



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 1  
1 CONGRESS STREET, SUITE 1100  
BOSTON, MASSACHUSETTS 02114-2023

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NAVSTA NEWPORT RI  
5090 3a

April 5, 2005

Curtis Frye  
U.S. Department of the Navy  
Naval Facilities Engineering Command  
Northern Division  
10 Industrial Highway  
Code 1823, Mail Stop 82  
Lester, PA 19113-2090

Re: Draft 30% Removal Action Work Plan for the Soil Removal and Revetment Construction at the Old Fire Fighting Training Area

Dear Mr. Frye:

I am writing in response to your request for EPA to review the *Draft 30% Removal Action Work Plan for Soil Removal and Revetment Construction* at the Old Fire Fighting Training Area, Naval Station Newport, Newport, Rhode Island, dated March 11, 2005. Detailed comments are provided in Attachment A.

Please edit the work plan to indicate the construction sequence for the replacement storm drains and explain how it interfaces with the soil excavation schedule. Indicate the measures that will be taken to prevent contaminant migration through partially constructed storm drains if the storm drains will be constructed sequentially to match the excavation schedule.

Please clarify how the previous sample locations and grid nodes will be accurately located and marked in the field.

Please clarify how you will determine what depth of excavation at the shoreline is necessary to remove contaminated material before constructing the revetment. Some areas of the shoreline are immediately adjacent to areas that have the greatest TPH contamination found at the site. Will the excavation and sampling protocols in the revetment area be the same as those proposed for the on-shore areas of the site? If any TPH free product cannot be removed from an excavation because of its depth, and screened piping cannot be installed as would be done in the on shore areas, please explain how the Navy would manage this situation.

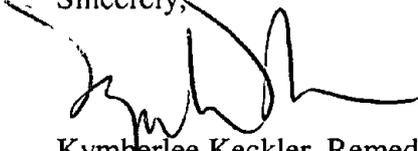
It appears that the limits of the excavation required to reach MLW is farther from the top of the bank than the available reach for the excavator. Please edit the work plan to describe what measures will be taken to provide access beyond the bank for the excavator and how far beyond the bank these measures will be required.

Please clarify when the sediment samples will be collected at OFFTA. Although this activity is not within the scope of the removal action it is related to the removal action schedule and obviously should be completed before removal action activities begin.

Please edit the work plan to better define the survey requirements both before and after construction.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Old Fire Fighting Training Area. Please do not hesitate to contact me at (617) 918-1385 should you have any questions or wish to arrange a meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kimberlee Keckler', written over a horizontal line.

Kimberlee Keckler, Remedial Project Manager  
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM, Providence, RI  
Cornelia Mueller, NETC, Newport, RI  
Jennifer Stump, Gannet Fleming, Harrisburg, PA

## ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 1, §1.1	Please edit the second last sentence to indicate that excavation of significant PAH contamination located below the historical low water line will also be included. Without such excavation the project goal of unrestricted use may not be achieved.
p. 4, §1.6	<p>The second bullet is not correct in stating that excavation will be limited to the historic low groundwater elevation. This statement is also inconsistent with the third bullet that correctly states that the excavation limits will be approximately 3 feet below the historic low water table. Please edit the text to reflect that our agreement is to excavate as deep as possible without the use of sheet piles or dewatering.</p> <p>The third bullet should also discuss that some excavation will also be performed to remove significant PAH contamination from below the water table.</p> <p>The fourth bullet should also discuss that in some locations clean soil will be removed temporarily to provide access to deeper contaminated soil or to prevent side slope failure in an adjacent excavation. Any clean soil so removed may be reused at the site for backfill. Some excavation will also be performed to remove significant PAH contamination from below the water table.</p>
p. 6, §2.5.2	Please edit this section to include regulators as weekly meeting participants.
p. 8, §3.1	Please edit this list of tasks to include the removal of all buried structures. Also add a final task to prepare a closeout report.
p. 9, §3.4	In the last paragraph of this section, please include analytical testing of backfill.
p. 10, §4.2.2	Please edit the second sentence of the second paragraph by adding the following to the end of the sentence “or has the potential to damage the soil erosion and sediment controls.”
p. 11, §4.2.3	The reference to two storm drains may not be correct. Figure 3 shows two 24-inch drains discharging to the bay but in addition there is an 8-inch pipe near SB429 that may be an active drain line and also a 6-inch line that connects to the central 24-inch line that appears to discharge from building 144. Finally, there is a storm drain in the extreme western side of the site that connects to a catch basin. This storm drain may also need to be upgraded and protected by the revetment rather than terminating the revetment north of the drain if doing so could jeopardize the integrity of the drain and catch basin. Please correct as appropriate.

- p. 11, §4.3 In the fourth paragraph, please indicate that confirmation samples will be analyzed for all contaminants of concern (COCs) and that one confirmation sample will be collected for every 500 square feet of area used for stockpiles.

Please edit the second paragraph to indicate that following the excavation of contaminated soil, samples will be collected and analyzed for COCs before construction of the revetment begins. This is consistent with the second bullet in Section 4.5. No technical specifications have been included in Appendix E for this submittal.

- p. 12, §4.5 In the third bullet please edit the text to specify a minimum separation between areas being backfilled and areas undergoing excavation to minimize the possibility of cross contamination.

In the fifth bullet, please supplement the text to indicate that post-excavation samples will also be collected from any grids that have not been excavated or otherwise sampled. This will be necessary to indicate that removal activities have not contaminated these areas and to provide data for the risk assessment.

The discussion in the sixth bullet must be edited to address the following concerns:

- a. PetroFlag screening cannot be used for wet or high moisture samples because of data reliability concerns. Laboratory analyses will be required for wet or high moisture samples.
- b. For any soil condition, a PetroFlag concentration of 500 ppm will not be an acceptable screening threshold since this is the state-imposed action level. The screening threshold shall be much less than 500 ppm; EPA recommends 100 ppm due to the unreliability of PetroFlag screening.
- c. The discussion in this bullet needs to be significantly revised. Post-excavation samples shall be collected for risk assessment purposes, and analyzed for all COCs. The sampling effort needs to be coordinated with the risk analysis. Sufficient data at depth must be collected for use in the residual risk assessment. Also, the sample water content may be an issue, since excess water can alter reporting limits. Based on the anticipated construction sequencing, which will require that each grid be sampled then backfilled immediately after being excavated, it is assumed that a stratified sampling plan would be used with each 100-foot by 100-ft grid considered a separate stratum. Within each stratum/grid the samples required could be selected randomly or selected on a systematic grid based on random initiation. The number of samples required within the strata/grids need to yield a post-excavation data set rigorous enough to calculate 95% UCLs on the mean.

- d. At a few locations around the site where PAH concentrations beneath the historically-low water elevation are significantly greater than the cleanup goal, EPA expects the excavation to be extended to the depth necessary to remove this contamination, up to the practical limits of excavation without using sheet piles or dewatering. Areas where this situation apparently exists include grids B-4, B-5, and A-7 and possibly grids A-8, B-10, and B-11 where both TPH and PAH concentrations are high.
- e. EPA does not agree with the averaging technique used to establish the depth of excavation within each grid. This method was documented in spreadsheets previously provided but is not included in the current work plan. EPA believes it would be more productive and effective to target the excavation depth based on the sample data available. The result of this would be excavations that are not necessarily uniform across any grid. However, this method would more effectively remove known contamination than the averaging method proposed by the Navy. Further discussion is warranted regarding how to determine the excavation depth within each grid. This information will be required in the final work plan.
- f. Please change Barilum to Beryllium.

p. 13, §4.7 Limited random testing of backfill material should be included in the project requirements even for backfill that is certified clean in writing by the vendor. Please edit the work plan to require testing every 10,000 cubic yards if written certification is provided or every 2,000 cubic yards if no written certification is provided.

Regarding the second paragraph, does this description mean that backfill material will not be stockpiled on the site?

Please edit the work plan to indicate what the specified/targeted final grades will be. Several figures in the draft work plan have grade information but each of these figures is designed to present information other than final grades. There also appears to be some inconsistency between these figures and the revetment cross-sections. Please include a separate figure dedicated to indicating what the final site grades will be so there is no misunderstanding.

p. 14, §4.8 Please clarify the last sentence in this section. Based on information available from the mound removal effort, trucks had to be loaded much earlier than 5:30 p.m. in order to arrive at the disposal facility before it closed. Please edit the work plan to indicate that no loaded truck will leave the site unless there is sufficient time for it to arrive at the disposal facility before it closes.

Will there be a scale on site for weighing each vehicle? What weight restrictions need to be considered for traveling over the bridges to Coasters Harbor Island?

- p. 15, §5.1. A more comprehensive SAP is required. Please edit this work plan to include:
- Quantities of samples including quantities of quality control samples
  - Analytical methods and holding times
  - Target detection limits
  - Sample container types and sizes
  - Required sample volumes
  - Sample identification protocol
  - Chain of custody procedures
  - Data validation requirements

Edit the discussion in this section to comply with the requirements specified in EPA's comment on Section 4.5, page 12 of the draft work plan. Also, since the Navy does not plan to use these samples to drive the excavation (PetroFlag screening samples will be used for that purpose) it might be more appropriate to refer to these samples as post-excavation samples rather than confirmation samples. The post-excavation samples collected for use in the risk assessment should yield a data set representative of post-excavation conditions including subsurface soil less than 10 feet deep and deeper subsurface soils as appropriate.

- p. 15, §5.2 Please edit the description of the composite sampling to indicate that an eight-point composite will be collected based on dividing each stockpile into quadrants and collecting two sub-samples from each quadrant with the goal of collecting a composite sample that is representative of the entire stockpile. Collect all sub-samples from a minimum of 6-inches beneath the stockpile surface.
- p. 15, §6.1 Please edit the last partial sentence on the page to indicate that erosion and sediment controls will be inspected daily, not weekly, and after each significant precipitation event (greater than 0.25 inches in less than a 12 hour period) **or** (not and) after an event that has the potential to damage the erosion and sediment controls.
- p. 16, §6.4 Please provide a copy of the Coastal Zone Consistency Determination in the Final Work Plan, or as a work plan addendum if necessary.
- p. 17, §6.6 In the first bullet, please list all metal COCs, not just lead. Also, include in this list the Jersey barriers and any concrete from below-grade structures.
- p. 19, §6.7.3 Please correct the first sentence.
- Figure 8 If this figure is depicting historical low water elevations please edit the title of the figure to clarify that. If the elevations shown are not historical low water elevations please edit the figure to depict those elevations. The colors and line

styles used make it difficult to differentiate between low observed and low estimated groundwater elevations. Please edit the colors or line styles to make this difference evident. Finally, please clarify in the legend which lines are depicting the historical low water elevations. Typically this is an estimated elevation that is deeper than the lowest observed elevation.

Figure 11 Please include the proposed revetment slope on this figure. Also, it appears that a portion of the existing grade line is missing. Please correct as appropriate.

Figure 12 This revetment section is in the vicinity of the eelgrass beds so please expand this figure to incorporate the location of the eelgrass beds relative to the revetment. The work plan needs to incorporate a setback requirement for the revetment and the turbidity curtain from the eelgrass beds sufficient to protect the beds from damage during installation of the revetment. The turbidity curtain needs to be placed far enough away from the eelgrass to prevent the curtain from injuring the eelgrass. Please edit the figure to present the proposed setback.

The proposed elevation of the top of the revetment is shown as 8 feet. However, this elevation is not consistent with the grading plan shown on Figure 3. Please correct as appropriate.

Figure 13 The proposed elevation of the top of the revetment is shown as 8 feet while the existing grade is greater than 10 feet. Please edit this figure to show the grade transition landward of the revetment, which needs to account for the proposed roadway.

Appendix A Please edit the schedule to include the survey work anticipated by the discussion of the revetment design in Appendix F.

Appendix B In Section 12.0 on Page 11: a) consider changing confirmatory sampling” to “post-excavation sampling” since the Navy does not plan to use these samples to drive the excavation; b) the discussion of compaction under the backfill task should not refer to compaction by a bulldozer as this will not be adequate. Compaction shall be as specified in the technical specifications and it is anticipated that a vibratory roller will be required. Compaction shall be as necessary to be protective of the revetment. Please edit this section accordingly.

Appendix C In Appendix C of the Construction Quality Control Plan, under the Surveyor subcontractor, the only task listed is the As-Built survey. However, the revetment construction appendix apparently anticipates that additional pre-construction surveying will be performed to better define the existing near-shore topography, which will be required to properly re-establish the pre-construction grades at the

top and at the toe of the revetment. A more complete discussion of the surveying scope of work should be presented in the work plan.

In Section 4.3 on page 12 of the Site Health and Safety Plan, add water body-related physical hazards such as drowning and immersion/hypothermia.

Appendix E The technical specifications should include not only the revetment construction details and basis of design and the excavation and backfill requirements, but also replacement storm drain system requirements, and security fence requirements.

Appendix F Please supplement the analysis in this appendix to discuss what potential long-term impacts on the eelgrass beds will result from construction of the revetment. Support the discussion with appropriate documentation.

Section 1: The second paragraph refers to an anticipated survey of the shoreline and near shore topography to facilitate the revetment design. Please add this requirement to the survey discussion scope of work and edit the schedule to include this survey task.

Section 3: In the second bulleted list in this section:

- a) The first bullet refers to 3 or 4 outfalls that may need to be incorporated into the revetment design. Please coordinate this with the previous discussion in the work plan that acknowledges only two storm drains.
- b) The third bullet refers to the termination points of the revetment. Please demonstrate that terminating the revetment as mentioned in this bullet will not put the western drain line and the concrete boat launch ramp in jeopardy because of wave reflection and erosion along the terminus of the revetment. The design should indicate how the revetment will interface with these features.
- c) The sixth bullet states that the MLW line will be the seaward limit of the revetment. Further discussion of this limit is warranted because there are eelgrass beds located immediately adjacent to the MLW line off the northwestern shore. If a buffer zone is not provided between the eelgrass beds and the limit of the revetment wall during construction, some loss of eelgrass beds would be expected. This needs to be avoided if possible.

In Section 7: The text states that design assumptions, criteria, methodology, and calculations will be summarized in the final design. Please correct the text to state that this information will be provided in the final design; a summary will not be sufficient. EPA anticipates that the next submittal will include additional design details.

In Appendix B: Regarding the data in attachment B1, since these are FEMA elevations, the datum is NGVD 1929. Please add a note to that effect for the B1 data table.

In Appendix C: Please supplement Attachment 5, Extreme Analysis for Wind, with a description of the rationale and methodology followed and the conclusions of the analysis. Indicate the source of the 16 data points (why were only 16 used?) and what they represent (are these hourly wind speeds?). Will the final design incorporate wind speeds within the 95% confidence range? Will the most highly correlated scenario be used? For the record, annotate the next submittal with the correct units (the software shell is apparently set up for waves not wind).

In Appendix D: Please supplement this appendix with descriptions of the rationale and methodology followed and the conclusions of the analysis. For example, regarding Attachment D3, please indicate the rationale for selecting 18 feet of water for the conversion of Hmo to Hs.

In Appendix E: Please supplement this appendix with descriptions of the rationale and methodology followed and the conclusions of the analysis. For example, provide the rationale used to select the parameter values used for the calculations. It is not apparent that the parameter values used in the calculations are the same as those calculated in Appendix D or as presented in the preliminary revetment design, for example, the structure heights are not consistent and the water depths are not correct based on site-specific characteristics. If the parameter values used are appropriate, please explain.

Regarding Attachment E4 calculations, a better indication of the implications of the design is warranted. For example, the 10-year water surface elevation is 6.7 feet (*see* Appendix B). At that elevation for case 1 the overtopping will be 4.3 cfs/ft, which is significant. For case 2, the extreme wave, the overtopping will be over 50 cfs/ft. This result does not appear to be consistent with the design criteria presented in Section 3 that indicated a 50-year recurrence interval. The 50-year ocean elevation at the site is 11 feet. The selected design criteria will also impact the length required for the apron at the top of the revetment and the design for the roadway along the shore. The next submittal should present the design intentions and the elements of the design more clearly.