

8/31/05-00918

August 31, 2005

Ms. Maria Pino
U.S. EPA Region III
NPL/BRAC Federal Facilities Branch (3HS11)
1650 Arch Street
Philadelphia, PA 19103-2029



RE: Final Work Plan
Interim Removal Action, Site 8
NAB Little Creek, Virginia Beach, Virginia

Dear Ms. Pino:

JVI is pleased to provide the following responses to USEPA (BTAG) comments received on the above referenced work plan. Comments have been incorporated into the document as noted below to prepare this Final Work Plan. Subsequent to the Draft Work Plan submittal, proposed interim actions at Site 7 have been delayed indefinitely. As such, reference to Site 7 has been removed from the text of the document; however, individual appendix information still includes information regarding Site 7 that will not be utilized during the interim action to be completed at Site 8.

1. Section 3.2.1.1 states that soil at Site 8 will be sampled to evaluate whether soil can be reused as general fill. The section states that concentrations will be compared to human health criteria and background to determine if soil can be reused as general fill. Criteria protective of ecological receptors must also be considered, particularly in instances where the material will be used as part of ecological restoration projects, such as the tidal wetland restoration.

RESPONSE: Restoration areas will use existing onsite soils where pre-construction characterization sampling indicates re-use is acceptable. An outside source of certified clean sand will be used at a minimum depth of six inches in all saltmarsh planting areas on top of final established site grading. General fill will meet acceptable clean fill criteria as established in the Work Plan.

2. Section 3.2.1.1 states that soil found to be acceptable for reuse will be stockpiled as general backfill for use at the site. Any soil containing rhizomes of *Phragmites sp.* should not be used as backfill to reduce the chances of *Phragmites* colonizing the site. If this fill is necessary to use, it should only be used in low marsh areas where *Spartina alterniflora* is being planted. Ensuring that fill does not have *Phragmites* will reduce or

eliminate costs for control later.

RESPONSE: Onsite soils will be inspected by a qualified wetland biologist to determine the existence of invasive species. Outside soil sources will provide Phragmites free certifications for all clean sand and soils used for saltmarsh and upland riparian buffer restoration. Following completion of pre-construction testing of site soil for re-use, much of the soil is not acceptable for re-use and will require off-site disposal.

3. Section 3.2.2 on page 3-4 states that as part of the prep work at Site 7, existing vegetation along the embankment at Site 7 adjacent to the canal will be removed to allow access by equipment. However, Section 3.4 (Backfill and Restoration) does not discuss the revegetation of this embankment following the removal of sediment from the canal. Restoration should include the revegetation with native riparian species, including native grasses, shrubs and trees. Cutting trees flush with the ground and minimizing compaction will also encourage resprouting of cut vegetation along the bank.

RESPONSE: Actions at Site 7 have been deferred to coincide with additional maintenance actions at the site. This is not applicable to Site 8.

4. Section 3.2.2. also indicates that wood chips from nonsaleable trees and mulched materials will be spread in a thin layer onsite. This practice should be avoided in the restoration area as the material will act as a mulch and will initially suppress plant growth and revegetation efforts. This material can either be used as mulch elsewhere at the installation or composted and later used as a soil amendment.

RESPONSE: Wood chips will not be placed outside of trail footprints. No wood chips will be placed on the ground surface within Riparian and saltmarsh restoration areas. The wood chips may be used as a soil amendment, including as a drying and bulking agent for off-site disposal.

5. Section 3.2.2. indicates that off-site material proposed for use for backfill material for wetland planting will be analyzed and screened against Region III residential RBCs and NAB Little Creek background UTL values. As the material is being utilized in an ecological re-use / restoration project, ecological values must also be considered. In addition, in order to ensure that the material is suitable for revegetation, nutrient and TOC levels should be established. This will inform an evaluation of the need for additional soil amendments.

RESPONSE: The Tier I partnering team for NAB Little Creek plans to utilize clean fill materials that are below residential RBCs and established NAB Little Creek background values. There are no current plans to sample or establish

nutrient or TOC levels in imported planting fill, however, the material will be sandy in nature to support wetland plants.

6. Section 3.4.1 on page 3-10 states that all backfilled areas will be seeded with an approved mix of seed, nutrients, fertilizer and mulch. BTAG recommends that all areas be reseeded with a native seed mix, as opposed to the typical construction mix containing fescue. If native grasses are used, it is likely that no fertilizer will need to be added to the soil prior to seeding. As stated in a later comment, seeding with switchgrass as is proposed on the upland island at Site 8 would work in other disturbed areas of both Sites 7 and 8. The mix of seeds selected for the site should also be specified in the document.

RESPONSE: We will not use a fescue, but will use the following native wildlife seed mix based upon a recently completed design by JVI:

- Replace Kentucky 51 Fescue in the standard VESCH coastal seed mix with Sheep Fescue, which is a good cover grass that requires less mowing and is less dominating to wildflower species
- Use a southeastern wildflower seed mix containing a variety of annual and perennial wildflower species
- Use a wildflower seeding rate of 12 to 15 pounds of seed per acre
- Plant grass and wildflower seed separately, but concurrently, if grass is planted by hydroseeding method
- Mix and co-plant wildflower seeds with grass seed when grass is planted by means other than hydroseeding
- Mow the area once per year in the late summer or early fall when both the annual and perennial wildflower plants are in seed.

7. Appendix C provides a map (ES-4) showing the proposed elevations and plants for the wetland. As noted in previous discussions, much of the area proposed for restoration consists of an upland island (0.598 acres). Site 8 is currently adjacent to fairly extensive uplands that is heavily forested. As designed, the upland island will provide little additional wildlife value, because of the significant uplands adjacent to the site, and create minimal opportunity for wildlife viewing. While we understand that economic limitations may prevent removal of the material being used to create this island, we still believe it is important to note that the Restoration Plan should focus more on creating a more diverse wetland habitat, which will be more attractive to viewable wildlife (i.e., fish-eating birds), and less on creating upland habitat, by significantly reducing the size or eliminating the upland island from the design.

A diverse wetland habitat would consist of a mix of vegetated low marsh (with *Spartina alterniflora*), and shallow unvegetated pools, with pockets of high marsh (with *Baccharis halimifolia* and *Iva frutescens*). The shallow water pools provide areas where small fish will get trapped during low tide, creating an area where large fish-eating birds (i.e., herons and egrets) can easily feed. The pockets of high marsh will provide nesting areas for salt marsh dependent songbirds (i.e., marsh wren). This area of Little Creek is severely lacking in high marsh scrub-shrub habitat for these species. This approach would create significant wildlife viewing opportunities along the walking trail. The current design provides very little of this habitat, and views to the creek will actually be blocked as the vegetation (including trees) on the upland island matures. Reduction of the amount of fill material currently proposed to be returned to the restoration area to achieve the noted elevations will also reduce, if not eliminate, the opportunity for *Phragmites* to invade the site from surrounding areas.

If removal of the additional material is economically prohibitive and the island feature must be retained, BTAG recommends that a more diverse list of trees and shrubs be planted on the upland island. Currently the Restoration Plans shows that the upland island will only be planted with 261 wax myrtle (*Myrica cerifera*). This species is acceptable to use, but other species that can tolerate brackish soil and periodic inundation by brackish water should also be utilized. Additional shrub species to consider include: red chokeberry (*Aronia arbutifolia*), sweet pepperbush (*Clethra alnifolia*), inkberry holly (*Ilex glabra*), and arrowwood viburnum (*Viburnum dentatum*). Tree species to consider include: Eastern red cedar (*Juniperus virginiana*), blackgum (*Nyssa sylvatica*), American holly (*Ilex opaca*), willow oak (*Quercus phellos*) and persimmon (*Diospyros virginiana*). These same species should be planted along the slope between the walking trail and created wetland and along the embankment of the canal at Site 7. These species will eventually produce fruit and nuts that will attract songbirds and other easily viewable wildlife.

RESPONSE: The recommendations are noted and will be consulted during the final grading of the site once the exact excavations elevations are determined. Original project plans included utilizing significant amounts on-site soil (re-use) to minimize transport of materials off-site. However, based upon pre-characterization sample results, most on-site soil will require off-site disposal. This will likely result in importing less backfill to establish saltmarsh (as opposed to upland habitat). Final excavation elevations will be used to maximize a diversity of saltmarsh elevations and minimize the establishment of upland habitats where to the extent practicable. If it is determined that an upland island is determined to be the most practicable alternative, a diverse grouping of the above suggested shrub and tree species will considered.

8. Map ES-2 in Appendix C also shows that the upland island will be seeded with

20 pounds per acre of switchgrass (*Panicum virgatum*). BTAG recommends that the seeding rate be reduced to 10 pounds per acre to enhance wildlife usage. Annual ryegrass (*Lolium multiflorum*) should also be added to the mix at a rate of 15 pounds per acre to provide temporary erosion control until the switchgrass becomes established. This mix of switchgrass and annual ryegrass would also be an acceptable seed mix for the embankment along the canal at Site 7 and other disturbed areas.

RESPONSE: The proposed seed mix will be considered for planting the upland island (if established) based on final excavation grades. Site 7 is no longer part of the project at this time.

9. Performance and monitoring criteria should be specified in the work plan.

RESPONSE: This criteria will be provided in the workplan. A new section (3.4.4 - Wetlands Performance Monitoring) has been added to the document to include performance and monitoring criteria.

Please let me know if you have any questions or concerns concerning this Final document. I can be reached at (757) 671-8311, x412.

Sincerely,

AGVIQ-CH2M HILL JVI



Paul A. Landin, P.E.
Project Manager

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