

Navy Responses to Comments from USEPA, PREQB and DOI on the Draft Final Closure Plan, Open Burn/Open Detonation Site, Former AFWTF, Vieques, Puerto Rico, April 2004.

Attached are the Navy's responses (in bold type) to the comments received by the Navy regarding the Draft Final Closure Plan, Open Burn/Open Detonation Site, Former AFWTF, Vieques, Puerto Rico. The comments were received from USEPA Region II RCRA Program Branch, the USEPA Superfund Group, the Puerto Rico EQB and the Department of Interior, Fish and Wildlife Service. The USEPA RCRA comments and PREQB were received in letter from Mr. Adolph Everett/USEPA RCRA program branch to Mr. Christopher Penny/LANTDIV dated June 4, 2004. Comments from the EPA Superfund Program Branch were received via email from Mr. Tim Gordon/USEPA RCRA program branch to Mr. Christopher Penny dated June 16, 2004. The comments from DOI F&WS were received via e-mail from Mr. Tim Gordon dated June 23, 2004.

June 4, 2004 - RCRA Programs Branch

1. It would be more appropriate to cite 40 CFR Part 265 requirements, rather than 40 CFR Part 264 requirements, since the OB/OD units operated under Interim Status Standards. Though EPA will not require revision of the Plan to address this comment, an addendum should be submitted which notes that all references to 40 CFR Part 264 requirements should instead be to the corresponding 40 CFR Part 265 requirements.

40 CFR Part 265 is referenced in place of 40 CFR Part 264 throughout the Draft Final Closure Plan dated July 2004.

2. In Section 3.3.19, the last sentence should read "...in accordance with applicable 40 CFR Part 265 Subpart G regulations." And not just "...in accordance with applicable Subpart G regulations.

The change suggested above has been made to Section 3.3.19. The last sentence of Section 3.3.19 reads as *"The plat will state the U.S. Navy's obligation to restrict disturbance of the hazardous waste disposal unit area in accordance with applicable 40 CFR Part 265 Subpart G regulations."*

3. The schedule given in Figure 4-1 is not currently accurate, and needs to be revised to include EPS's/EQB's review of this Draft Final Plan and Navy's revision of the Draft Final Plan, prior to it undergoing Public review. Also, the start dates for these and all subsequent activities shown on the schedule need to be adjusted to reflect the actual dates of these reviews and revisions.

The schedule (Figure 4-1) has been revised to reflect the appropriate review and comment periods.

4. The first sentence in paragraph two of Section 5.1 that " Because this treatment will be under CERCLA no permit is required." Is not currently accurate and also conflicts with the prior statement in Section 5.1 that "The BIP events will be carried in accordance with 40CFR [&] 266.206." Therefore the first sentence in paragraph two should be revised to read something like " However, the BIP treatments are expected

the aid of an appropriate geophysical instrument (e.g., Schonstedt GA-52CX magnetometer). Excavation of anomalies will be performed by a two-person team of UXO Technicians using hand excavation tools such as shovels, spades, trowels, and pry bars. The excavation activities will be limited to a maximum depth that will provide for a safe working environment for the investigation crew by eliminating the subsurface explosive hazard in accordance with the procedures described in Section 5.0 of this plan."

The second sentence of Section 5.4.1 reads *"the hand excavation activities will be limited to a depth necessary for safe work area access."*

As part of the interim Closure Report a risk assessment (described in Section 5.16) will be developed to assess the potential impacts to human health and the environment from any MEC and environmental contamination remaining on-site and the anticipated land use for the site. In addition, an evaluation of potential remedial alternatives (described in Section 5.18) will be conducted. This evaluation will assess the need for additional MEC clearance.

June 16, 2004 - CERCLA Superfund Programs Branch

1. Previous comments pointed to the need for a well within the OD area. The Navy responded by indicating that wells would be moved closer to the area. This was neither done, nor does it meet the need. While it is true that a well within the OD area would not pick up contamination downgradient of the placement, it is the most likely area to be contaminated. Furthermore, the concern of 'cross contamination' from the soils within the area seems to miss the point. It is poor science to bias sampling away from the area most likely to be contaminated. The fact that soils may be contaminated within the area is what drives the need for a well here, to determine if groundwater has been impacted. Therefore the additional well is needed. Please include this well in the work plan.

This discussion also pertains to the OB area, where, again, wells are planned around the periphery of the suspect area. An additional well should be installed in the area of concern.

The locations of the wells will provide characterization of the groundwater quality impacts from the site considering the close proximity of the wells to the center of the site (25 ft. at the OB area, 90 ft. at the OD area) and the time since the sites were in operation (greater than 10 years). The proposed soil sample locations will provide data regarding subsurface contamination in the center of the OB and OD areas. In addition, the well layout is consistent with the approach approved by EPA for the Phase I RFI of installing wells at the downgradient site boundary. Furthermore, a well located in the center of the each area provides disadvantages in that 1) it would not provide an indication of any impacts from the downgradient half of the OB and OD areas and 2) cross contamination of subsurface media may occur when drilling through contaminated soil in each area.

The first paragraph of Section 5.8 has been changed to read: *"boreholes drilled for monitoring well installation will be lithologically logged by the Field Geologist as described in Section 5.6. Well locations are described in Section 3.3.5 and are shown*

After reviewing historical aerial photographs and performing a site reconnaissance (June 2004) there is no evidence that any treatment of explosives took place adjacent to the "berm" discussed above. Therefore, sampling adjacent to this "berm" would not be warranted. However, if further evidence (e.g., geophysical anomalies) is gathered that suggests the treatment of munitions occurred in this area the need for additional samples will be addressed in the Interim Closure Report that will be reviewed by EPA.

4. The approach to UXO/MEC in the OD area is in contrast to that used in SWMU-4 on the western end of the island. At SWMU-4, ordnance was cleared prior to environmental investigations. At the OD pits, it appears that MEC work will be completed only for safety / avoidance purposes, and only to a depth of 1 foot. This presents a problem. If MEC is left in place, it represents a potential source of contamination. Environmental sampling would tell us whether contamination is present today, but if MEC is left in place, it could degrade, resulting in a future release. For this reason, the approach at SMWU-4 (West) is the better paradigm. MEC should be fully cleared prior to environmental sampling.

MEC avoidance and clearance will be conducted as needed to provide a safe work environment during the environmental sampling. Clearance to a safe depth will be sufficient to provide safe access routes to sample locations. Soil borings will be cleared to a depth necessary to reach the appropriate sample depth. References to the 1 foot clearance depth throughout the document has been removed and the clearance approach specific to that reference inserted into the text.

The first paragraph of Section 3.3.4 has been changed to read *"within the boundaries of the 3-acre site identified on Figure 3-1, selected geophysical anomalies will be excavated and removed to provide a safe working environment for the field sampling personnel. An UXO contractor will locate the geophysical anomalies with the aid of an appropriate geophysical instrument (e.g., Schonstedt GA-52CX magnetometer). Excavation of anomalies will be performed by a two-person team of UXO Technicians using hand excavation tools such as shovels, spades, trowels, and pry bars. The excavation activities will be limited to a maximum depth that will provide for a safe working environment for the investigation crew by eliminating the subsurface explosive hazard in accordance with the procedures described in Section 5.0 of this plan."*

The second sentence of Section 5.4.1 reads *"the hand excavation activities will be limited to a depth necessary for safe work area access."*

A risk assessment (described in Section 5.16) will be conducted using the site characteristics, soil, groundwater, and MEC data collected during the investigation of the OB and OD areas. If there are unacceptable risks to human health and the environment or potential for future contaminant releases they will be addressed in the Interim Closure Report. Additionally, any MEC left in place at the site or contamination identified that poses a risk to human health and the environment will be addressed in the evaluation of remedial alternative (described in Section 5.18) to be presented in the Interim Closure Report.

PREQB

- #9 Discusses clearance depth of 1- ft. Please provide the reasoning for stopping excavation of anomalies at 1-ft. Reasons for going deeper include: 1.) since the site is on the LIA and adjacent to a bombing target it is possibly that large UXO is located deeper on the site than 1-ft., and 2.) if an anomaly is detected and selected for investigation and is deeper than 1-ft. it is likely to be a large object and is possibly of significant interest and value to identify. Please provide justification for stopping excavation of anomalies at a depth of 1-ft. Also see comment #15.
- #15 Assumes that future land use is “wilderness area” and that 1-ft is adequate. Clearance depth s should always be determined by site-specific information when possible. DDESB’s 1-ft recommendation is only a starting point for analysis of the MEC remediation depth requirement. And, there is no reason why this site investigation needs to conform to even DDESB’s default clearance depth. See #9 above for two reasons for excavating anomalies to deeper depths.

Further, restricting excavations to 1-ft at SMWU-4 resulted in inadequate characterization of that site.

Recommend performing sample excavations to deeper depths to get more complete data on subsurface MEC contamination.

MEC avoidance and clearance will be conducted as needed to provide a safe work environment during the environmental sampling. A clearance to an appropriate depth will be sufficient to provide safe access routes to sample locations. Soil borings will be cleared to a depth necessary to reach the appropriate sample depth. References to the 1 foot clearance depth throughout the document has been removed and the clearance approach specific to that reference has been substituted.

The first paragraph of Section 3.3.4 has been changed to read “within the boundaries of the 3-acre site identified on Figure 3-1, selected geophysical anomalies will be excavated and removed to provide a safe working environment for the field sampling personnel. An UXO contractor will locate the geophysical anomalies with the aid of an appropriate geophysical instrument (e.g., Schonstedt GA-52CX magnetometer). Excavation of anomalies will be performed by a two-person team of UXO Technicians using hand excavation tools such as shovels, spades, trowels, and pry bars. The excavation activities will be limited to a maximum depth that will provide for a safe working environment for the investigation crew by eliminating the subsurface explosive hazard in accordance with the procedures described in Section 5.0 of this plan.”

The second sentence of Section 5.4.1 reads “the hand excavation activities will be limited to a depth necessary for safe work area access.”

A risk assessment (described in Section 5.16) will be conducted using the site characteristics, soil, groundwater, and MEC data collected during the investigation of the OB and OD areas. If there are unacceptable risks to human health and the environment or potential for future contaminant releases they will be addressed in the Interim Closure Report. Additionally, any MEC left in place at the site or contamination identified that poses a risk to human health and the environment

(EM-61) followed by a cesium-vapor total field magnetometer (Sinter Smartmag SM-4), in conjunction with a base station magnetometer, will be evaluated across the entire prove-out area using the same survey techniques determined to be suitable for the investigation.

The GPO will be established to identify the most optimum and accurate sensor, sensor platform, positioning methods, data density and data processing techniques. The optimum geophysical data collection method will be based primarily on the detection depth capabilities and false alarm rate. The GPO will also allow for evaluation of the operators and functionality of the geophysical sensors.

The GPO test plot will be established with 20 to 30 seeded items (targets) representative of those items expected to be found at the site. The depths and orientations of the items will be varied to effectively evaluate the instrumentation and operators.

Specifics regarding the GPO, instrumentation, and operators will be given in the Closure Report."

9. This section discusses clearance depth to one foot, and references DOD 6055.9 STD as saying that 6055.9 STD has a "required clearance depth for a wilderness area." This is an incorrect and incomplete reading of 6055.9-STD. What it actually requires is that site specific planning be performed. As stated in comment 4, there is no default 1-ft standard for a wilderness area. Recommend review of comment 4 to make adequate changes necessary to accurately characterize this site. As previously stated, it is further recommended that clearance depth be based on site-specific information.

See response to Comment #4.

10. This section fails to address how demilitarization of inert MEC will be accomplished. Recommend including procedures of how demilitarization of inert items will be accomplished.

A subsection has been added to Section 5.4 entitled 5.4.4 Processing of Inert MEC Items. "Inert ordnance items will be demilitarized in accordance with DoD 4160.21-M, Defense Reutilization and Marketing Manual, and DoD 4160.21-M-1, DoD Demilitarization Manual. In general, treatment of all MEC will be performed using standard demolition practices. All disposal operations will be performed under the direction and supervision of an on-site SUXOS and UXOSO. Operations will be closely monitored, safety strictly enforced, procedures will be adhered to, and an exclusion zone will be maintained with only essential personnel present."

Additionally, Appendix E has been added, which describes the ORS metal collection and inspection procedures.

11. Fails to address UXO clearance for soil borings. This section states that [b]efore soil borings (or well borings) are initiated, the location will be cleared of munitions by the UXO contractor." Safe clearance for soil borings or well borings cannot be completed from the surface. Recommend including down-hole clearance procedures as part of this section.

joint site inspection by Navy and Service personnel of the LIA after a period of heavy rains showed that most of the area was flooded with up to 18-24 inches of water, including the road and other areas immediately adjacent to the OB/OD site. This flooding can persist for extended periods.

A statement has been added to the second paragraph of Section 2.5.3; *"In the vicinity of the OB/OD unit, flooding has been observed following significant rain events and the observed flood waters persisted for extended periods."*

2. Section 3.3.6.3, Soil Sampling and Analysis. This section states that subsoil samples will be taken over a two foot interval from a depth of 2-8 feet. The sampling depth will be determined by visual observation or photoionization detector (PID) screening. It is unclear how metal or perchlorate contamination and concentrations can be determined visually. A PID is used to measure volatile organic compounds (VOC's). While these are a concern; we are also concerned with longer lasting compounds such as metals. The Service's previous concern with soil sampling for eastern Vieques was that there are no samples being taken at intermediate depths. We continue to have the same concerns about the soil sampling discussed in this document. We continue to recommend that to adequately determine level and extent of contamination, all subsurface soil samples be taken at regular intervals throughout the vadose zone down to 8 feet, for all samples in the former Atlantic Fleet Weapons Training Facility.

The sampling approach has been modified and Section 3.3.6.3 (each of the three bullets following the first paragraph) and 5.7 (third paragraph) report text has been changed to indicate how the subsurface soil samples will be collected and reads as follows *"... will be collected over a 2-foot interval from a depth of 2 ft bgs to a maximum depth defined by the extent of disturbed soils or 8 ft bgs, whichever is greater. The soil column interval of sample collection will be determined by indications of contamination from either visual observations or PID screening levels. If no contamination is apparent in the field the sample will be collected from the depth of disturbed soils or a depth of 6-8 ft if the disturbed soils extend to a depth of less than two feet."*

This sampling approach does not provide contaminant data for the entire vadose zone; however, the soil samples will be collected from the worst case sampling interval to conduct conservative risk assessment and provide an assessment of the extent of residual contamination. The need for any additional soil sampling will be provided in the Interim Closure Report.

3. Section 5.4.1 Hand Excavation. Excavations will be limited to a depth of 1 foot based on DOD 6055.9-STD for wildlife areas. This depth may not adequately reflect the long term wildlife management needs of the area. Management actions may include reforestation efforts, wetland restoration, and other ground intrusive actions that may require greater than 1 foot depth. We recommend that this section be clarified to state that the 1 foot depth is for the proposed action only and may require additional clearance at a later date.

Screening Levels for Soil from 'Memorandum - Amended Guidance on Ecological Risk Assessment at Military Bases; Process Considerations, Timing of Activities, and Inclusion of Stakeholders,' June 23, 2000".