ATLANTIC
ENVIRONMENTAL SERVICES, INC.

engineers
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May 6, 1993

Ms. Carol Keating
U.S. EPA
Federal Facilities Superfund Section
Region I
JFK Federal Building (HAN-CANI)
Boston, MA 02203

RE: Phase II RI Work Plan
Naval Submarine Base - New London
Groton, Connecticut
Atlantic Project No: 1256-18-04

Dear Ms. Keating:

Enclosed please find for your review a copy of the Navy responses to your comments dated April 15, 1993 regarding the CBU and OBDANE sections dated March 1, 1993 of the Phase II Remedial Investigation Work Plan and Field Sampling Plan.

If possible, we would like to discuss any comments you may have regarding these responses at the same time we discuss your comments on the revised Phase II RI Work Plan (March 1993). Should you have any questions, feel free to contact me or Deborah Stockdale.

Sincerely,

ATLANTIC ENVIRONMENTAL
SERVICES, INC.

Barry Giroux
Project Manager

BG:js

cc: Deborah Stockdale - NORDIV
Adam Sullivan - CTDEP
William Mansfield - NSB-NLON

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NAVY RESPONSES TO U.S. EPA COMMENTS (APRIL 15, 1993) ON CBU AND OBDANE SECTIONS (MARCH 1, 1993) OF THE PHASE II REMEDIAL INVESTIGATION (WORK PLAN, FIELD SAMPLING PLAN, QA/QC PLAN AND HEALTH AND SAFETY PLAN)

GENERAL COMMENTS

1. This document was difficult to review since it did not specifically make reference to the particular sampling protocol or any other section(s) of the Phase II RI project plans for sampling procedures, sample preservation, holding times, chain of custody/shipping of samples, frequency of QA/QC sample collections and associated criteria, analytical methods and procedures, data validation, or for distribution of project reports. The text should, at a minimum, reference the applicable sections in the Final Phase II RI Work Plan.

   The draft Phase II RI Work Plan has been revised to include the CBU and OBDANE sites. This revised draft (March 1993) has been submitted to your office for review.

2. Air monitoring should be conducted during all invasive investigation procedures to ensure worker protection. In addition, the work plan should include a statement regarding the airborne contaminant concentration action levels at which protective equipment must be donned (i.e., limits beyond which field work ceases until protective equipment can be donned).

   The portion of the Phase II Work Plan which discusses issues relating to air monitoring for VOCs (i.e., worker safety and fenceline measurements for migration of contaminants off-site) is also relevant to these two sections.

   Consideration should be given to monitoring for semi-volatiles related to fugitive dust during significant invasive procedures. This becomes especially important during the remediation phase.

   The Phase II RI Health and Safety Plan does specify air monitoring requirements and appropriate levels of personal protection equipment to be used by workers based on air monitoring results. OBDANE and CBU are included in the Phase II Health and Safety Plan, therefore health and safety procedures, and air monitoring procedures have been specified for CBU and OBDANE.

   As stated in our previous response to a similar question regarding the Phase II Work Plan as it pertains to other sites we agree that air monitoring for semi-volatile constituents during any remediation activities as part of a health and safety plan, may be warranted and will be considered at that time.

3. As discussed in EPA's May 20, 1992 letter regarding the Navy's responses to EPA's comments on the draft August 1991 Installation Restoration (IR) Report, there is some concern that the scope of the Step I investigations may not be sufficient to completely characterize the nature and extent of contamination at these areas. Given the number of years that have transpired since the time that many of the documented releases occurred, it is possible that contamination has migrated outside the original site boundary. EPA requests, therefore, that the Navy consider the installation of a downgradient monitoring well at each site to ensure that the ground monitoring system adequately assesses groundwater quality at the base.

We did consider a scenario of installing up- and down-gradient wells at this site. Based on the objectives of this supplemental Step I investigation it appeared that these wells were not necessary. The purpose of these supplemental Step I investigation is to determine if the low levels of contaminants detected in soil have had a measurable impact on groundwater. As such the one well in the center of the source area we believe is adequate to make this determination.

4. Regarding the compositing of samples in earlier investigations, EPA Region I ecological risk assessment requires the use of individual analysis. Future soil samples must be analyzed separately to rule out any dilution effects which could occur with compositing.

No sample compositing has been proposed in either the CBU or OBDANE Work Plans.

SPECIFIC COMMENTS

1. **Section 2.2 — Supplemental Step I Investigations**

The text states in the last sentence that the information is summarized from information that is presented in more detail in the Phase I RI Report, and from any additional background information obtained during the preparation of this work plan. Please identify the additional background information and indicate by reference notation where they are used in the preparation of this work plan.

The additional background information referenced in this section consists primarily of a site inspection performed on February 23, 1993 and a review of the Site Analysis, U.S. EPA Environmental Monitoring Systems Laboratory, March 1992. These sources will be added to this section.

2. **Section 5.2.2.1.1 — Site Background**

The last sentence of the first paragraph of this section states (with reference to Figure 2-6) that runoff does not flow to the nearby catch basin, but there is no indication of a catch basin near the storage area depicted in Figure 2-6. Please clarify the location of the catch basin in the figure.

The last paragraph of this section states that the drums noted in the IAS report were removed. Please indicate when the drums were removed. Also, please provide information as to when the two drums noted on October 20, 1988 were placed in the storage area and when they were removed.

The last sentence of the last paragraph states that not drums were observed on-site "nor was there any evidence of recent storage or leakage of drums". Please explain how the "evidence" was determined. For example, was it based on simple visual site inspection(s), or were field surveys made with detection instruments at surface and subsurface locations, or were other approaches used?

The catch basin is shown but not labeled in Figure 2-6. It is located at the southern end of the storm sewer which transects the deployed parking area. The drums were removed shortly after the IAS inspection. The two drums noted during the 1989 inspection were removed in 1989. This information will be included in the Work Plan.

The "evidence" was based on a visual examination. This will be clarified in the test.

3. **Section 5.2.1.3 — Nature and Extent of Contamination**

The text describes contamination detected at the site as resulting from previous activities conducted at the site. Please identify references for the data presented in this section.

The previous activity referred to is use of this area for storage of drums as documented during the IAS (1982) Atlantic (1988) inspection, and U.S. EPA aerial photograph site analysis (1992). These sources will be referenced in this section.

4. **Section 5.2.2.2.1 — Site Background**

The last paragraph of this section states that Atlantic personnel inspected the site on September 30, 1988 and on February 23, 1993 and verified the presence of several empty drums. Please provide more details as to the type of drums (steel, fiberboard, etc.), and their condition, i.e., intact, ruptured, open, crushed, or other. Also, please clarify how the drums were verified, i.e., by visual inspection, by radar, by unearthing then, or by other means.

The additional data will be provided and the means of verification which was solely based on visual observations will be indicated.

5. **Section 5.2.2.2.2 — Site-Specific Geology and Hydrology**

The second and third paragraphs make reference to the "fill material" at the site. Please elaborate on the description of this material.

The description will be modified based upon Atlantic's visual observation. The fill appears to consist primarily of soil and construction rubble.

6. **Section 5.4.1 — Replacement Paragraph 2**

The fifth sentence does not fully address ecological concerns with regard to soil. Because of the lack of soil criteria regarding ecological concerns, exposure calculations will be required so that a comparison can be made to available literature information. It is suggested that the sentence be modified to read:

"The assessment will be based on a comparison of contaminant concentrations to health-based ARARs for groundwater and soil, site-specific background concentrations for inorganics in soil, exposure calculations based on maximum and mean contaminant concentrations in soil, and professional judgement as to potential risk a contaminant may pose at certain concentrations in a particular medium."

The paragraph will be revised as suggested.

7. **Section 5.7.1 — Supplemental Step I Storage Area**

The installation of a single monitoring well may not be sufficient to completely "assess whether contamination has impacted deeper soils and groundwater" at this site. As previously discussed, since earlier studies identified contamination at the site, subsequent investigatory work should be designed to assess the extent, in addition to the nature, of contaminated detected.

Please refer to our response to general comment number 3 above which addresses this issue.

8. **Table 7-3 — CBU Drum Storage Area Field Sampling Plan**

As a point of clarification, the surface soil (0-2') samples should be analyzed individually, not as composites, for inorganics (TAL), and organics, TCL volatiles, semi-volatiles and pesticides.

The work plan does not propose to composite soil samples.

9. **Section 7.1.2 — OBDANE**

The fourth paragraph states, "There were no other compounds identified at the site above background values". As stated in EPA's May 20, 1992 letter, EPA will not accept published values for background levels of inorganics for comparative risk analyses. Site-specific background soil data for inorganics must be collected from each site. Several sections of the revised field sampling still make reference to "published" background levels. Have background samples been collected from this site? Further clarification of this issue is requested.

The Navy has previously agreed to develop site-specific background levels and will use these values in the Phase II Work Plan when they are available. The samples for

background determination were collected in April 1993. Validated results should be available in June of 1993.

10. **Table 7-6 — OBDANE Field Sampling Plan**

As a point of clarification, the surface soil (0-2') samples should be analyzed individually, not as composites, for inorganics (TAL), and organics, TCL volatiles and semi-volatiles.

The work plan does not propose to composite soil samples.

11. **Section 4.2.1.1 — CBU Drum Storage Area**

This section describes the collection of subsurface soil samples from each of three test borings. The section needs to describe or reference the equipment that will be used to make these borings including procedures for sampling soil and for associated equipment decontamination. Also, description, or reference to other sections of the work plan, need to be given for sample preparation, preservation, and for laboratory shipment as well as the type and frequency of QA/QC samples that will be collected.

The second paragraph states that borings 1TB1 and 1TB2 will be advanced to a depth of 15 feet. However, all soil borings should be terminated only after a minimum of 15 feet and after 15 feet of soil which is determined to be uncontaminated, based on field instrument screening. This will ensure that the vertical extent of contaminated soils will be determined.

The last sentence of the third paragraph states, "a sample will be collected from either the elevation of groundwater or from any fine-grained soil layer present above the water table." Please clarify: "elevation of groundwater" and provide the rationale for collecting a sample from any fine-grained soil layer.

In addition, the section states that one groundwater monitoring well will be installed at the site to characterize the quality of groundwater at the site. Also, Table 4-3 shows a water sample collected from a well designated as 1GW1S. Please confirm whether this is the groundwater monitoring well and also indicate its presence in Figure 4-1. Similarly, groundwater sampling well for the OBDANE designated as 14GW1S in Table 4-5, needs to be indicated in Figure 4-2.

A revised draft Phase II Work Plan which includes CBU and OBDANE has been submitted to EPA. Sampling equipment, procedures, QA/QC and health and safety procedures are specified in this document.

We agree that the borings should be advanced below any evidence of contamination; however, we believe an interval less than 15 feet will be capable of meeting this objective. We, therefore, propose to revise the plan to provide for borings to be advanced to a minimum of 4 feet below any evidence of contamination.

Elevation of groundwater refers to the depth of the apparent groundwater phreatic surface based on an observation of the measured depth to groundwater and degree of soil moisture. This clarification will be made. The rationale for collecting samples from a fine-grained soil layer is that contaminants might accumulate at any such layer present. This criteria was added based on previous EPA comments.

Groundwater samples 1GW1S and 14GW1S will be collected at sample locations 1MW1S and 14MW1S as indicated in tables 4-3 and 4-5. Both monitoring wells 1MW1S and 14MW1S are shown in the appropriate figures.

12. **Table 4-2 — CBU Drum Storage Unit**

Since drums have been stored at this site and given their persistence and lack of mobility in soil, PCBs should be retained as an analyte of interest.

We excluded PCB as they were not detected during previous investigation; however, we will revise the Work Plan to provide for PCB analyses at the CBU drum storage area (6 soil, 2 groundwater).

13. **Section 4.2.1.2 — OBDANE**

Two sediment/surface water samples should be obtained from the drainage at the foot of the hill below of the OBDANE. Analytes should include full TCL/TAL.

The drainage from OBDANE flows to a low spot below the 50-foot contour interval not directly into the stream that flows out of the pond. Surface water has not been observed in this low spot. Both the pond and stream have been previously sampled. As surface water is not present at this low spot and as the stream and pond have been previously sampled, we do not propose to add any additional surface water sampling at this location. The Work Plan will be revised to obtain a sediment sample from the low spot with analyses consistent with all other samples at this site (i.e., TCL, VOC and SVOC, and TAL constituents).