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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

July 23, 2002

Mr. Mark Leipert
Engineering Field Activity Northeast
Naval Facilities Engineering Command
10 Industrial Hwy., Mail Stop #82
Lester, PA 19113-2090

Subject: Comments on Draft Revision 1, Phase II Environmental Baseline Survey Revised Decision Document for Review Item Area 39A-F: East Mat

Dear Mr. Leipert:

The United States Environmental Protection Agency (EPA) has reviewed the Draft Revision 1, Phase II Environmental Baseline Survey (EBS) Decision Document for Review Item 39A-F, May 2002. EPA comments on this document is in Attachment 1 of this letter.

If you have any questions please call me at (617) 918-1382.

Sincerely,

Patty Marajh-Whittemore
Remedial Project Manager

Enclosure
cc: Dave Barney/SOWEY NAS
Dave Chaffin/MADEP
Steve DiMattei/Betsy Mason/EPA
RAB Members
Ken Goff/SSTTDC
Kathleen Creighton/Stone & Webster
Peter Golonka/Gannett Fleming

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ATTACHMENT 1

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document for Review Item Area 39A East Mat - Stained and Non-Stained Pavement

GENERAL COMMENTS

1. It is agreed that further soil sampling is needed to fill possible data gaps associated with the historically darkened areas on the East Mat, as discussed in the May 30, 2002 EBS Meeting.

2. In the Decision Documents for 39B through F and in decision documents for most other RIAs, all constituents with maximum values exceeding human health benchmarks were carried through to the background comparison table in Section 5.1. This procedure was not followed for RIA 39A. Since the Navy is considering C11-C22 aromatic hydrocarbons, arsenic, beryllium, iron and benzo(a)pyrene to not be potential threats to human health in spite of exceedances of the established human health benchmarks by the maximum values detected, it would be useful to present the results of the background comparisons for these constituents to support the arguments presented in Section 4.1.1. Please present the results of the background comparisons for the constituents in the table in Section 4.1.1 which are not currently in the table in Section 5.1.

3. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Documents for RIA 39A (April 2000) and RIA 39G (December 2001) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60.

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document for Review Item Area 39B East Mat - Construction Debris Area

GENERAL COMMENTS

1. EPA agrees with the Navy's conclusions of this document.

2. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Document for RIA 39B (April 2000) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60.

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document for Review Item Area 39C East Mat - Groundwater

GENERAL COMMENTS

1. The groundwater sampling and analysis for RIA-39C is compromised somewhat by apparent difficulties with well construction, field water-quality-parameter stabilization, and turbidity. In particular, it is noted that pH is elevated in a number of wells (e.g., MW11-107, -112, -113, -129, all of which recorded pH > 11). In addition, DO measurements are erroneous (e.g., DO of 43.1 mg/L in MW11-89, well above saturation), as acknowledged in the footnotes to Table 39C-1. Furthermore, turbidity was very high at the time of sampling for a number of wells, including MW11-089 (250 NTU, estimated visually), -093 (175 NTU), and -094 (50 NTU). If additional sampling is done in response to the recommendations of the Decision Document, appropriate steps should be taken to ensure viable samples. Well redevelopment should be considered, and care should be taken in the purging to ensure stable parameters at physically reasonable levels.

2. This RIA considered the groundwater from the East Mat Area. Comparisons of maximum values and detection limits to benchmarks, established in the Phase II EBS work plan, were supplemented through further comparisons of groundwater results to Massachusetts MCLs and MADEP GW-1 standards. These additional comparisons were appropriate for this site and provided useful information regarding the possible presence of constituents requiring further evaluation. The conclusions of the Decision Document are accepted from a human health perspective.

3. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Document for RIA 39 C(April 2000) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60, and to nearby wetlands.

SPECIFIC COMMENTS

1. Page 4, Section 1.2: The final paragraph of this section states: "Because groundwater generally flows to the southwest and east in this area, the East Mat ditch (RIA 60) is not presumed to be receiving groundwater from RIA 39C." This statement does not preclude the possibility that groundwater could discharge to the eastern part of the East Mat Ditch. Further, the statement contradicts, to a degree, a previous statement in the third-last paragraph: "Groundwater flows generally in an east-northeast direction east of the ground-water divide while ground water flows generally in a southwestern direction west of the ground-water divide." Please clarify. It seems likely, based on the groundwater flow direction, especially in the eastern and northeastern portions of the site, that shallow

groundwater could discharge to the East Mat ditch.

2. Section 3.0: It is not clear how the factors for the reporting limits of the rejected data are determined. Please clarify. In addition, the recoveries for hexachlorocyclopentadiene are of concern since the LCS was recovered at 0% (in a sample with no expected matrix effects). Since there was no recovery in the LCS, and next to no recovery in the MS/MSD there is concern whether this compound would even be detected in a sample.

3. Page 18, Section 6.0: Lead is the only chemical that exceeds the human-health benchmark, is higher than background, was detected at a concentration greater than the MMCL, and drives the recommendation to perform further sampling and analysis. Therefore, the validity of the analysis at the single well where these conditions were found is critical. However, several problems with the sampling of MW11-107 are noted. In particular, the pH is very high (11.89), suggesting possible interactions with the cement and/or grout. It is interesting to note that pH at the end of development was recorded at 5.58; the very high values appeared only at the time of the purge for sampling. In addition, the turbidimeter was malfunctioning at the time of sampling of this well. Turbidity was down to 38 NTU at the end of development, approximately one month prior to sampling. Turbidity at the time of sampling was estimated (visually) at <10 NTU. However, the elevated lead concentration for this sample is suggestive of significant particulates, to which lead is strongly sorbed. This possibility is further supported by the high aluminum (1470 J micrograms per liter; please see related comment on Table 39C-2), which is often associated with turbidity. (It is noted that this indicator is blurred somewhat here by the high pH, because aluminum solubility increases sharply at high pH. Nonetheless, the ratio of Al to Fe is roughly constant across a number of wells at the site, including MW11-107, independent of pH. This suggests that the high Al in MW11-107 is likely due to turbidity, rather than high dissolved Al.) Iron is high, as well, which is also common in turbid samples. In addition, other metals (e.g., chromium, copper, vanadium, zinc) are also elevated in MW11-107, consistent with sorption on hydrous ferric oxides that may be present in particulates sampled from this well. Additional sampling of groundwater at this site should pay careful attention to the quality of the samples in order to obtain analyses that can be used reliably to interpret potential site impacts.

4. Table 39C-2: Some of the data from this RIA are used in the assessment of elevated pH on groundwater chemistry performed by ENSR ("Potential Effects of Elevated pH Values on the Representativeness of Groundwater Samples," memo to M. Krivansky from M. Kauffman, dated February 6, 2002), and the reporting of selected parameters does not agree. In particular, the tables in the memo show iron for MW11-107 at 25,000 micrograms per liter, while Table 39C-2 shows 2,500 micrograms per liter. Aluminum shows a similar disparity, reported at 14,700 micrograms per liter in the memo, and at 1470 J micrograms per liter in the Decision Document. Please check for accurate tabulation of analytical data.

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document for Review Item Area 39D East Mat - JP 8 AST Area

General Comments

1. EPA agrees with the Navy's conclusions of this document.

2. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Document for RIA 39D (April 2000) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60.

Specific Comment

1. Page 3, sec. 1.2, para. 2: The text refers to "waste oil," while the storage tanks are referred to elsewhere in the document as having contained waste jet fuel. Please check for consistent usage.

2. Section 4.1.1 (second to last paragraph): If the PAH results were reported using the higher MDLs for Method 8270, and there are exceedances of a human health or eco risk benchmark using the 8270 MDLs, then there is a data gap. Please clarify.

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document Review Item Area 39E-East Mat-Long Term Storage Area

General Comments

1. EPA agrees with the Navy's conclusions of this document.

2. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Document for RIA 39E (August 2000) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60.

Draft Revision 1 Phase II Environmental Baseline Survey Decision Document
Review Item Area 39F-East Mat- Material Near Catch Basins and Drain Lines

General Comments

1. EPA agrees to the Navy's conclusions on of this document.

2. Risk to ecological receptors was not evaluated in this Decision Document because the exposure pathway is not present at this site. Previous concerns that the site description in the original Decision Document for RIA 39F (August 2000) did not support this assertion have been addressed by a much more detailed site description that adequately discusses the potential for migration of site contaminants to the East Mat Ditch, which is covered under RIA 60.