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Letter of Transmittal

To: Commander - Atlantic Division
Naval Facilities Engineering Command
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Attn: Mr. Scott Park, Code 18223

S.O. No. 62470-328
Project: Naval Amphibious Base, Little Creek
Date: February 18, 1997

We are forwarding the following: ■ Attached ❑ Under Separate Cover

DWG. NO.	NO. COPIES	TITLE OR DESCRIPTION	COMMENTS
		Naval Amphibious Base, Little Creek Draft Responses to USEPA and the Commonwealth of Virginia Comments on the Draft Final Supplemental Ecological Assessment	
	1	Responses to USEPA comments	
	1	Responses to the Commonwealth of Virginia comments	

THESE ARE TRANSMITTED as checked below:

■	As requested	❑	No exceptions taken	❑	Revise and resubmit
■	For review and comment	❑	Rejected - See remarks	❑	Submit specified items
❑	For your information	❑	Proceed subject to corrections noted	❑	For signature

GENERAL COMMENTS:

cc: Ms. Kelly Greaser - NAB Little Creek

BAKER ENVIRONMENTAL, INC.

By: Thomas C. Fuller

Title: Project Manager

RESPONSE TO COMMENTS SUBMITTED BY THE USEPA REGION III
DRAFT FINAL SUPPLEMENTAL ECOLOGICAL ASSESSMENT
NAVAL AMPHIBIOUS BASE LITTLE CREEK
NORFOLK, VIRGINIA

Comment Letter Dated July 9, 1996

1. The purpose of this Supplemental Ecological Assessment (SEA) was to compile the existing ecological data on Little Creek Harbor (the Harbor) under one cover. Based on this compilation, the quality of the database used to support the SEA was established and a screening level assessment was conducted to provide an evaluation point relative to the current status of the ecology of the Harbor. It is agreed that the benthic macroinvertebrate community within the entire Harbor cannot be assessed with one benthic macroinvertebrate sample. The SEA's use of this single point estimate of the benthic community verses the restoration goal requirements provided information on the ecological quality of the Harbor. Although limited to one station, the data was robust and the benthic community at this point in the Harbor appears to be meeting restoration goals. The ERA was conducted on the most recent existing data for IR Sites 7 and 12. Only Sites 7 and 12 were evaluated because the remedial investigation only included surface water and sediment collected from these two IR sites. It is noted that additional ecological and environmental media sampling was not part of the scope of this SEA.

2. There is no known source of mercury contamination at NAB Little Creek from the IR sites. It is noted that the SEA is focused on the potential impacts from IR sites on the Harbor. As such, cause and effect relationship between IR contamination sources and ecological receptors via a complete exposure pathway is necessary for justification of more intensive sediment and biota studies.

3. The conclusions of this SEA were based on the evaluation of existing data. It is acknowledged that data gaps may exist. VOCs and inorganics were only evaluated in the ecological risk assessment portion of the SEA because previous studies concluded that Sites 7 and 12 are only contaminated with VOCs and inorganics. Therefore, the remedial investigation did not include the analysis of SVOCs, pesticides, or PCBs. The presence of tributyltin (TBT) in environmental media within the Harbor cannot be specifically related to an IR site. Therefore, an IR study of TBT within the Harbor is not warranted.

4. It is acknowledged that the SEA was a screening level assessment. The assessment endpoint was considered in the context of a comparison between criteria expected to protect up to 95% of the species and the available data on exposure point concentrations. It is recognized that specific and focused assessment and measurement

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endpoints require additional information, such as biota surveys and bioassays, to evaluate the potential ecological impacts.

5. A more comprehensive ecological assessment would better evaluate the conditions within the Harbor; however, it should be noted that the focus of the SEA was to address IR related impacts. The many other sources of contamination, such as the 24 storm sewers that discharge into the Harbor, are not IR-related and their impacts to the ecological health of the Harbor are not under the jurisdiction of the Navy's IR program. The conclusions are based on the screening level ecological assessment and the impacts related to sources of contamination at the IR sites. Because of the numerous and various types of contaminant sources within the Harbor watershed (storm sewers, railroad car spills, light industrial activity) and the complexities of fate and transport of contaminants in the Harbor (training activities, tidal influences), there will be a significant degree of uncertainty even with a more comprehensive assessment .

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1. The conclusions of this SEA were based on the evaluation of existing data. It is acknowledged that data gaps may exist. However, only data gaps directly linked to the exposure pathway analysis of IR sites should be considered. Data gaps linked to exposure pathways from non-IR sites cannot be considered under the IR program.

2. The source of mercury is not believed to be the IR sites; therefore, additional studies under the IR program are not warranted.

3. It is agreed that the benthic macroinvertebrate community within the Harbor cannot be assessed with one benthic macroinvertebrate sample. However, the benthic macroinvertebrate data point does provide a point of reference for evaluation of a small part of the Harbor's ecological condition. The source of the benthic description is the Long-Term Management Strategy for Dredged Material Disposal for the Naval Weapons Station, Yorktown, Yorktown, Virginia; Naval Supply Center, Cheatham Annex, Williamsburg, Virginia; and Naval Amphibious Base, Little Creek, Norfolk, Virginia: Phase I: Evaluation of Existing Management Options and Data.

4. The ecological risk assessment presented in the SEA was conducted on previously collected data; therefore, the detection limits were unchangeable for this report. The BTAG screening values are from 1995 and the data assessed is from 1992. It is noted that due to low levels of several of the BTAG screening levels it is unlikely or unfeasible to obtain detection limits below all screening levels.

5. The purpose of this study was to assess the impact of the IR and non-IR sites on the aquatic ecology of the Harbor using only existing data. Therefore, the SEA used the available data in support of a screening level assessment appropriate for this quantity and quality of data. Data from Sites 7 and 12 were used because these IR sites are the only areas where surface water and sediment were collected during the remedial investigation.

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6. VDEQ 305(b) Report data and STORET data were reviewed for this report. Discussions of the STORET data and 305(b) data are presented on pages 2-9 and 3-1 through 3-3 of the SEA.

7. It is acknowledged that the Round One Verification Step conducted in 1986 detected SVOCs, pesticides, and PCBs near Site 7. However, the Interim RI conducted in 1991 did not indicate that SVOCs, pesticides, and PCBs were of concern to the surface water and sediment. Therefore, VOCs and inorganics were the constituents analyzed for in the Remedial Investigation. The SEA focused on aquatic receptors.

8. Additional information on tidal influences that was inadvertently excluded from the SEA can be included and discussed in subsequent editions.

9. Section 4.2.3.1 presents a characterization of the habitat and aquatic biota within Little Creek as presented in the Long-Term Management Strategy for Dredged Material Disposal for the Naval Weapons Station, Yorktown, Yorktown, Virginia; Naval Supply Center, Cheatham Annex, Williamsburg, Virginia; and Naval Amphibious Base, Little Creek, Norfolk, Virginia; Phase I: Evaluation of Existing Management Options and Data. This section states that "the benthic assemblages within Little Creek have been described as depauperate, limited to the most tolerant species." However, as stated in the SEA, the report implies that the benthic environment is impacted due to sediment that is disturbed from the heavy use of the channel. The conclusions presented in Section 6.0 concerning the benthic community are based on the Chesapeake Bay Benthic Restoration goals as applied to the results of the Ewing et al. study (1992). The restoration goals incorporate species type (opportunistic or equilibrium) and other measurements (species density, Shannon-Wiener Diversity Index, and species abundance) to determine the health of the benthic community.

10. The application of surface water criteria to groundwater, especially when the interface is between "fresh" groundwater and salt water, increases the uncertainty of the SEA and may not present an

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accurate representation of surface water conditions in the Harbor. In addition, the effect of tidal influences would add to the uncertainty of this exercise.

11. As noted in Sections 7.5.1 and 7.5.2, upper confidence limit concentrations could not be used in the calculation of the cumulative site QIs because of the small surface water and sediment sample sets at Sites 7 and 12. The calculation of the cumulative QI will be changed to use maximum concentrations instead of average concentrations.

Available data was used to conduct the SEA. The Remedial Investigation data used did not include SVOCs, pesticides, and PCBs in the surface water and sediment. The Remedial Investigation analysis for Sites 7 and 12 were selected based on the results and analyses of the Interim Remedial Investigation. The cumulative QI is calculated only for the contaminants of potential concern at Sites 7 and 12; therefore, SVOCs, pesticides, and PCBs were eliminated as contaminants of potential concern prior to the Remedial Investigation. The absence of these contaminants in the QI does necessarily indicate a misrepresentation of the overall site QIs.

12. The wetlands and associated ecological receptors using the wetlands as habitat would be included in the screening level assessment through the evaluation of exposure point concentrations and measurement endpoints. It is recognized that there are no exposure points sampled within the wetlands; however, sampling points upstream and downstream provide a characterization of what exposures may be to surface waters flowing through the wetland systems.

13. The purpose of the SEA was to compile all existing IR and non-IR data and evaluate the data relative to the ecological condition of the Harbor. While it is noted that a single benthic station in the middle of the channel is affected by a variety of contamination sources, the station does provide a perspective on the ecological health of this mid-channel location.