, Washington dated October 8, 2010.

Dear Captain Dawson:

The U.S. Environmental Protection Agency has reviewed the final 2010 Five Year Review for the Bangor Ordnance Disposal (OU-1) and Bangor Naval Base (OU-2 through OU-8) National Priority List sites. This is the third Five Year review completed by the Navy for the Bangor facility NPL sites. The EPA has reviewed the referenced document for technical adequacy, accuracy, and consistency with the NCP and the EPA guidance. The document provides a summary of the status and protectiveness of the Operable Units for which Records of Decision have been completed. It also identifies actions to be taken that ensure the protectiveness of the selected remedies and ongoing remedial actions and documents a schedule for completion of the recommended actions.

Based on the EPA's review of the 2010 Five Year Review, the EPA generally concurs with the Navy's determinations and recommendations, except as noted below. The EPA focused primarily on the ongoing groundwater remedial actions for which optimization recommendations were made in the 2005 Five Year Review. In most cases the EPA believes the schedule for completion of the follow-up actions need to be more aggressive than proposed by the Navy in order to ensure protectiveness and provide adequate information for the next Five Year Review. Many of these same optimization recommendations were identified in the 2005 Five Year Review.

The following are the EPA's protectiveness determinations for these Sites that will be reported to Congress in the EPA's annual report and the additional recommendations and follow up actions necessary to address issues raised in the 2010 Five Year Review that affect or could affect protectiveness. All issues and recommendations identified in your report and this letter which affect or may affect protectiveness, their associated due dates and their implementation status will be tracked in the EPA's CERCLIS database.

Bangor Ordnance Disposal NPL Site – OU 1 (Site A)

The EPA concurs that the remedy is currently protective because there is no current use of the groundwater at the site. However, to be protective in the long term, the Site A groundwater extraction and treatment system needs to be optimized to ensure that groundwater containment of the entire RDX plume is occurring and progress toward achieving Remedial Action Objectives including restoration of

the aquifer in a reasonable timeframe, is demonstrated. The Navy's Five-Year Review Recommendations 5 and 6 on Table 8-1 appropriately call for collecting information to update the conceptual site model and for evaluating other potential remedies (including Monitored Natural Attenuation) and taking action based on that assessment. The milestone date is December 2015, but EPA doubts that the investigation plans as currently scheduled are adequate to meet this milestone. In addition, the EPA identified an additional issue which could affect long-term protectiveness. Phthalates were detected in groundwater during the Remedial Investigation above MTCA B levels, and are listed as a COC on Table 1 in the ROD. There has never been any post-ROD sampling to confirm whether phthalates remain in the groundwater and evaluate progress toward cleanup. Before the next Five-Year Review, the Navy needs to add phthalates to the analyte list for one groundwater sampling event by 2014 to evaluate whether they are still present.

Bangor Base – OU 2 (Site F)

The EPA concurs that the remedy is currently protective because there is no current use of the groundwater at the site. However, to be protective in the long term, the groundwater extraction and treatment system needs optimization to ensure containment of the entire RDX plume is being achieved. The Navy's Five-Year Review Recommendation 8 on Table 8-1 calls for assessing and optimizing the Site F extraction system. However, the recommendation should include implementing the optimization. To ensure that the optimized system, including containment is successfully demonstrated, the milestone date should be moved up a year to December 2014 to allow time to collect and evaluate preliminary performance monitoring data before the next Five-Year Review in December 2015.

Bangor Base – OU 8

The EPA does not concur that this remedy is currently protective, due to the potential for vapor intrusion into various industrial buildings at the site from the groundwater plume. The EPA cannot make a protectiveness determination without data to evaluate the VI pathway in the buildings above the groundwater plume. Therefore the EPA is deferring its determination of protectiveness until adequate data are collected by December 2012 (Recommendation 17 on Table 8-1). Since no one currently uses the groundwater at the site, if the VI pathway is determined to be incomplete, then the remedy can be determined to be currently protective. However, to be protective in the long term, the recommendations to perform pilot testing and to assess whether COC concentrations in the soil are protective of groundwater (recommendations 16 and 18 on Table 8-1) need to be implemented, and in addition, if the data shows VI to be an issue, the necessary measures to address VI would need to be implemented. These recommendations need to also include implementation of any remedy modification before the milestone date of December 2015.

Consistent with the EPA's August 1, 2011 memorandum "Program Priorities for Federal Facility Five-Year Reviews", the Five-Year Review Guidance Section 1.3.3 has been superseded and future Five Year Review due dates will be based on the planning date for this review. Therefore the next Five-Year Review will be due December 30, 2015 and the subsequent Review will be due December 30, 2020.

Finally, the August 1 Program Policies memorandum also calls for a summary of the EPA Superfund Site-wide Environmental Indicator Status for Sites undergoing Five-Year Reviews, which are as follows:

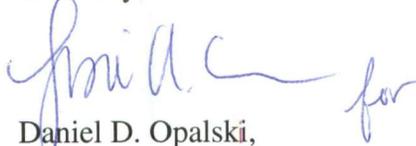
For the Bangor Ordnance Disposal Site, the Superfund Sitewide Human Exposure Environmental Indicator Status remains "Current Human Exposure Under Control." The

Groundwater Migration Environmental Indicator Status has been changed to "Insufficient Data" because the groundwater extraction and treatment system has not been optimized to fully capture the groundwater beneath the source area and more data is needed to determine whether or not the larger plume is stable.

For the Bangor Naval Base Site, the Superfund Sitewide Human Exposure Environmental Indicator Status has been changed to "Insufficient Data" because additional sampling data is needed to confirm there are no unacceptable exposures to benzene due to vapor intrusion. The Groundwater Migration Environmental Indicator Status has been changed to "Insufficient Data" because additional rounds of monitoring data are needed to confirm that the OU2 RDX plume and the OU8 benzene plume are not expanding.

The EPA requests a letter from you by November 15, 2011 describing your response to and plans for addressing the issues and follow-up actions identified in this letter. If you have any questions, please contact Harry Craig of my staff at (503)-326-3689 or e-mail: craig.harry@epa.gov.

Sincerely,



Daniel D. Opalski,
Director

cc: Barry Rogowski, Ecology
David Liu, NAVFAC NW