

**Navy Response to EPA Comments on the
Draft Final Feasibility Study Report
Site 07 - Calf Pasture Point
Naval Construction Battalion Center
Davisville, Rhode Island**

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Navy Responses to EPA's Review Comments
Draft Final Feasibility Study, IR Program Site 07, Calf Pasture Point
Naval Construction Battalion Center
Davisville, Rhode Island

INTRODUCTION

This document contains the Navy's responses to the EPA's comments provided 5 May 1997 on the following documents:

"Draft Final Feasibility Study Report, Site 07 - Calf Pasture Point, Naval Construction Battalion Center, Davisville, Rhode Island", April 1997

"Navy Response to EPA Comments on the Draft Feasibility Study Report, Site 07 - Calf Pasture Point, Naval Construction Battalion Center, Davisville, Rhode Island", April 1997

RESPONSE TO COMMENTS

EPA Comment on Response to Comment #2

The Navy is advised that CERCLA section 121 requires that the alternatives must comply with all ARARs, including RCRA. Further, the NCP requires that the alternatives evaluated must comply with ARARs. 40 CFR 300.430(e)(9)(iii)(B). The Navy's assertion that the Site is being investigated under the Superfund program is correct; however, CERCLA and the implementing regulations require the Navy evaluate alternatives that meet ARARs. EPA has determined that RCRA is a relevant and appropriate ARAR for Site 7. RCRA must therefore be included in the ARAR tables, and the Navy must demonstrate how the alternatives, including Alternative 2, will meet the RCRA requirements.

Navy Response: As per Section 20.2 of the FFA, RCRA will be included as an ARAR in the Site 07 FS. The Navy believes RCRA to be "relevant and appropriate" for Site 07.

In order for RCRA to be "applicable" to Site 07, either (1) the remedial action would require the offsite disposal of hazardous waste (which is not anticipated although a possible exception to this would be the disposal of spent GAC under the vacuum vapor extraction alternative) or (2) the site would have to be an identified Solid Waste Management Unit (SWMU) from a formal RCRA Corrective Action program as the result of the Base obtaining or trying to obtain a hazardous waste facility operators' permit (which also does not apply to the site).

Accordingly, the Navy believes that the relevant and appropriate portions of RCRA are 40 CFR 264 Subpart F (Releases From SWMUs) and 40 CFR 264.101 (Corrective Action for SMWUs). Because Site 07 has not received hazardous waste after 26 July 1982, it would not be considered a "regulated unit" per 264.90(1)(2). Thus, 264.101 (Corrective action for SWMUs) would be most relevant for Site 07. This would not

include the detailed requirements for "regulated units" concerning detecting, characterizing and responding to releases to the uppermost aquifer under Sections 264.91 through 264.100. The relevant Section, 264.101, requires that corrective action be instituted to protect human health and the environment for releases of hazardous waste or constituents from any SWMU, and that this corrective action will be specified in the permit, (which is not pertinent here), and subpart S (Corrective Action for SWMUs). However, the portions of Subpart S relevant to the "how to" execute corrective action at SWMUs have not been issued as final regulations. Although proposed Subpart S was issued on 27 July 1990, this has not been finalized and it is the Navy's understanding that, in practice, how corrective action is performed is a site-by-site, region-by-region process. Typically, EPA seeks risk-based cleanups more than follow the relatively old Subpart S proposed regulations and related guidance documents. Solutions are based on risk to ensure that the requirement of Section, 264.101 is met: corrective actions are instituted to protect human health and the environment

In summary, the most relevant and appropriate RCRA requirements are the corrective action requirements of 40 CFR 264.101 which call for corrective action at the SWMU necessary to protect human health and the environment, as specified in the permit (which does not apply here) and in accordance with Section 264.101 and Subpart S. It is noted that Section 264.101 and Subpart S do not contain specific monitoring requirements or durations.

The Navy's new conceptual long-term monitoring plan (LTMP: see attached document), which is based on the discussions at the 16 May 1997 BCT meeting, presents a monitoring program which will satisfy RCRA and CERCLA requirements for protecting human health and the environment.

EPA also takes exception to the Navy's proposed 5 year monitoring program. A 5 year monitoring program does not meet the RCRA requirement for monitoring which specifically requires monitoring as long as contamination is left at the site that may migrate to and beyond the boundaries. While in the CERCLA process the analysis of alternatives is only required to be over a 30 year period, the Navy will be required to monitor the contamination as long as it poses a threat to human health or to the environment.

Navy Response: Due to the low risks to human health and the environment, the monitoring program was initially scoped for only 5 years; however, a revised LTMP has been developed based upon the 16 May 1997 BCT meeting (attached). During the Draft Final FS, it was anticipated that the data from the first 5 years would be used to show that the plume is not expanding or increasing in concentration and that land use restrictions would address all unacceptable risks. Accordingly, if after the first 5-year review period it is determined that additional monitoring is required, then the monitoring program would have been extended and the data would again be evaluated at the subsequent review periods. Otherwise (e.g., if the plume is receding or risks are unchanged), the subsequent review periods would only be necessary to evaluate whether

there was any significant change in the use of Calf Pasture Point that may generate new concerns.

The new LTMP has been developed to satisfy BCT requirements for sampling locations and frequency although the full scope of will be developed during the Design Phase.

In general, the Navy's proposed list of monitoring wells for LTM purposes falls short of what is needed. First, the lateral and vertical coverage available through the current monitoring well network is insufficient in many areas. In general, the southern and western margins of the site as well as the interior wetland areas (i.e., interior to the dune line along the southern and southeastern shoreline) are general areas which are insufficiently monitored by existing monitoring wells. Additionally, monitoring of surface water and sediment in the known and potential discharge locations of the plume will need to be included in tandem with ground water sampling.

Navy Response: Based upon the 16 May 1997 BCT meeting, a revised, conceptual LTMP (attached) was developed which considered additional sampling locations. It is unlikely that monitoring shoreline surface water and/or sediment is going to provide useful information for the LTMP. Allen Harbor has two daily tidal cycles with a change in sea level of 3 to 5 ft. The entrance channel, in particular, is therefore subject to a dynamic turnover of water volume as well as sediment deposition/erosion. VOC in surface water are likely to be diluted, volatilized, and carried in/out with the tides such that most samples will be non-detect. Furthermore, any detections will be difficult to attribute to Site 07 due to the multiple potential offsite sources from the bay and harbor (e.g., boating activity, two marinas, overland runoff, the stormwater discharge to the south, the landfill to the west, etc.). Therefore, the Navy's conceptual LTMP includes evaluating ground-water samples from shoreline monitoring wells and seep samples from the shoreline instead of surface water and sediment samples. If a trend of increasing COC concentrations is identified in those wells, then the investigation could be expanded accordingly. As described in the attached conceptual LTMP and as agreed to during the 16 May 1997 BCT meeting, final details of the LTMP will be resolved during the Design Phase.

It is noted in the LTMP that sediment sampling within the interior wetlands would be performed if adjacent shallow monitoring wells indicate a potential for discharge of VOC to the wetlands. Historic data from MW07-13S and nearby former hydroprobe locations (which have been non-detect for VOC) indicate that VOC are not discharging to the wetland.

The locations of additional permanent ground water, surface water, sediment sampling points will need to be evaluated and discussed only after a greater density of additional field data is collected. In some cases, data gaps area already known, but the degree of uncertainty with respect to ground water discharge to surface water and sediment necessitates a greater level of effort towards identifying additional locations for permanent monitoring points which target the discharge areas. In this context, EPA advocates the use of real-time screening data such as

passive sampling technologies, direct push methods (e.g., micro-wells), vertical profiling, etc. as a preliminary step in identifying the optimum locations for permanent sampling locations. The results of the additional vertical conductivity profiling (i.e., EM-39) may also be used to gain a better understanding of the adequacy of current well locations and screened intervals in context of the dynamics of saline and fresh water interaction. EPA anticipates analyzing these various data prior to finalizing the list of additional shallow and deep monitoring well locations, as well as surface water and sediment sampling locations. Never the less, various opportunities for vastly improving LTM coverage are suggested from the current data, which offered as a starting point for LTM discussions, as follows.

Navy Response: The attached conceptual LTMP document describes a phased approach for determining monitoring points which includes the use of hydroprobes and/or passive sampling techniques.

Navy's proposed wells for plume monitoring: Alternatives 2 through 4 propose that MW07-22S/D (upgradient); MW07-19S and MW07-21S/R (downgradient); and MW07-11D and MW07-25D/R (side-gradient) be monitored to evaluate the plume. Alternative 5 includes MW07-22S/D (upgradient) only and explains that side gradient wells are not required due to vertical barriers and downgradient wells are not required due to performance monitoring wells. The following issues are identified with respect to the Navy's proposed wells for the evaluation of the plume. Additional issues are likely to become evident following additional field data collection efforts, (e.g., borehole conductivity logging, vertical profiling, direct-push sampling, passive sampling methods, etc.):

A. At a minimum, the following additional wells should be monitored in the shallow zone: MW23S and MW24S. These wells are essential to the evaluation of the performance of the remedy since these wells are within the known plume discharge area. The purpose of monitoring MW19S should be clarified. Additional shallow wells should be installed at the MW25 cluster and MW12 cluster to improve coverage in the western part of the plume.

Navy Response: In the Draft Final FS, MW07-19S was included in the monitoring program because it had the highest shallow ground-water concentration and it appears to be situated in the area where the plume is affected by the salt water wedge. The Navy has prepared a revised, conceptual LTMP (attached) based upon the discussions at the 16 May 1997 BCT meeting.

B. At a minimum, the following additional wells should be monitored in the deep zone: MW23D and MW21D. These wells are essential to the evaluation of the performance of the remedy since these wells are within the known plume discharge area.

Navy Response: See the attached conceptual LTMP document.

C. Based on the well head distribution data at low and high tides, the deep and bedrock

groundwater is migrating to the south toward Narragansett Bay (note the orientation of the directional arrows on Figures 1-17 and 1-18), as opposed to the contaminant flow which is west and south west toward Allen Harbor. With respect to the location of the source, MW07-11D is a down-gradient well (not a side-gradient well; see Figure 1-17); MW07-21R is a side-gradient well (not a down-gradient well; see Figure 1-18). Since the levels of VOC in the eastern part of the site indicate that the contaminants are in the dissolved phase, at a minimum, it may be prudent to install an additional rock well in the groundwater flow direction in the location of existing MW11D.

Navy Response: The Final FS will be modified to clarify ground-water flow direction and interpreted plume direction. See the attached conceptual LTMP for the sampling locations being considered.

D. For Alternative 5, limited monitoring of side-gradient wells is warranted to ensure the integrity of the sheet pile walls is maintained. Since the sheet pile walls are driven down to an uneven bedrock topography there is potential for some deep ground water to pass under the walls and additionally the walls would not prevent the migration of bedrock ground water which is known to be contaminated. In this respect, the LTM points selected for this alternative must be sufficient to evaluate the same performance criteria as the other alternatives, particularly in the down-gradient discharge areas. Therefore, it is recommended that side-gradient deep and bedrock monitoring wells be added as well as downgradient bedrock ground water monitoring wells (the installation of downgradient bedrock monitoring wells would be needed - see next comment). The monitoring of deep ground water monitoring wells downgradient is included in the system performance monitoring (see Table 4-8, Page 1).

Navy Response: It is agreed that limited monitoring of side-gradient wells may be warranted under Alternative 5 although the performance of the sheet pile walls may also be evaluated through a less intensive program (e.g., utilizing piezometer wells or similar).

The monitoring wells, surface water and sediment sampling locations proposed for the evaluation of the ground water plume should be considered carefully with respect to the location of the source, the ground water migration direction, the ability of the selected wells to provide the needed information, and the ground water/surface water discharge location(s). As the potential human receptors to this plume are mainly the recreational shell fishers/beachcombers, EPA is most concerned with the nearshore/onshore mudflat/wetland discharge locations. Vertical profiling of the shoreline and interior wetlands will need to be completed in order to identify efficient sampling locations to determine the protectiveness of the remedy. Extensive subtidal investigation may not be warranted with respect to the potential risks at this site.

Navy Response: The attached conceptual LTMP, which is based upon the discussions at the 16 May 1997 BCT meeting, outlines the Navy's approach to monitoring Site 07. As stated in response to comment #2, the Navy believes that monitoring shoreline sediment

will be of little value and it is recommended to focus on shoreline monitoring wells and, potentially, seep samples. The Navy agrees that extensive subtidal investigations are not warranted, as outlined in response to comment #2.

Parameters proposed for monitoring: Alternatives 2 through 5 only include TCL VOC for monitoring of the ground water plume (plume evaluation). Since the ground water contains elevated levels of several inorganics, surface water and sediment monitoring at the known and potential ground water discharge locations should include inorganics as well as VOCs.

Navy Response: As discussed at the 16 May 1997 BCT meeting, the conceptual LTMP (attached) includes VOC for addressing risk and may also include arsenic, manganese, and iron for providing plume characterization data and/or for evaluating whether biodegradation of chlorinated VOC is occurring. The design portion of the conceptual LTMP also includes one sampling event for PAH, PCB, and pesticides to address NOAA's concern regarding the toxicity identified at wetland station V3. See response to comment #2 regarding shoreline sediment monitoring.

EPA Comment on Response to Comment #5: The Navy's response states that the ground water monitoring program specified under each alternative except the No Action alternative, will effectively monitor the extent of the plume and ensure that it will not generate future risks. The proposed monitoring for plume evaluation for each alternative is indicated as 5 years which will not ensure that future risks are not generated beyond the 5 year period. See EPA Comment 2.

Navy Response: See the attached conceptual LTMP.

EPA Comment on Response to Comment #8

The discharge of groundwater is in the nearshore environment. The sediments and surface water in the vicinity of the groundwater discharge points must also be included in the monitoring program. The human and the environmental exposures to groundwater discharge in the form of contaminated sediments and surface water must be monitored. Therefore, change both text and tables to include sediment and surface water monitoring with the ground water monitoring.

Navy Response: The currently available sediment and surface water data do not show contamination due to Site 07. Further, it is unlikely that monitoring shoreline surface water and/or sediment would provide useful information for the LTMP. Allen Harbor has two daily tidal cycles with a change in sea level of 3 to 5 ft. The entrance channel, in particular, is therefore subject to a dynamic turnover of water volume as well as sediment deposition/erosion. VOC in surface water are likely to be diluted, volatilized, and carried in/out with the tides such that most samples will be non-detect. Furthermore, any detections will be difficult to attribute to Site 07 due to the multiple potential offsite sources from the bay and harbor (e.g., boating activity, two marinas, overland runoff, the stormwater discharge to the south, the landfill to the west, etc.). Therefore, the Navy's conceptual LTMP includes evaluating ground-water samples from

shoreline monitoring wells and seep samples from the shoreline instead of surface water and sediment samples. If a trend of increasing COC concentrations is identified in those wells, then the investigation could be expanded accordingly. As described in the attached conceptual LTMP and as agreed to during the 16 May 1997 BCT meeting, final details of the LTMP will be resolved during the Design Phase.

EPA Comment on Response to Comment #12: See EPA Comment 2.

Navy Response: See responses to comment #2 above.

EPA Comment on Response to Comment #21: In the draft version, Section 1.4.3 contained a paragraph on the nature and extent of metals in soil. As explained by the Navy's response to Comment 15, Sections 1.4.1 through 1.4.3 were moved to the end of Section 1.2.3.3. However, the metals in soil information for Phase II presented in the draft was not transferred to Section 1.2.3.3 as expected. This information should be added.

Navy Response: This information will be added to Section 1:2.3.3.

EPA Comment on Response to Comment #24: The Navy states that the VOC concentrations are generally higher in the shallow and bedrock ground water than in the deep ground water along the shoreline and Figures 1-19 through 1-21 are referenced. It is not evident from these figures that this statement is valid.

Figure 1-19 (shallow ground water) shows MW07-21S is the only shoreline well with contamination. The total chlorinated VOC detected was 1481 $\mu\text{g/L}$.

Figure 1-20 (deep ground water) shows MW07-23D with a total chlorinated VOC concentration of 1022 $\mu\text{g/L}$; MW07-21D with 140 $\mu\text{g/L}$; MW07-12D with 99 $\mu\text{g/L}$ and MW07-25D with 6745 $\mu\text{g/L}$.

Figure 1-21 (bedrock ground water) shows MW07-21R with a total chlorinated VOC concentration 8390 $\mu\text{g/L}$ and MW07-25R with 4400 $\mu\text{g/L}$.

Based on this information, the deep and bedrock ground water concentrations are generally higher than the shallow ground water along the shoreline. Furthermore, the extent of contamination along the shoreline is greater in the deep and bedrock ground water. Taking into account the results of the USGS borehole logging in December of 1996 which demonstrated potential upward movement of water out of the bedrock, Section 1.4.6.2 should be modified.

Navy Response: The text will be modified. The referenced text was initially in reference to the modeling performed during the RI in which, of the two transects examined, the southern shoreline was represented by the transect from the source area to MW21 (where shallow and bedrock had higher concentrations than deep).

EPA Comment on Response to Comment #25: See Comment 24 above. Also, the new

reference in Section 1.4.6.3 to Section 1.4.5.3 is incorrect (there is no Section 1.4.5.3) and should be Section 1.4.6.2.

Navy Response: See responses to comment #24 above. The section references will be corrected as noted.

EPA Comment on Response to Comment #27 (49 and 11)

The Navy's assumption that surface water and sediment are offsite media is incorrect. The groundwater has been shown to discharge at the shore. Potential discharge of contaminants to interior wetlands (i.e., within the dune line) is another issue. The sediment and surface water in the vicinity of the groundwater discharge must be monitored to determine if both human health and ecological risks due to exposures to sediment and surface water will change from the current levels. Therefore, change both text and tables to include sediment and surface water monitoring with the ground water monitoring.

Navy Response: See response to comment #2 regarding monitoring sediment and surface water. If a trend of increasing VOC concentrations are observed at shoreline monitoring points under the conceptual LTMP (attached) then the investigation may be expanded accordingly.

EPA Comment on Response to Comment #32

The Navy's assumption that there will be only one 5 year review is incorrect. CERCLA, the NCP and the FFA require that 5 year reviews be conducted as long as the waste remains in place and causes a risk. DNAPL VOC sources are not known to disappear in 5 years, rather, time-frames on the order of hundreds of years may be needed for the DNAPL source to naturally attenuate. Therefore, change the text and the tables to indicate at least six-5 year reviews for the 30 year analysis.

Navy Response: The implication of only one 5-year review was unintentional; the Navy agrees that, in accordance with CERCLA, the NCP, and the FFA, 5-year reviews will be conducted as long as wastes remain in place and cause a risk. The text will be clarified accordingly. The original text was intended to indicate that the proposed semi-annual monitoring program would be conducted for 5 years in order to provide time-dependant data which would be used at the first 5-year review period to determine whether continued monitoring was required after that time. If no further monitoring would be required (e.g., due to sufficient decreases in COC concentrations or lack of site risks), then the subsequent review periods could be used to evaluate whether any new risks would be present due to future uses of the property. The revised conceptual LTMP (attached), which provides for monitoring beyond 5 years, has similar provisions for reducing the scope (number and frequency of sampling/analysis) as warranted by data trends and site risks.

EPA Comment on Response to Comment #40: The Navy has removed the phrase "after 20 years"; however, the rest of the sentence "since the original disposals, no adverse impacts have been identified in shoreline sediment or shellfish" remains in Section 3.2.2.2. This

statement still retains its original meaning. Although adverse impacts have not been identified to date in the shoreline sediment or shellfish, this does not preclude potential future impacts if the hot areas of the plume are not contained or treated prior to discharge to the shoreline. Also see EPA Comment 2.

Navy Response: The referenced text will be deleted throughout the document as the preceding sentence satisfactorily outlines the reasons that ground-water treatment may not be warranted or practicable. Data from the long-term monitoring program will be used to assess the protection to human health and the environment.

EPA Comment on Response to Comment #46: See EPA Comment 2.

Navy Response: See responses to comment #2 above.

EPA Comment on Response to Comment #51: See Comment 40. (Note: This refers to the first Comment 51 which is listed twice in the Navy's Response to EPA Comments).

Navy Response: See responses to comment #40 above.

EPA Comment on Response to Comment #55: See EPA Comment 40.

Navy Response: See responses to comment #40 above.

EPA Comment on Response to Comment #58: See EPA Comment 40.

Navy Response: See responses to comment #40 above.

EPA Comment on Response to Comment #60: See EPA Comment 2.

Navy Response: See responses to comment #2 above.

EPA Comment on Response to Comment #64: See EPA Comment 2.

Navy Response: See responses to comment #2 above.

EPA Comment on Response to Comment #67

AWQC must be retained as an ARAR in the Chemical Specific ARAR tables since the groundwater discharges to the surface water at the shoreline. Rhode Island and EPA do not currently have a MOA for groundwater classification; therefore, Federal classification is the controlling factor. MCLs must be retained as an ARAR in the Chemical Specific ARAR tables since the groundwater could potentially be used for drinking water in the future.

Navy Response: AWQC will be retained as "relevant and appropriate" potentially to be used during the development of performance standards at shoreline monitoring points under the LTMP (however, dilution effects will likely need to be taken into

account - see also Response to Comment #82).

MCL will be retained as "relevant and appropriate" although the Navy believes that this is more appropriately suited for ex-situ ground-water treatment alternatives (which require subsequent discharge/disposal of treated ground water) rather than in-situ ground-water criteria. The Navy believes that ground water from the plume or downgradient areas would not be used for drinking water in the future because of the brackish/saline quality. Desalination would not likely be cost effective considering that piped water is available to the north of Calf Pasture Point.

EPA Comment on Response to Comment #69.

See above comment on Response to Comment #67.

Navy Response: See response to #67 above.

EPA Comment on Response to Comment #73

See above comment on Response to Comment #2. Comment #73 pertained to action specific performance standards for the Limited Action Alternative 2. In its response, the Navy incorrectly assumed that the standards were for cleanup levels. The Standards would be used to determine if the Limited Action remedy is performing as designed by comparing the monitoring data with the standards. Therefore, Table 3-1A must be added for the Limited Action Alternative 2.

Navy Response: The comment is acknowledged and Table 3-1A will be added for the development of performance standards under Alternative 2. It should be noted that Alternative 2 is called "Institutional Controls" rather than "Limited Action".

EPA Comment on Response to Comment #75.

See above comment on Response to Comment #2.

Navy Response: See responses to comment #2 above.

EPA Comment on Response to Comment #77: Given that the discharge of ground water is in the near shore environment and that the potential discharge points on-site are currently not known, the monitoring of the sediment that has been deleted from Table 2-1 should be included again.

Navy Response: See responses to comments #2, #8 above.

EPA Comment on Response to Comment #80: The stated change to Table 2-6 was not made. Antimony is still listed as ND. The change from ND to 27.1 $\mu\text{g/L}$ should be made for both Table 2-6 and Table 2-6B.

Navy Response: The comment has been noted and the tables will be corrected.

EPA Comment on Response to Comment #82

While EPA agrees with the Navy's response to this specific comment, EPA will still require the Navy monitor the groundwater/surface water discharge points to determine if the seeps due to the plume contain contaminants above AWQC. AWQC is an appropriate screening value for demonstrating the effectiveness of the remedy. The performance criteria for the remedy should include AWQC as a trigger for a subsequent risk assessment to determine if the exposure to surface water in the seeps at the plume ground water/surface water discharge areas with exceedences of AWQC would cause a risk to human health or the environment.

Navy Responses: AWQC for certain COC may be usable for screening levels although AWQC with modification for dilution may be more appropriate in order to account for site-specific conditions (i.e., the high degree of tidal flushing through the entrance channel to Allen Harbor). See also Response to Comment #67.

EPA Comment on Response to Comment #86.

See above comment on Response to Comment #67.

Navy Response: See responses to comment #67 above.

EPA Comment on Response to Comment #87.

See above comment on Response to Comment #67.

Navy Response: See responses to comment #67 above.

EPA Comment on Response to Comment #89

The Navy incorrectly states that all onsite wells appear to be screened in the proper locations. The USGS has not finished logging the site and therefore the possibility of additional wells and /or borings to be added to the monitoring network still exists. The Navy should plan on installing borings, yearly, at the onshore/nearshore groundwater discharge zones to monitor the possible recreational human health risks and possible ecological risks due to exposures to the possibly contaminated sediment.

Navy Response: The existing USGS data appear to confirm the existing well screen locations. The additional USGS data can be incorporated into Phase I of the conceptual LTMP (attached). Installing new borings on a yearly basis along the shoreline may be excessive considering that the monitoring well network outlined in the conceptual LTMP should be sufficient to evaluate potential discharges and risks. As described in Response to Comment #2, the Navy believes that ground-water and seep sampling will provide more useful information than shoreline sediment for the monitoring program.

The wells that may need to be re-installed with a different screen location include MW07-10, MW07-12, MW07-23, and MW07-24. Based on the USGS logging data for MW07-10, a freshwater lens appears to be identified approximately 20 feet below ground surface, while well screens for MW07-10 are located less than 10 feet bgs and between 25 and 35 feet bgs. A freshwater lens appears to be present in MW07-12 at a depth of 15 feet, while well screen is

located at a depth of approximately 25 to 35 feet bgs. MW07-23 exhibits characteristics of a freshwater lens at approximately 15 feet bgs, while the MW07-23S screen is set above 10 feet bgs and MW07-23D is set below approximately 35 feet bgs. MW07-24 exhibits characteristics of a freshwater lens at an approximate depth of 32 feet bgs, while the well screens are set at depths from 10 to 20 feet bgs in the shallow well and approximately 42 to 52 feet bgs in the deep well.

Navy Response: Monitoring well locations and screening intervals will be evaluated in Phase I of the LTMP (attached).

The borehole logging exhibited a freshwater lens located between the screen locations of MW07-24S/D at approximately 32 feet bgs. In the December meeting, the concern regarding the well screen locations for MW07-24S/D was dismissed because of the low VOC contamination identified in two wells upgradient of these wells. According to the Navy, these wells MW07-13 and MW07-11 had total VOCs of 44 $\mu\text{g/l}$ and 2 $\mu\text{g/l}$, respectively. Due to the absence of significant contamination in these two upgradient wells, it was suggested that the screen locations in MW07-24S/D were not a critical issue. However, it should be noted that logging data is not available for wells MW07-13S/D and MW07-11D which would indicate whether these two wells are screened in the optimum location. The lack of this information does not allow the argument that low contamination identified upgradient is justification for not addressing the potentially improper screen location of MW07-24. The location of the well screen in MW07-24 is expected to be important with respect to long-term monitoring if the plume continues to migrate to the south (see Figures 1-17 and 1-20).

Navy Response: Monitoring well locations and screening intervals will be evaluated in Phase I of the LTMP (attached).

EPA General Comment (provided at the 16 May 1997 BCT meeting)

The brand name for vacuum vaporizer wells (UVB) needs to be removed in case that service is no longer available after signing the ROD.

Navy Response: A generic name for the technology (vacuum vaporizer wells) will be used rather than "UVB".