

**MEETING NOTES FOR
28 OCTOBER 2009 RESPONSE TO COMMENTS DISCUSSIONS FOR
DRAFT SITE 16 FEASIBILITY STUDY REPORT (PUBLISHED FEBRUARY 2009)
FORMER NAVAL CONSTRUCTION BATTALION CENTER (NCBC) DAVISVILLE
NORTH KINGSTOWN, RHODE ISLAND**

ATTENDEES/PROJECT TEAM

David Barney (DB) (Navy BEC)	Christine Williams (CW) (EPA Region I)
Jeff Dale (JD) (Navy RPM)	Richard Gottlieb (RG) (RIDEM)
Brian Olson (BO) (EPA Region I)	Susan Bird (SB) (Navy NAVFAC)
Scott Anderson (SA) (Tetra Tech)	Joseph Logan (JL) (Tetra Tech)
Lee Ann Sinagoga (LAS) (Tetra Tech)	Dave Peterson (DP) (EPA Region I)

The 28 October 2009 BRAC Clean-up Team (BCT) meeting was conducted to discuss responses to comments prepared for the Draft Feasibility Study (FS) report published for Site 16 at the Former Naval Construction Battalion Center (NCBC) in February 2009. A response-to-comment (RTC) document was issued by the Navy in August 2009 in response to comments received from EPA Region I and the State of Rhode Island Department of Environmental Management (RIDEM) between February and May 2009. The meeting focused on the 12 FS issues listed in the attached agenda (Attachment A) and discussed in the following narrative.

Item 1 – Classification of Groundwater Underlying Site 16 and Groundwater Remedial Goals/Criteria

DB and BO both indicated that the issue would not be resolved at this meeting. DB noted previous EPA correspondence that supported a “low use and value aquifer” and “presumed long term monitoring remedy.” BO indicated that the EPA position was clearly stated in their policy document of 26 June 2009 (*Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration*, OSWER Directive 9283.1-33). DB stated that the Navy would likely have great difficulty justifying groundwater restoration to maximum contaminant level (MCLs) when the groundwater underlying Site 16 will not be used as a domestic water supply source. The Navy’s position is summarized in the White Paper dated 24 August 2009 (Technical Memorandum, Preliminary Remediation Goals at the Former NCBC, Davisville Rhode Island) which was included in the referenced RTCs document. Per the analysis presented in the White Paper, the Navy has concluded that the groundwater may be more appropriately categorized as EPA Class III groundwater (not a potential source of drinking water) versus its current categorization by the EPA (Class IIB – potential drinking water source) Regardless of the ultimate decision regarding this issue, EPA requested that the next version of the FS include an evaluation of groundwater restoration to MCLs. One alternative to examine could be the active remediation to RIDEM GB or other risk based criteria (see Item 8) followed by monitored natural attenuation to MCLs (a very long restoration time may be required for this scenario). The EPA would also like the FS to include an evaluation of the technologies/costs required for groundwater restoration in a relatively short period of time (not defined). Any groundwater remediation scenarios presented in the FS should also consider the following:

- 1) If one assumes that the groundwater underlying Site 16 is developed for domestic purposes, what impact would pumping have on the saltwater intrusion into the local aquifer? Would the saltwater intrusion render the aquifer unsuitable as a domestic water supply source? If so, the groundwater underlying Site 16 may be more appropriately classified as EPA Groundwater Class III (not a potential source of drinking water). Is the saltwater intrusion issue the basis for a technical impracticability (TI) waiver?
- 2) If the RIDEM GB criteria are selected as clean-up goals for the upgradient Nike site, this would impact the selection of clean-up goals for Site 16. EPA will clarify the Agency’s current regulatory authority regarding the Nike Site as well as the Agency’s position regarding clean-up goal requirements for the Nike Site (i.e., MCLs versus GB criteria). The Nike Site is a state (RIDEM)-

lead site; the USACE and RIDEM are currently considering the RIDEM GB criteria as clean-up goals.

- 3) What would be the cost of groundwater restoration to MCLs within a short period of time? Are the projected costs prohibitive?

Item 2 – Hazardous Waste (Listed/Characteristic) at Building 41 and Northwestern Portion of the North Central Area (NCA) and Item 3 - Landfill/Hazardous Waste Landfill – Northwestern Portion of NCA

These two items are related and were discussed together. BO clarified that the Navy determines whether or not the northwestern section of the NCA is declared a landfill. Navy agreed. At this point in time, the best descriptor for the area is “contaminated fill” or “filled land”. This designation may change pending the outcome of the FS Support Field Investigation planned for the spring of 2010. Any designation of “listed or characteristic” waste is also the Navy’s determination. The BCT agreed that there is no listed waste in the Site 16 area.

Regarding his ARAR-type landfill comments, DP indicated that his intent was to identify a waste/landfill ARAR that might be “close” (potentially relevant and appropriate) in terms of providing a “standard” to follow in a remedial alternative. For example, a solid waste or hazardous waste land fill may not exist in the NCA; however, the landfill-type ARARs provide guidelines, for example, for the inspection and maintenance of a cover/cap in the NCA. Thus, the landfill ARARs in his comments may not be those that apply *in total* to the remedial alternatives provided in the Site 16 FS. Rather, *sub-sections* of the referenced regulations may be appropriate and relevant (e.g., a sub-section that specifies standards/guidelines for maintenance and inspection or a sub-section that provides specifications for a landfill cover). In this sense, the ARAR may be “relevant and appropriate” but not “applicable”.

During the Item 5 discussions, it was agreed that the exceedance of a TCLP criterion becomes an indication of hazardous waste only when the soil is actually managed.

Item 4 – Land-Use Control Issues for Site 16

There were numerous FS comments regarding the identification/implementation of land use controls (LUCs) for Site 16. In general, the EPA and RIDEM comments requested more detail regarding the actual implementation of the LUCs, particularly for non-Navy property. However, the Navy (DB) indicated that such information would be premature at this time; as such details are more routinely established in a Land Use Control Implementation Plan (LUCIP) and also reflected in actual land transfer documents for Site 16. The Navy agreed that the FS will include more comprehensive information regarding the LUCs necessary for Site 16 and a clear acknowledgment that such LUCs are necessary. The FS will also state that a LUCIP will be compiled detailing the implementation of the LUCs. However, as indicated in the RTCs document, the FS would not contain the details of the actual implementation of the LUCs. The Air Force IC check-list will be utilized during the preparation of the LUCIP.

Regarding the LUCs, RG indicated that the state requires deed restrictions or notices and would not accept the use of local, municipal ordinances which may change over the course of time. RIDEM also requested that boundaries of areas impacted by the LUCs be clearly specified.

Item 5 – Applicable and Relevant or Appropriate Requirements (ARARs)

The following ARARs-type comments received on the draft FS were specifically discussed. The discussion was primarily between DP and JL:

- **82 “a” (change in flood plain citation)** – EPA (DP) stated that this is not an ARAR and recommended that the text refer to floodplain protection in Protectiveness discussion.

- **82 “b” (Historic and Landmark Preservation rules)** – EPA (DP) agreed that these rules do not need to be included.
- **83 first sentence (all of Site 16 to be restricted)** – JL indicated that the requested “residential” information will be added to Table 2-3 as suggested. LUCs for soil can then be identified for specific areas rather than being applied to the entire Site 16 area.
- **83 second (TCLP not a cleanup criteria; risk is speculative because no TCLP test has been done)** – EPA (DP) noted that exceedance of a TCLP criterion may be an indication of the need to take action. However, it was agreed that an exceedance of a TCLP criterion becomes an indication of hazardous waste only when the soil is *actually managed*.
- **83 5th (TPH criteria)** – EPA (DP) agreed that TPH criteria/exceedances/remedial alternatives can be acknowledged in the FS. However, separate costs should be developed for those areas recommended for remediation due to TPH contamination only; the costs for those areas are to be presented separately from the overall costs. JL indicated that there are only a couple locations that demonstrate TPH contamination only; most TPH contamination is co-located with PAH contamination. Consequently, a separate FS-type evaluation/document for TPH cleanup only would have been inefficient and was not prepared.
- **85 last 3 RCRA (organic thresholds not met)** – EPA (DP) agreed that a good case could be made that these particular ARARs may not be applicable because of the low levels of organics. However, DP recommended that the Navy evaluate whether any of the subsections/components are potentially relevant and appropriate (e.g., the provisions for inspection, maintenance, etc).
- **85 “b” (soil could be hazardous)** – EPA Region 1 does not utilize these ARARs. However, the referenced ARARs must still be followed.
- **85 “b” (containers ARAR should be included; land disposal restrictions [LDRs] might be needed for investigation derived waste [IDW])** – EPA Region 1 does not utilize these ARARs. However, the referenced ARARs must still be followed.
- **85 “g” (environmental land use restriction [ELUR] needed for RIDEM concurrence)** – The ELUR requirement is not an ARAR; however, the procedures used to develop the ELUR need to be followed. Post meeting note: In RIDEM’s comments on the draft FS, the Agency requested that ELURs be used.
- **85 “g” (Transport and LDR needed in any of the soil is hazardous)** – EPA Region 1 does not utilize these ARARs. However, the referenced ARARs must still be followed.
- **85 “m” (LUCs addressing the installation of wells)** – EPA requested that this be included as a legal authority to prevent well installation in addition to relying on the LUCs.
- **85 “f” (vapor intrusion [VI] and monitored natural attenuation [MNA])** – EPA stated that these TBCs be included in Region 1 FS documents. *Post meeting note:* This is similar to the other “broad” relevant and appropriate-type ARARs mentioned above because only specific chapters and subsections may need to be referenced.

Item 6 – Remediation Goals for Soils Adjoining Marina (RIDEM Agenda Item)

RIDEM comments received on both the RI and FS documents for Site 16 indicate that soils in the vicinity of the marina abutting the northern boundary of Site 16 should be cleaned-up to residential standards. The State specifically refers to Rule 3.58 of the State Remediation Regulations which reads as follows:

Rule 3.5.8 Residential Activity shall mean any activity related to a (1) residence or dwelling, including but not limited to a house, apartment, or condominium, or (2) school, hospital, day care center, playground, or unrestricted outdoor recreational area.

The Navy has disagreed with the RIDEM comments for the following reasons which are documented in the Navy's RTC documents for both the RI and FS documents:

- 1) **Rule 3.34** of the referenced regulations states that **Industrial/Commercial Activity** shall mean any activity related to the commercial production, distribution, manufacture or sale of goods or services, or any other activity which is not a traditional residential activity as defined by this Section including activities related to outdoor recreational areas with restrictions in place to limit potential exposure. The latter part of this definition indicates that residential criteria do not apply to all recreational areas. Specifically, the type of recreational activity allowed (restricted versus unrestricted) may be considered in the determination of the remedial goals.
- 2) The current lease issued by the Navy restricts the property from residential use. Perhaps more importantly, the draft FS for Site 16 presents alternatives for the remediation of contaminated soils in the NCA to industrial/commercial standards and the use of LUCs to restrict the property from residential use.
- 3) The Comprehensive Base Reuse Plan identifies the area around E-107 as waterfront commercial. The FOSL found the area suitable for lease "in accordance with the Comprehensive Reuse Plan approved by the Town of North Kingstown and RIEDC in February 1994 and the National Environmental Policy Act (NEPA), Record of Decision, signed in July 1997".
- 4) From a risk assessment perspective, while the current/future tenants may occasionally contact surface soils, surface waters and sediments in the general vicinity of the docking areas while maintaining/utilizing their boats, exposure is likely to be limited and more reflective of industrial/commercial/restricted recreational types of exposure.
- 5) In RIDEM correspondence dated January 19, 2007 (regarding Naval Station Newport), RIDEM indicates that it may be possible to place restrictions or institutional controls on property recreational use to limit potential exposure as defined in Rule 3.34. RIDEM further stated in the correspondence that " it must be reasonably proven to the Department that whatever restrictions and institutional controls are in place are protective under all applicable exposure scenarios given the standard applied". (See Attachment B).

This issue was not resolved during the 28 October 2009 BCT meeting.

Post meeting notes: Attachment C, *Parcels for Marine Development* (courtesy Steve King, QDC) depicts the area currently leased to the Yacht Club (QDNYC) (Lot 14, 3.6 acres) and, thus, currently used for marina purposes. A review of the leased area indicates that the vast majority of Lot 14 (greater than 80 percent) is not within Site 16; the Site 16 area that is within the Yacht Club lease area is a narrow strip of land along the southern boundary of Lot 14 which includes land directly abutting Bldg E-107. It should be noted that the Site 16 area immediately east of Bldg E-107 is paved with asphalt.

Item 7 – Inclusion/Exclusion of TPH in FS

As noted in the preceding ARARs discussion, the BCT agreed that the minor TPH contamination areas can be included in the narrative descriptions/tables/figures for the soils remedial alternatives. However, the costs for remediating areas contaminated only with TPH will be presented separately from cost estimates for other areas. A paragraph will be added to the FS indicating that, in most cases, that TPH contamination is co-located with other contamination and also explaining "why" remediation costs for TPH contaminated areas only are presented separately from cost estimates for other areas.

Item 8 – Groundwater Remediation Issues: Time Frames/1000 ug/L Contours/Presumptive Remedies

The EPA is generally satisfied with the concept of potential remediation of “hot spot” areas in the groundwater plume. However, the Agency would like the FS document to include a more comprehensive justification for the concentrations used to define a “hot spot”: Why was 1,000 ug/L (a somewhat arbitrary number indicative of relatively high levels of contamination) selected in the FS as the concentration defining an area for active remediation? The EPA also recommended that the Navy consider the evaluation of risk-based or criterion-based concentrations (lower than 1,000 ug/L) when defining the “hot spots” for active remediation. The EPA recommended that active remediation be considered for all areas where vapor intrusion risks exceed risk management benchmarks established for Site 16. It should be noted that Items 1 and 8 are related. The resolution of Item 1 may impact the groundwater remediation alternatives evaluated for Site 16, including the concentration selected to define a “hot spot” area/area requiring active remediation.

Post meeting notes: The shallow-overburden groundwater areas that exceed remedial goals established for the VI pathway are targeted for active remediation in the FS. In most cases, the significant groundwater contamination at Site 16 is found in the deeper groundwater zones (intermediate, deep, and bedrock zones). In most cases, shallow zone concentrations overlying this contamination do not exceed remedial goals established for the VI pathway.

Item 9 – Soil Remediation: Thoroughness/Scope of Alternatives

The current remedial alternatives for soils evaluate active remediation of contamination within sub-areas of the northwestern section of the NCA. The areas of contamination are not contiguous and, thus, areas to be excavated, capped, and/or covered are also not contiguous. While the remediation does address the contamination detected, the remediation appears somewhat “piecemeal”. This approach may make future site inspections (for purposes of confirming institutional and engineering controls area in place) and future site development more difficult versus an approach that consolidates areas to be capped/excavated/covered, etc. The Effectiveness/Implementability sections of the FS will be updated to acknowledge the difficulties associated with the current suggested approach. Additionally, the Navy will re-evaluate the Effectiveness/Implementability of the current approach when the data from the FS Support Investigation is available and consider an alternative that consolidates or joins the areas to be remediated/capped.

Item 10 – Remediation of Saturated Soils

The EPA (CW) indicated that the responses submitted by the Navy regarding remediation of saturated soils were acceptable.

Item 11 – Remediation of Allen Harbor Sediments

RIDEM comments recommended that the FS include an evaluation of remedial alternatives for the PAH-contaminated sediments of Allen Harbor. The Navy responded that such an evaluation was not necessary because the environmental forensics evaluation included in the RI concluded that there was not a clear source signature linking the Site 16 source areas to the PAH contamination detected in the sediments of Allen Harbor. EPA reviewers agreed with this conclusion. Also, any remediation scheme developed would be significantly complicated by the fact that there are several continuing non-Site 16 sources of contamination contributing PAHs to the sediments (i.e., the support piers for the dock structure, fuels and other materials associated with boat usage, surface water run-off from asphalt-paved areas in the developed portion of Site 16). There is also currently limited potential for direct contact with the sediments because of the boat traffic associated with the marina and because of the erosion control boulders the southern boundary of Allen Harbor. However, RIDEM expressed concerns regarding the future potential for exposure should conditions in the Harbor change (e.g., the boulders and/or marina were removed). The EPA and RIDEM recommended that the Navy update that narrative in the FS to

more directly explain that sediment remediation would be ineffective (and would not result in risk reduction) given the various continuing sources of PAH contamination to the sediments of Allen Harbor.

Item 12 – Metals as Chemicals of Concern for the FS

EPA comments recommended the evaluation of metals as COCs for groundwater. The Navy response indicated that, as discussed in the RI report for Site 16, the elevated metal concentrations noted in the unfiltered groundwater samples appear to be, in part, a consequence of turbidity and salinity. Additionally, the pattern of concentrations does not demonstrate a clear source-area to groundwater concentration pattern. Consequently, the Navy considered the filtered/dissolved metals concentrations when selecting COCs for groundwater. With the exception of arsenic, the Navy did not select metals as COCs. The Navy agreed to update the narrative in the Site 16 FS with a more comprehensive explanation of the COC selection process for metals.

ATTACHMENT A



AGENDA

FORMER NCBC DAVISVILLE

BRAC Cleanup Team (BCT) Meeting

Date: October 28, 2009

Time: 10:00 A.M.

Location: RIDEM Offices, 235 Promenade Street, Providence, Rhode Island

Site 16 – Response-to-Comments Discussions for Site 16 Feasibility Study (FS)

10:00 – 10:05 (5 min)	Introductions
10:05 – 10:15 (10 min)	Agenda Review and Meeting Logistics
10:15 – 10:45 (30min)	Classification of Groundwater Underlying Site 16 and Groundwater Remedial goals/Criteria
10:45 – 11:15 (30 min)	Hazardous Waste (Listed/Characteristic) at Bldg 41 and Northwestern Portion of North Central Area (NCA)
11:15 – 11:45 (30 min)	Landfill/Hazardous Waste Landfill - Northwestern Portion of NCA
11:45 – 12:45 (60 min)	Lunch
12:45 – 13:15 (30 min)	Land-Use Control Issues for Site 16
13:15 – 13:45 (30 min)	ARARs
13:45 – 14:15 (30 min)	Remediation Goals for Soils Adjoining Marina (RIDEM Agenda Item)

If time permits, the legal and non-technical aspects of the following topics can also be discussed.

14:15 – 14:30 (15 min)	Inclusion/Exclusion of TPH in FS
14:30 – 14:45 (15 min)	Groundwater Remediation Issues: Time Frames/ 1,000 ug/L Contours/Presumptive Remedies
14:45 – 15:00 (15 min)	Soil Remediation: Thoroughness/Scope of Alternatives
15:00 – 15:15 (15 min)	Remediation of Saturated Soils
15:15 – 15:30 (15 min)	Remediation of Allen Harbor Sediments
15:30 – 15:45 (15 min)	Metals as Chemicals of Concern for FS
15:45	Adjourn

SIGN-IN SHEET

RESPONSE-TO-COMMENTS DISCUSSIONS (OCTOBER 28, 2009, RIDEM PROVIDENCE RI OFFICE) FOR SITE 16 FEASIBILITY STUDY (FEBRUARY 2009 VERSION)

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ATTACHMENT B



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

January 19, 2007

Robert G Schirmer
Environmental Restoration
Facilities Engineering Command, Mid-Atlantic
Naval Facilities Engineering Command
9742 Maryland Avenue
Norfolk, VA 23511-3095

RE: Application of Direct Exposure Criteria for Recreational Use Sites Naval Station Newport,
Newport Rhode Island.

Dear Mr. Schirmer,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) received your letter regarding the application of Residential and Industrial/Commercial Standards to sites at Naval Station Newport in December 2006. As you are aware, Residential Activity is defined in Section 3.58 of the Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases as amended February 2004. The definition states that:

Residential Activity shall mean any activity related to (1) residence or dwelling, including but not limited to a house, apartment, or condominium, or (2) school, hospital, day care center, playground or unrestricted outdoor recreational area.

Industrial Commercial Activity is defined under Section 3.34 of the above-cited regulations. The definition states that:

Industrial Commercial Activity shall mean any activity related to the commercial production, distribution, manufacture or sale of goods or services, or any other related activity as defined by this Section including activities related to out door recreational sites with restrictions in place to limit potential exposure.

As the Department has steadfastly maintained, it is stated in the above regulations that playgrounds or unrestricted outdoor recreational activates are considered residential activities. At the Old Fire Fighter Training Area, the Navy initially stated that they wanted unrestricted outdoor recreational use of Katy Field, which contained a playground, picnic area and a playing field. Under this scenario, please be advised that the residential criteria would be applicable.

It has come to my attention recently that the Navy inquired as to whether it was possible to place restrictions or institutional controls on the aforementioned property for

recreational use to limit potential exposure as defined in Section 3.34. This approach may be amenable to the Department in certain limited situations, but the recreational restrictions in place must be verified by the Navy, through formal risk analysis, to be consistent and compatible with an Industrial/Commercial risk scenario. Specifically, if standards other than Residential are to be considered for recreational areas as outlined in your letter, the burden of proof is on the Navy. That is, it must be reasonably proven to the Department that whatever restrictions and institutional controls are in place are protective under all applicable exposure scenarios given the standard applied.

Standards other than residential will only be considered by the Department if it can be proven that by placing an institutional control on a property, and ensuring its proper implementation and conducting the applicable reporting requirements, the applicable standard it is protective under a recreational scenario. Such a course of action would also only be considered by the Department if, as with all remedial actions, RIDEM has the authority to take enforcement actions or require additional investigation and/or remedial activities if the restrictions are not maintained or the use of the property changes.

In regards to RIDEM's regulatory role and our authority on military bases to either ensure that a restriction is maintained and/or take enforcement action if it is not, the Department has not received a satisfactory response in writing to date. Please be advised that the Department will be very reluctant to enter into restrictions on properties until assurances are given by the Navy that we have the authority to ensure that such restrictions are maintained. The Department is amenable to various avenues to address this issue including clearly outlining our regulatory authority with respect to restrictions or institutional controls through a Memorandum of Understanding or modifying the Federal Facilities Agreement, if applicable.

We look forward to your response. If you have any questions please contact Paul Kulpa at (401) 222-2797, extension 7111, or myself at extension 7141.

Sincerely,



Matthew D. DeStefano
Supervising Engineer
Office of Waste Management

cc: Leo Hellested, DEM OWM
Paul Kulpa, DEM OWM
Richard Gottlieb, DEM OWM
Cornelia Mueller, NSN
Brian Olsen, EPA Region I
Kymberlee Keckler, EPA Region I

ATTACHMENT C

