

5/3/07 - 02775



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC
6506 HAMPTON BLVD
NORFOLK VA 23508-1278

TELEPHONE NO:

IN REPLY REFER TO:

(757) 322-4815

May 3, 2007

Danny Rodriguez
US EPA Caribbean Environmental Protection Division
Vieques Office Park
Carr. 200, Km 0.4
Vieques, PR 00765
(787) 741-5201

RE:

- 1) Responses to Comments on Final Munitions and Explosives of Concern Master Work Plan, Former Vieques Naval Training Range (VNTR), Vieques, Puerto Rico.

Encl:

- 1) Response to US EPA and PR EQB comments on Final MEC Master work plan dated December 21, 2006.
- 2) Changed page 2-9 for Final MEC Master work plan (CH2M HILL, December 2006).
- 3) Changed page 2-21 for Final MEC Master work plan (CH2M HILL, December 2006).

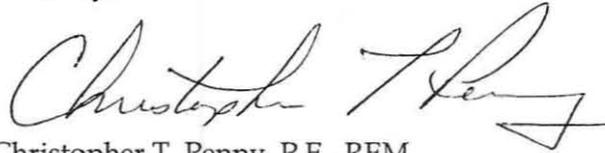
Dear Mr. Rodriguez:

NAVFAC has reviewed and addressed the comments in your letter dated December 21, 2006. Enclosure 1 contains responses to comments and clarifies some of the text within the document. Enclosures 2 and 3 are changed pages which address changes requested by US EPA and PR EQB.

A review of the comments indicates the technical approach is not impacted and remains unchanged for current work efforts. As indicated in the responses to comments, as additional changes are made to the Master Work Plan, the revised pages of the plan will be submitted. Site specific procedures which differ from the Master Work Plan will be addressed in site specific work plans.

If you have any additional comments, please do not hesitate to contact me at (757) 322-4815.

Sincerely,



Christopher T. Penny, P.E., REM
East Vieques Program Coordinator
Environmental Programs Branch
Environmental Division
By direction of the Commander

Copy to:

- Mr. Ariel Iglesias/USEPA (1 copy)
- Mr. Tom Hall/Tech Law (1 copy)
- Ms. Yarrissa Martinez/PREQB (1 copy)
- Mr. Jim Pastorick/UXOPro (1 copy)
- Mr. Richard Henry/USFWS (1 copy)
- Mr. Kevin Cloe/NAVFAC Atlantic (1 copy)
- Mr Philip McGinnis/NAVFAC Atlantic (1 copy)
- Mr. Carlton Finley/NAPR (1 copy)
- Ms. Madeline Rivera/NAPR (1 copy)
- Mr. John Tomik/CH2M HILL (1 copy)
- Mr. Tim Garretson/CH2M HILL (1 copy)
- Mr. William Davis/UXB (1 copy)
- Mr Rick Urbanski/NOSSA (1 copy)

Response to USEPA and PREQB comments dated December 21, 2006 – Review of the Final MEC Master Work Plan, Former Naval Training Range (VNTR), Vieques, Puerto Rico

Navy responses are given in bold italicized text following the most recent regulatory comment.

EPA Specific Comments:

2. – Appendix I, Response to Comments, Page 11: EPA Specific Comment 25 reads as follows: Table 10-2 Rare and Endangered Terrestrial and Amphibious Wildlife at VNTR, page 10-2: In this table, all of the rare or endangered species listed are noted as not having been observed during the study, with the exception of *Trimeresurus* (Fer-de-Lance). This would seem to indicate that this species was observed during the survey. However, this species is listed in the table as “Rare or Extinct.” It would seem very unlikely that this species is extinct if one was observed during the referenced study. Please review this table and correct as necessary.

The April 4, 2006 Navy response reads as follows: Footnote for *Trimeresurus* has been revised on Table 10-2 to indicate “not observed during study.”

Analysis: The Navy response addresses the concern expressed. However, it appears that no such footnote was added, as Table 10-2 (Rare and Endangered Terrestrial and Amphibious Wildlife at VNTR) has been deleted from Section 10 of the Final MEC MWP. It appears that the listing presented in Table 10-2 has been completely removed from the Final MEC MWP. If the Navy opted to remove Table 10-2, the Navy should revise the response to the subject EPA comment to reflect the action actually taken on the EPA comment.

Navy Response

The Master work plan was revised to include only the general information for the Environmental Protection Plan (Section 10). The previous biological information was removed from the Master Work Plan, as more accurate information is being collected as part of more updated surveys. A Final Biological Assessment (BA) for the LIA has been completed and is referenced in the Master Work Plan. This BA is currently being expanded to cover the biological resources and mitigation measures for the entire former VNTR. Once the full VNTR BA is complete, the Master work plan will be revised to include a reference to the VNTR BA.

4. – Appendix I, Response to Comments, Page 11: EPA Specific Comment 26 reads as follows: Section 10.4, Water Resources within the Project Site, page 10-3: The text only describes ocean water resources. It should include groundwater. See comment #9 above.

The April 4, 2006 Navy response reads as follows: Section 10.4 will be retitled ‘Surface Water and Groundwater Resources within the Project Site.’ Additionally, the entire section will be replaced with ‘Based on available aerial photography, the surface water resources located within or adjacent to the project area, are the Caribbean Sea to the north, south, and east and several lagoons primarily along the coast.’

Analysis: The Navy response addresses the concern expressed. However the section number concerned has been renumbered as Section 10.2 instead of 10.4 as stated in the navy response. In addition, the revised verbiage in Section 10.2 does not read as stated in the Navy response. The Navy should revise the cited response to reflect the actual changes made to the Final MEC MWP.

Navy Response

Changes to this Section 10 resulted in the proposed Section 10.4 being changed to Section 10.2. The following two sentences have been added to Section 10.2: "Two types of groundwater aquifers can be found within the project area; within the upper portion of the bedrock and sedimentary rocks in the EMA, and in the alluvial deposits found below the hills in the low flat valleys along the coast."

5. - Appendix I, Response to Comments, Page 11: EPA Specific Comment 27 reads as follows: Section 10.8, Compliance with ARARS, page 10-4: Need to expand the compliance with ARARs discussion to include: what they are; chemical specific, action specific, location specific; difference between applicable and relevant and appropriate; clearly describe the NPL sites must meet ARARs - this is a threshold CERCLA/NCP requirement; be clear that for most activities conducted entirely on-site, permits are not required, etc.

The April 4, 2006 Navy response reads as follows: The definition of ARARs and TBCs is provided following Table 1-1 in Section 1.2. The discussion of chemical, action and location specific ARARs is beyond the intended scope of this document. Further explanation of compliance with ARARs as required for environmental site implementation is contained in the Environmental MWP for Vieques, CH2M HILL, January 2001.

The last sentence in Section 10.8 Compliance with ARARs will be changed to read 'Other ARARs and TBCs to be followed were presented in Table 1-1.' The following sentence will be added as the last sentence in the paragraph 'All sites addressed under the NPL must meet the ARARs set forth in this document, the Environmental MWP (CH2M HILL, January 2001), and other ARARs as necessary.'

Analysis: There is no Section 10.8 in the Final MWP as is stated in the Navy response. The Navy should revise the cited response to reflect the actual changes made to the Final MEC MWP.

Navy Response

Section 10.8 has been removed from the MWP. The ARARs are given in Section 1.2 and summarized in Table 1-1. More specific application of the ARARs will be addressed in site specific work plans as appropriate.

EQB Specific Comments:

The following are comments (last reaction to comments in **bold**) that the Navy has not complied with the agreed-upon resolution on the final document sent to EQB. For comments #4 and #9 the responses provided by the Navy were accepted, however EQB still believes that these topics should be discussed in the final document. Also, comments #13 and #16, the responses were accepted but they were not adequately inserted in the final document.

Comment #4. Section 2.4.8, Page 2-15: There is no mention of potentially clearing vegetation by controlled burning. Since this is a MWP it may be appropriate to say that controlled burning is being considered, may be implemented if regulatory issues can be resolved, and, if used, will be described in a site-specific work plan.

Navy Response: At this time, due to the legal limitations, controlled burning cannot be conducted at the Former VNTR. If this changes this document will be revised to include that vegetation clearance method as an option. Specific plans to carry out this operation will be developed and any general procedures will be included in a revision of this document.

Additional EQB comment (May 2006): Response accepted.

December 2006 EQB comment: Since the Navy plans to perform controlled burns it would have been efficient to include information on this operation in this MWP. However, it is the Navy's option to choose not to do so and modify this MWP and inform the regulators of this modification (in accordance with Section 1.9 of the MWP) prior to performing controlled burns.

Navy Response

If the variance for controlled burning is approved by the Commonwealth of Puerto Rico, the Master work plan will be revised/amended to cite the regulatory approved prescribed burn plan and any associated work plans (i.e., Air Monitoring Plan) to provide the work approach for conducting controlled burning.

Comment #9. Section 2.4.13, Page 2-21: Range fires have been a problem. It is recommended to include precautions to be taken to prevent range fires caused by MEC detonations in this section on MEC disposal or to include a new section on this subject. It is appropriate that the MWP identify this problem and analyze applicable solutions.

Navy Response: A Prescribed Burn Plan for the TCRA within the LIA, which contains several preventative measures for the spread of fire resulting from MEC detonations, is currently under review by EPA, DOI and EQB. Fire preventative measures proposed include: the establishment of fire breaks surrounding the detonation areas, vegetation clearance of selected areas to suppress the spread of fire and the maintenance of a standby water supply to wed down fire breaks away from any range fires. Once the Draft Prescribed Burn Plan is finalized the fire prevention measures can be amended to the Master Work Plan.

Additional EQB comment (May 2006): Response accepted.

December 2006 EQB comment: Although the Navy response to this comment discusses fire suppression in the context of controlled burning, the original EQB comment discusses fire suppression in the context of other MEC operations such as manual vegetation clearing and MEC disposal. It appears that these MEC operations may have caused several fires on Eastern Vieques. Therefore, it is appropriate for the MWP to include a fire suppression plan regardless of whether or not controlled burning is performed in the future. It is possible that this plan will need to be modified to support controlled burning. But the fact that serious fire hazards exist on Eastern Vieques makes it important that planning for fires caused by MEC operations is in place as soon as possible. As stated in the original EQB comment, it is recommended that the MWP be modified to include a fire suppression plan.

Navy Response

The maintaining of cleared roads around the perimeter of areas that are cleared of MEC has demonstrated to be an effective method for controlling the spread of range fires. In addition, MRS 16, a 70 acre water filled lagoon provides a secondary fire break for controlling range fires. See attached changed Page 2-21, which has been revised to include a bullet under general procedures that states "roadways or waterways will be maintained to serve as fire breaks in areas where demolition activities are being carried out and unintentional fires may occur."

Comment #11. Section 3.2, Pg 3-1: Reference the Puerto Rico explosives law (which requires users and transporters of explosives to have a permit from the Superintendent of Police) as required permit.

Navy response: The following will be added as the last sentence in Section 3.2 Licenses and Permits: 'In addition, users and transporters of explosives over public transportation routes will be required to obtain a permit from the Superintendent of Police, as required by the Commonwealth of Puerto Rico law.'

Additional EQB comment (May 2006): Puerto Rico Law No. 134 of June 28, 1969, requires more than obtaining permits for "users and transporters of explosives over public transportation routes." The following text, taken directly from Law 134, requires permits for manufacture, transport, receipt, storage, possession, handling and use of explosives. It is recommended that the MWP be modified to completely comply with Law 134.

"(a) No person shall carry out any or any one of the activities herein listed without having first obtained the corresponding permit or permits from the Superintendent issued in accordance with the provisions of this chapter and its regulations:

- (1) Manufacture explosives or substances that may be used to manufacture explosives;
- (2) transport explosives or substances that may be used to manufacture explosives;
- (3) receive, store and possess explosives or substances that may be used to manufacture explosives;
- (4) use explosives or substances that may be used to manufacture explosives;
- (5) operate an establishment where explosives or substances are handled that may be used to manufacture explosives."

December 2006 EQB comment: The MWP is still silent on how this requirement has been met. It says (section 3.2) that a permit is required, but there is not an indication in the plan that this requirement has been complied with. It is recommended that the plan be modified to include a copy of the permit or other documentation that this requirement has been met.

Navy Response

Section 3.2 states that contractors who use explosives on-site must meet all applicable requirements. The Navy has the responsibility to provide reasonable oversight of these activities and legal/regulatory oversight is the responsibility of U.S. ATFE and PR State Police. U.S. ATFE and PR State Police have determined that the explosives storage and transport for this project have demonstrated that the Navy is in compliance with applicable requirements.

Comment #13. Section 3.4.3, Pg 3-3: This section says that a guard will be posted during non-working hours. However, there is a new guidance to the Puerto Rico explosives law ("Guidance for the Administration, Application and Oversight of the Puerto Rico Explosive's Law," Chapter XVIII, "Magazines, Guidance, Safety Precautions to be taken in the Magazines' Surroundings") that requires a guard at all times (24 hours/day) whenever explosives are stored. It is recommended that this guidance be added to the list of ARARs.

Navy Response: The following ARAR will be added to Table 1-1 in Section 1.2: 'Guidance for the Administration, Application and Oversight of the Puerto Rico Explosive's Law, Puerto Rico explosives law Chapter XVIII.'

However, it should be noted that NAVFAC is in consultation with PR State Police to clarify the requirements for guards. Because during working hours personnel are on-site in the vicinity of the storage area and during non-working hours a security guard is stationed in the vicinity of the stored explosives, it is believed the intent of the law is being met. The results of these discussions will be included in revisions to this document.

Additional 2006 EQB comment (May 2006): Response accepted.

December 2006 EQB comment: This agreed-upon addition to the MWP (note above: "The results of these discussions will be included in revisions to this document) has not been made. The Navy should modify the MWP to document the waiver from the Puerto Rico police for compliance with the requirement for a 24-hour guard of the explosives magazines.

Navy Response

Sergeant Amado Rivera of the PR State Police Explosives Division Humacao has met with the Navy representative and has concurred that the Navy's approach for the storage of explosives meets the intent of Puerto Rico law. The approach includes: monitoring of the explosives storage area during the daytime working hours and having a guard conducting surveillance of the area during non-working hours. As stated in the response to Comment #11 above, the PR State Police have conducted an assessment and the Navy was found to be in compliance with the regulations.

Comment #16. Table 9-1 Table 9-1 is a good effort at identifying all of the relevant QC inspections. However, it appears that the DFW contained in Table 9-1 are not complete. For example, there are no DFW associated with geophysics, subsurface clearance or UXO disposal. It is recommended that Table 9-1 be modified to completely capture all of the DFW that are relevant to the full spectrum of activities that can be conducted at VNTR.

Navy response: Table 9-1 will be revised to include additional definable features of work including the following: digital geophysical surveys, geophysical prove-outs, subsurface MEC clearance and MPPEH processing.

Additional EQB comment (May 2006): Response accepted.

December 2006 EQB comment: The additions to Table 9-1 have been made. However, it doesn't appear that the audit requirement for "digital geophysical mapping" (page 9-15) is adequate because the audit requirement is "once." This means that compliance with this audit requirement requires a QC inspection of the performance of this critical work one time. It is recommended that the MWP be modified to state this critical DFW will be audited more frequently than only once.

Navy Response

Table 9-1 has been revised to include additional Definable Features of Work including: digital geophysical surveys, geophysical prove outs and MPPEH processing. The site specific work plans; however, will include the recommended QC frequency for each of these tasks.

Additional EQB Comments:

1. An agreement was made at the June 9, 2005 MR Subcommittee meeting that additional information on the GPO would be added to the MWP. This agreement is documented in EQB's report of this meeting which states:
 - Doug Maddox asked about establishing a GPO for Eastern Vieques. Chris Penny answered that Tom Douglas of Navy EOD TECHDIV is going to perform QA oversight for the Navy. George Overby said they are planning on constructing multiple GPOs in different areas with different geology. He agreed that information on the GPO areas will be included in the Master MEC Work Plan which will be sent to the Navy for internal review in a week or so.

This information hasn't been added to the MWP as agreed. Since we learned at the last CTC meeting that the GPO is currently being constructed it is likely that a significant amount of information is known about the GPO that can be added to the MWP as agreed. It is recommended that the MWP be modified to provide relevant information on the GPO such as its location, the number of targets, type of targets and depth of targets.

Navy Response

As described in the site specific work plan for the Phase II SI, the GPO Report will be submitted as an interim deliverable. Once the report is reviewed and approved by the regulators it will be either cited in the MWP or added as an appendix of the MWP, if it is to be utilized for all future geophysical surveys.

2. EQB has requested that Figure 2-1 be modified to include the agencies and regulators to show the lines of communication that will be used to provide information on the project. This was requested since EQB's earliest comments on the pre-draft MWP in December 2004 as documented by this comment:

"Page 2-5, Fig. 2-1:

1. Recommend adding dashed line boundaries or using shading to indicate which organizations the various personnel work for.
2. Add other members of the Project Team (EQB, USFWS, etc.) to the organization chart.
3. One block at the bottom references QA/QC. This is incorrect. These two functions are independent of each other and cannot reside with the same person or organizations."

Note that #2 above has never been addressed. It is likely that the project can benefit from improvements in communication and showing the relationship of the regulators and agencies to the project may help. EQB continues to request that this modification to Figure 2-1 of the MWP be implemented.

Navy Response

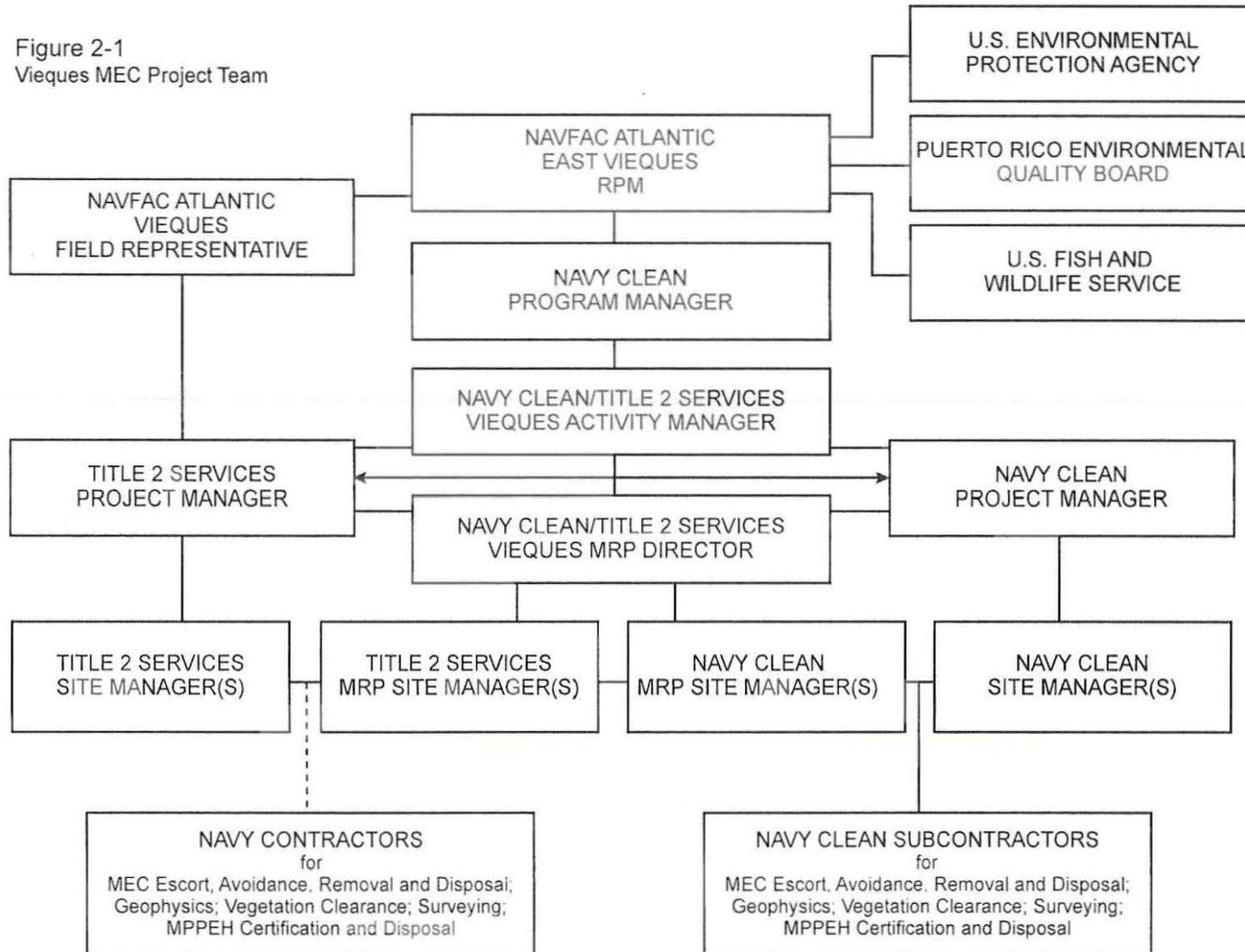
See attached change Page 2-9, which is Figure 2-1 showing communications with regulatory agencies and U.S. Fish and Wildlife directly with the NAVFAC RPM.

3. Appendix I – EQB’s comments begin on Page 18 of this appendix. However, they are labeled “UXO Pro, Inc. Comments.” UXO Pro is a contractor to EQB and has no authority to separately submit comments. All comments developed by UXO Pro are submitted only after review and approval of EQB. Therefore, it is not correct to refer to these comments as “UXO Pro comments.” It is requested that the document be modified to refer to these comments as “EQB comments.”

Navy Response

Noted. All future documentation will reference the letterhead individual/company/organization from the submittal when responding.

Figure 2-1
Vieques MEC Project Team



Responsibilities

During demolition activities, the Navy contractor/Navy CLEAN subcontractor SUXOS will have overall control of the Site. An EZ will be established around the demolition site according to the Explosive Operations Site Approval and Explosives Safety Submission. Only the SUXOS, UXO Team, and UXO-qualified safety personnel will be allowed within the EZ once the disposal operations have begun. The UXOSO will ensure safe work practices and procedures are observed,

General Procedures

The following general procedures will be followed for all disposals by detonation:

- The UXO Team, comprised of the UXOTIII and a UXOTII, will inspect the location, condition, and net explosive weight (NEW) of the MEC selected for disposal.
- The UXOTIII will ensure that permission to detonate explosives has been obtained from the SUXOS and coordinated with the appropriate outside agencies.
- It is the responsibility of the SUXOS to schedule the detonations and to ensure that all project personnel are accounted for before disposal operations begin.
- The UXO Team will prepare enough explosive charges to perform the planned detonations. The transportation vehicle will then be loaded with the properly containerized explosives and initiators, and other equipment required.
- Initiators will always be transported in a separate container from the main-charge explosives.
- A minimum separation distance of 25 ft will be observed for initiators and main-charge explosives while at the disposal site.
- If several MEC items are located in close proximity to each other, a mainline/branchline shot may be used to destroy these MEC simultaneously. Ensure the total NEW of the MEC to be destroyed does not increase the EZ minimum separation distance.
- Prior to initiation, the UXOTIII will ensure that guards are stationed at the roadblocks, scan the EZ for personnel, sound three distinct blasts on an air or vehicle horn, and then scan the area again and initiate the demolition charge if all is clear.
- In the event of a misfire, a 30-minute wait time for electric misfires or a 60-minute wait time for non-electric misfires will be observed.
- All waterways, roadways, and other access routes will be monitored for non-essential personnel during all phases of demolition operations.
- Roadways or waterways will be maintained to serve as fire breaks in areas where demolition activities are being carried out and unintentional fires may occur.

Post-Demolition Procedures

After successful initiation of the demolition shot, the UXO Team will conduct an inspection of the shot to confirm that complete destruction of the MEC item(s) has occurred. Upon verification, an "all clear" announcement will be made. If multiple demolition shots are

conducted, a systematic approach to dispose of MEC items scheduled for detonation will be performed. Following the final scheduled demolition shot of the day, notification will be provided to all parties on the notification list.

Engineering Controls

Due to the remote location of the VNTR work sites, the requirement for engineering controls is not anticipated. Fragment or blast mitigation may be provided by an appropriate DDESB-approved engineering control. Typical engineering controls for intentional detonations include tamping and sandbags. The design of such an engineering control shall be based on the Munition with the Greatest Fragmentation Distance (MGFD). The NEW used for the design of the engineering control shall be the total NEW of all munitions plus the initiating explosives.

2.4.14 Statistical Sampling

Intrusive MEC sampling consists of: 1) locating potential subsurface MEC items by mapping or detecting geophysical anomalies, and 2) excavating a percentage of the anomalies or area to determine if MEC or MPPEH metal is present. If statistical sampling is to be performed at the Former VNTR, the sampling methodology will be selected and described in site-specific work plans.

Sampling Methodologies

Statistical sampling determines how much sampling is required to sufficiently characterize the site for MEC contamination. Statistical sampling has evolved over the years to generate the following techniques (not in any hierarchical order):

- *Full-Coverage Sampling.* With this method, 100 percent of a site is sampled. This method is expensive, slow, and can be devastating to the environment.
- *Fixed-Pattern Sampling.* With this method, sampling data are gathered from grids spaced evenly over the site. With fixed-pattern, typically 10 percent of the total site is sampled.
- *Hybrid-Grid Sampling.* This method addresses random-pattern deficiencies by adding biased grids to random grids to ensure that areas with known contamination are sampled. Biased grids can also fill large unsampled areas left between random grids.
- *Transect Sampling.* This method would involve sampling along regular transects. It is particularly suited to boundary location (i.e., for identifying where impact areas end). This method requires a 1 to 5 percent sample area.
- *Meandering Path.* This method involves collecting geophysical data at a site by walking a meandering path over the study area. Geophysical sensors and data loggers collect data as GPS determines and records location. The meandering path technique eliminates the need to cut vegetation because the survey team simply finds a path through or around it. A safety escort and a geophysicist follow a loosely planned path designed to reduce distances between sample areas and to cover areas suspected of containing MEC.