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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
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NEW YORK, NY 10007-1866

MAR 17 2006

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Kevin Cloe  
Navy Technical Representative  
Installation Restoration Section (South)  
Environmental Program Branch  
Environmental Division,  
Atlantic Division (LANTDIV), Code EV23KC  
Naval Facilities Engineering Command  
6506 Hampton Blvd.  
Norfolk, VA 23508-1278

Re: Naval Activity Puerto Rico (NAPR), formerly Naval Station Roosevelt Roads,  
EPA I.D. Number PRD2170027203,

Draft Work Plan to Conduct Preliminary Assessment/Site Investigation at Pineros and  
Cabenza de Perro Islands, dated February, 2006.

Dear Mr. Cloe:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the Navy's February 2006 Draft Work Plan to Conduct Preliminary Assessment/Site Investigation at Pineros and Cabenza de Perro Islands ("the work plan").

In addition to technical review comments from EPA Region 2's contractor (Booz Allen) and UXOPro, the consultant for the PR EQB, which are given in the enclosures to this letter, EPA has the following comments:

1) The document is labeled as a "Work Plan to Conduct a Preliminary Assessment/Site Investigation", and in Section 1.1 of the work plan it is stated that "Its purpose is to generate field data to determine if further response action or remedial investigation is appropriate." However, EPA is not aware of the Navy having finalized a Preliminary Assessment/Site Inspection (PA/SI) report for Pineros and Cabenza de Perro Islands. Until an acceptable PA/SI report is completed, it is premature to proceed to the remedial investigation (RI) stage. Therefore, the title of the work plan should be changed to "Work Plan to Conduct a Preliminary Assessment/Site Inspection (PA/SI)".

2) Also, since the draft RCRA 7003 Order being developed for all of the NAPR facility is expected to include requirements for addressing Pineros and Cabenza de Perro Islands as "areas

of concern” (AOCs) to be addressed pursuant to RCRA corrective action requirements, the title of this work plan should indicate that it is equivalent to a Phase I RCRA Facility Investigation (Phase I RFI), under the RCRA corrective action process.

3) Although Section 2.1.3 (pg 2-4) of the work plan indicates a schedule for implementation is given in Figure 2-2, no such figure (or schedule) is included in the work plan. The schedule, when submitted, should also include the time-frames for submission of the draft final report to EPA and the PR EQB.

4) Section 2.2.7 (pg. 2-8) of the work plan, which is titled “Reporting”, contains an inadequate description of what topics will be addressed in the final report, such as: the presentation of the analytical results and whether those analytical results will be screened against acceptable human health and ecological screening values, and/or background; data validation; and how the geophysical survey results will be evaluated and reported. Also, Section 2.2.7 should be revised to include the time-frame for submission of the draft final report to EPA and the PR EQB.

5) In addition, Section 2.2.7 indicates that the report will present the results of a “preliminary human health and ecological risk assessments”. Although Appendix D “Conceptual Site Model” contains information on potential receptors and pathways, the discussion of those topics in the “Conceptual Site Model” is not adequate to fully define all potentially complete pathways and potentially impacted receptors. Also, the work plan itself gives no indication of how these “preliminary human health and ecological risk assessments” will be conducted, or the level of protectiveness considered acceptable.

6) Sections 3.1 (pg. 3-1) and 3.5 (pg 3-4) must be revised as follows:

a) All Navy CLEAN and CH2MHill SOPs that are to be followed must be explicitly cited and copies of those SOPs include in the work plan;

b) The work plan must include specific language regarding: how surface sampling locations will be selected; the minimum and maximum number of locations where surface samples will be collected; whether or not background surface soil samples will be collected; and the depth interval over which the samples will be collected;

7) Even though Section 2.2.4 (pg 2-7) indicates that any MEC (munitions and explosives of concern) will be avoided during implementation of the work plan activities, the work plan should be revised to include a discussion of how munitions-related and/or non-munitions related solid and/or hazardous waste will be managed and/or disposed of, or treated (e.g. via open detonation) if they are either generated or found during implementation of the work plan .

8) Section 5.5 (pg 5-6) should also cite as applicable or relevant and appropriate requirements (ARARs) regulations given at 40 CFR Part 261 and Part 266 Subpart M.

Within 35 days of your receipt of this letter, please submit a revised work plan addressing all comments given above and in the enclosures. However, as EPA understands that the Navy may commence implementation of the work plan imminently, comments given above and in the two enclosures should be followed during such implementation, pending submission to EPA of an acceptably revised work plan.

If you have any questions, please telephone me at (212) 637- 4167.

Sincerely yours,



Timothy R. Gordon  
Remedial Project Manager,  
Caribbean Section  
RCRA Programs Branch

Enclosures

cc: Ms. Yarissa Martinez, P.R. Environmental Quality Board, with encl.  
Mr. Julio I. Rodriguez Colon, P.R. Environmental Quality Board, with encl.  
Lt. Commander A. Ferguson, Naval Activity Puerto Rico, with encl.  
Mr. Felix Lopez, USF&WS, with encl.  
Ms. Kathy Rogovin, Booz Allen & Hamilton, w/o encl.

**REVIEW OF THE FEBRUARY 2006 DRAFT WORK PLAN TO CONDUCT  
PRELIMINARY ASSESSMENT/SITE INVESTIGATION**

**PIÑEROS AND CABENZA DE PERRO ISLANDS  
NAVAL ACTIVITY PUERTO RICO**

**REPA3-2203-081**

**March 13, 2006**

**I GENERAL COMMENTS**

1. While proposing to open parts of Piñeros Island for recreational use, the February 2006 Draft Work Plan (WP) to Conduct Preliminary Assessment/Site Investigation (PA/SI) repeatedly recommends that the majority of Piñeros and Cabenza de Perro Islands remains restricted to public access. The WP also indicates that, while no trespassing signs are present on several beaches, there is evidence of current and occasional human activity on Piñeros Island (e.g., land crabbing, beach access). Given that trespassing does occur, and the propensity for recreational users to wander off designated trails, Naval Activity Puerto Rico (NAPR) should modify the PA/SI WP to include sweeping land adjacent to the trails and in the vicinity of the historical bunkers for the presence of munitions and explosives of concern (MEC) and/or munitions constituents (MC). The PA/SI Report should specifically indicate the means by which NAPR and the Commonwealth of Puerto Rico will ensure that public access is limited to cleared areas.
2. Because NAPR recommends that Cabenza de Perro Island remains restricted to public access, no onshore PA/SI activity is proposed on this island. However, according to Section D.2.4.2 of the Conceptual Site Model (CSM) in Appendix D, United States Coast Guard employees periodically access the island to perform maintenance on the existing light tower. The CSM specifically lists these personnel as potential human receptors of MEC and MC. The WP should be amended to specifically discuss this periodic access, any precautions taken by Coast Guard personnel, the status of the light tower (i.e., its purpose and how long it will remain in use), and the justification for taking no action to protect these site visitors.
3. Although four suspected underwater demolition areas off the coasts of Piñeros and Cabenza de Perro Islands will be evaluated as part of the PA/SI, specific methods of investigation (e.g., visual reconnaissance, geophysical methods) were not specified, and according to Section 1.5.4, have not yet been determined. NAPR should provide an indication as to when these details will be finalized and should appropriately update all sections of the WP, the Health and Safety Plan (HSP) in Appendix B, and the Geophysical Investigation Plan (GIP) in Appendix C.

## II SPECIFIC COMMENTS

1. Section 1.5.3, Land Crabbing. The second paragraph of this section should be corrected to reference visual reconnaissance and digital geophysical mapping (DGM) transects shown on Figure 1-5, rather than Figure 1-3.
2. Figure 2-1, Project Team Organizational Structure. Expand this chart to include and show lines of authority for the program geophysicist referenced in Section 2.1.2, the lead data manager referenced in Section 4.2.1, and all proposed subcontractor services (i.e., vegetation removal, MEC avoidance, DGM, laboratory analysis, and data validation).
3. Section 2.2.3, Task 3 – Site Investigation. This section of the WP indicates that the underwater reconnaissance will be conducted visually. If NAPR decides to proceed with this methodology, the HSP in Appendix B should be expanded, as discussed in General Comment 3 above, to include safety precautions to be implemented during underwater activity and associated boating operations.
4. Section 3.1, Overall Approach. The sixth bullet in this section should be corrected to state that DGM will be performed on the *four* Piñeros Island beach areas that are potentially accessible to the public by boat.
5. Section 3.2.2, Vegetation Removal. Revise the second paragraph in this section to require that a MEC avoidance technician escort the biologist assigned to walk the trail and land crabbing areas during the visual survey for threatened or endangered flora and fauna. In accordance with MEC avoidance procedures outlined in the HSP, the biologist should not conduct this vegetation removal subtask unaccompanied. Furthermore, the escort should be qualified as a Level II Unexploded Ordnance (UXO) Technician, as described on page 4-36 of the WP.

The last sentence of this section should explain that a minimum of five feet of vegetation will be left uncut at the north and south beach trail heads so that the trails will not be visible *until MEC surveying and/or MC investigation efforts are completed*. Another sentence should be added to indicate at what point these remaining areas of vegetation will be cleared and inspected for MEC and/or MC.

6. Section 3.5.1, Field Operations. This assumes that at least twenty distinct areas of MEC or munitions debris will be encountered during the field effort along the transects. If it is possible that fewer MEC areas will be found, this section of the PA/SI WP should outline an alternate surface soil sampling plan. For example, in addition to sampling as many MEC areas as are found, the remaining surface soil samples could be collected in the

bunker storage or spent munitions disposal areas (as determined based on historical records or aerial photographs).

7. Table 3-3, Sample Collection Frequencies. A footnote should be added to this table indicating that the listed quality assurance and quality control (QA/QC) sample quantities may be adjusted if the number of field samples is significantly altered, if the sample collection effort takes longer than expected, or if field conditions warrant otherwise.
8. Section 3.5.2, Analytical Requirements and Sample Handling. The Sample Packaging and Shipping discussion on page 3-8 states that the selected analytical laboratory will be permitted as a soil laboratory with approval to receive imports of foreign soil samples in accordance with the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture. To allay concerns about possible administrative delays, this section should: 1) indicate whether NAPR considered any laboratories in Puerto Rico for this assignment (which would not need import permitting); 2) clarify whether the U.S. mainland laboratory to be selected for the PA/SI will already be permitted for soil imports; and 3) provide a rough estimate of the time line for permitting, if a non-permitted laboratory may be selected for the PA/SI.
9. Section 3.7.3, Investigation Results. This section should be expanded to also require that the PA/SI Report include figures showing the locations of found MEC or munitions debris; identified geophysical anomalies; the extent of vegetation removal; and the extent of visual MEC surveys adjacent to the trails, in the land crabbing area, and around the former bunker area.
10. Section 4.3.5, Sample Custody. Because no groundwater investigation is proposed for this PA/SI effort, the list of discretionary log book entry items on page 4-12 should be modified to delete well-specific data items. Instead, the recommended log book entry items should be tailored to reflect the UXO nature of the PA/SI (e.g., listing types and condition of MEC or munitions debris found near the selected surface soil sampling locations).
11. Section 4.3.9, Internal Quality Control. Revise the first sentence in this section to delete reference to trip blanks. Because the surface soil samples will be analyzed only for explosives constituent (i.e., no volatile organic analyses), there will be no need for this type of QA/QC sample.
12. Section 4.4.8, DGM Systems Quality Control. This section outlines DGM instrument standardization tests and acceptance criteria. For consistency with Table 4-2, the text of this section should include detailed discussion on azimuthal testing and height optimization. In addition, NAPR should ensure consistency between this section of the WP and Section C.22 of the GIP.

13. Section 5.1.1, Terrestrial Species. For consistency throughout the WP, and to streamline the field effort, this section should clarify that the species assessment will be completed by a qualified *biologist* familiar with both flora and fauna pertinent to the proposed effort.

The fourth paragraph in this section should be expanded to indicate that, despite the absence of *Ziziphus rignonii* and *Malphigia linearis* observations on the islands during the Environmental Assessment field surveys, these species are still categorized as species of special concern by the Puerto Rico Natural Heritage Program, and the surveying biologist will mark any observed specimens in the proposed work area.

The fifth paragraph in this section should be expanded to include examples of situations that would require removal of trees greater than four inches in diameter. In addition, the last two sentences state that unless the trail route can be adjusted, endangered or threatened species in the proposed work area will be flagged and left in place. The paragraph should indicate whether young, vulnerable specimens of these species will eventually be relocated off the trails to avoid trampling or other disturbance by recreational users. If NAPR believes that such efforts are unnecessary to protect these **species of special concern**, justification for this determination should specifically be provided.

14. Section 6.0, References. This section has been inadvertently omitted from the PA/SI WP and should be submitted for review.
15. Appendix B, HSP Introduction. To account for the possibility that field work may extend longer than expected, NAPR should consider revising the anticipated dates of work on page i. If necessary, the HSP should also be expanded to discuss summer, fall, and winter hazards and safety protocols.
16. Appendix B, Section 2.3.4, Bees and Other Stinging Insects. In the event of a bee sting where the stinger remains partially embedded in the skin, it is best to remove the stinger or stingers as quickly as possible. However, current medical guidelines advise against using tweezers or pinching the stinger between fingers, as this may inadvertently squeeze more venom into the victim. The stinger should be removed by scraping the stinger away in a side-to-side motion with a fingernail, stiff paper, or credit card. The HSP should be revised accordingly. In addition, the HSP should advise employees to keep bees away by wearing light-colored clothing; avoiding scented soaps and perfumes; and containerizing all food, drinks, and garbage consumed in the island area (outside the exclusion zone). The HSP should also suggest the use of ice or a cold compress and pain-relieving creams or oral medications if stung.
17. Appendix B, Sections 2.5, 3.2.2, and 8.2. These sections should be revised to use UXO job titles consistent with those outlined in Section 4.4.6 of the PA/SI WP. In addition, reference to the Know Trailer Park project should be deleted from Section 3.2.2.

18. Appendix C, Section C.19, Data Positioning. The last sentence in this section indicates that the locations of geophysical anomalies will not need to be reacquired at a later date. This statement should be deleted or clarified, as it may indeed be necessary to relocate detected anomalies for further remedial investigation and/or corrective action.
19. Appendix D, Section D.3.2, Interaction. The first paragraph at the top of page 8 should be corrected to reference heavy vegetation on Piñeros Island and the steep, rocky shoreline on *Cabenza de Perro Island* as natural barriers to unauthorized public access.

# UXOP<sub>Pro</sub>

## Comments on the Draft Work Plan to Conduct a PA/SI of Pineros and Cabeza de Perro Islands Dated February 2006

Comments Developed March 10, 2006

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1	N/A	N/A	This work plan is for conducting a PA/SI of both Pineros and Cabeza de Perro Island. However, there is no information on what, if any, investigation is going to be conducted on Cabeza de Perro Island. It is recommended that the plan be modified to document what investigation is going to be conducted on Cabeza de Perro Island, or state why no investigation is necessary.
2	1-12	1.5	This section says, "A complete investigation for, or removal of, MEC from the islands would require the removal of extensive areas of vegetation, which would have negative impacts on island wildlife." However, there is no support provided for this statement. What evidence exists to support this statement and conclusion? Has a study been performed which can be cited? It is possible that some areas can benefit from vegetation removal. For example, some environments include a natural cycle of burning that is required for maximum benefit of the vegetation and wildlife. It is recommended that this statement either be supported by scientific analysis or that it be removed.
3	1-12	1.5	This section says, "Due to site conditions, NAVFAC, in consultation with USFWS, DNER, and EQB, has decided on an approach that will allow public access to limited areas of Pineros Island, while protecting the ecology of the islands by disturbing only a small portion of the vegetation on Pineros Island."  This statement implies that a future land use plan has been, at least informally, discussed and decided upon by the referenced agencies. Questions to USFWS and EQB indicate that, although informal discussions have taken place, no formal agreement has been reached on how much of the islands will be

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			<p>made available to the public for use in the future. It is recommended that this statement be modified to clearly indicate that the agencies have not “decided on an approach that will allow public access to limited areas of Pineros Island”.</p> <p>Furthermore, the entire SI approach is based on this assumed agreed-upon approach to future land use. If there is not, in fact, agreement by the agencies on this issue, it may mean that additional areas should be visited and investigated during the SI. It is recommended that this issue of future land use be revisited and consideration be given to expanding the investigation area if this analysis indicates that additional areas will be accessible for recreational use in the future.</p>
4	N/A	Figure 1-5	<p>The legend on Figure 1-5 is a difficult to understand. This map should be consistent with the four investigation areas described in Section 1.5 (beaches, Bunker Trail, land crabbing and offshore anchorages). Figure 1-5 shows “Trail” and “Other Geophysical Investigation Areas”. It is recommended that Figure 1-5 be modified to specifically identify “Bunker Trail” and “Land Crabbing Area”.</p>
5	1-14	1.5.3	<p>This section references Figure 1-3 as showing the location of DGM transects and land crabbing area, etc. This reference is not correct. It should probably be Figure 1-5. Recommend correction.</p>
6	<p>N/A 4-2 4-3 4-24 4-27 N/A 4-36 C-11</p>	<p>Figure 2-1 4.2.1 4.2.1 4.4.1 4.4.2 Table 4-1 4.4.6 C.23</p>	<p>The descriptions of UXO and QC personnel in the sections referenced are not consistent.</p> <ol style="list-style-type: none"> <li>1. The organization chart (Figure 2.1) and the accompanying description of project personnel in Section 2.1.2 includes a “Senior UXO Safety Officer”. However, there are no QC organization and QC personnel included on this organization chart.</li> <li>2. Page 4-2 mentions a “Senior UXO Safety Officer” but the description of this person refers to the “UXOQCS”. Is the “Senior UXO Safety Officer” also serving as the “UXOQCS”? Are they the same person?</li> <li>3. On Page 4-3, the description of the FTL says he “... is also responsible for consistently implementing program QA/QC measures at the site ...”. This indicates that the person responsible for implementing the field program is also responsible for performing QC. This is highly irregular. It would be more appropriate to give the Senior UXO Safety Officer responsibility for QC as described in the plan and cited in the previous comment (#2 above).</li> <li>4. Section 4.4.1 says “The PM is responsible for ensuring the three-phase control process ... is implemented for each DFOW listed in this QCP.” It is recommended that this duty be given to a</li> </ol>

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			<p>QC representative, possibly a dual-hatted Senior UXO Safety Officer/MEC QC Manager. It is highly irregular to give QC duties to the project PM because this makes the PM responsible for QC of his own work.</p> <ol style="list-style-type: none"> <li>5. Section 4.4.2 says “the PM is responsible for verifying compliance with this QCP through audits and surveillance. The PM or a designee is to inspect/audit the quality of work being performed for the definable feature or work. The PM or a designee is to verify that procedures conform to applicable specifications stated in this work plan or other applicable guidance.” Again, this injects confusion concerning who is required to perform QC duties, inspections, audits and surveillance. It appears that the PM is performing QC on his own work, which is highly irregular.</li> <li>6. Table 4-1 refers numerous times to an “MEC QCS”. There is no other reference to this position in any organization charts and job descriptions. Who is the person, what does he do, and where in the organization does this position exist.</li> <li>7. At the bottom of page 4-46 there is the heading “Senior UXO Safety Officer” immediately followed by the description of the duties of the “UXOQCS”. Again, are both of these positions working on the project? Are they the same person dual hatted?</li> <li>8. Appendix C, Section C.23 says that “the DGM subcontractor and CH2M Hill will perform QC of geophysical data ...”. What is the QC responsibility of the DGM subcontractor. They are not mentioned in Chapter 4 and, specifically, are not listed on Table 4-1 or any of the other sections listed in the comments above where QC checks for DGM are listed. It is recommended that the QC responsibilities of the DGM subcontractor be described in the plan.</li> </ol> <p>Overall, it is recommended that the QC organization for this project be reviewed and that a clear explanation of the duties of the QC personnel be developed that is consistent throughout all text, figures and charts.</p>
7	2-4	2.1.3	This section references a project schedule in Figure 2-2. However, this figure is not included in the plan. Please include this figure.
8	N/A	Section 3	This plan does not contain any description of what action will be taken in the event that MEC is found during the investigation. EQB understands that intrusive activities to find MEC are not going to be performed. However, it is likely that some MEC with potential explosive hazards will be encountered

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			during the SI. Since it has been established that the site is used by unauthorized users for recreational purposes and land crabbing it is recommended that a procedure be developed to protect local citizens from MEC that is found on the surface, especially on beaches and in areas that receive vegetation clearance for this project.
9	3-1	3.1	This section says there are three beach areas potentially accessible to the public. Figure 1-5 and Section 1.5.1 document four beaches. It is recommended that this section be corrected to note four beach areas will be the subject of the SI.
10	4-3	4.2.2	This section says "... the PM will prepare written project instructions that will be distributed to all team members." Are these written instructions in addition to this work plan? If so, why are they necessary? Will they be reviewed by the agencies and regulators? It is recommended that a more complete description of these written instructions be provided in the work plan and that they be reviewed by the regulators and agencies prior to use and implementation.
11	4-25 4-26	4.4.1 4.4.1	<p>The section describing the Initial Phase of QC says that the Initial Phase will be used to "establish the quality of work required to properly deliver the project in accordance with contractual requirements". This is unusual. The quality requirements should be established now prior to work beginning, not during the Initial Phase of QC after the work has started. It is recommended that this section either be revised to refer to quality requirements that are established now, during project planning, or that additional guidance be provided for how these work quality requirements should be established during the Initial Phase.</p> <p>Also, it refers (in #3 under "Follow-up Phase") to testing procedures "performed in accordance with procedures established during the Preparatory Phase and confirmed during the Initial Phase". Again, it would be most appropriate to establish required testing procedures now during project planning. However, if this is not possible it is recommended that additional guidance be provided for how these testing procedures should be established during the Preparatory and Initial Phases.</p>
12	4-26	4.4.1	This section on the Follow-up Phase refers to Section 4.4 for the audit activities associated with each DFOW. However, this is section 4.4 so this reference appears to be referring to itself. It is possible that this reference should be to Table 4-1 which appears to provide this information. It is recommended that this reference be checked and corrected if it is in error.
13	4-27	4.4.1	The section on "Final Acceptance Audit" doesn't describe who is required to perform this audit. The last

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			<p>line of this paragraph seems to indicate that the contractor is going to perform this audit and accept the work. This is highly irregular because this function is almost always a QA function performed by the contracting authority, in this case the Navy. It is recommended that this be reevaluated and that information be added to this section do describe whether or not there is going to be any Navy QA and final acceptance of work done on the project.</p>
14	N/A	Table4-1	<p>The bottom line of the first page of this table under “Audit Procedures” references Section 4.11. This section doesn’t exist. Please correct this reference.</p> <p>The first line on the second page under “Audit Procedures” references Section 3.3. However 3.3 is the Geophysical Plan (a brief reference to Appendix C) which doesn’t contain the needed information on “Surface MEC Identification”. Please correct this reference.</p> <p>The large row for “DGM Survey” contains numerous potential problems:</p> <ol style="list-style-type: none"> <li>1. The “Responsible Person” for the DGM audits is the “Project Geophysicist” who is identified in Section 2.1.2 as Tamir Klaff. Performing these daily audits will require him to be on-site continuously for the duration of the DGM work. Please either confirm that he will be on-site full-time to perform this QC work or assign this important QC auditing function to someone else who will be on-site every day.</li> <li>2. There are many “Audit Procedures” listed that are not required for this project (Quad Bike Safe Operating Instructions, TM-4 audits, TM-6 audits, etc.). It is recommended that only QC audits that are applicable to this project be listed.</li> <li>3. There are many audits that are required by the Geophysical Investigation Plan (Appendix C) that are not listed on this table. It is recommended that all applicable audits be included on this table.</li> <li>4. This table references a geophysical prove-out (second page, last two rows) as defining the depth criteria for QC acceptance. However, the plan, including Appendix C, the Geophysical Investigation Plan, doesn’t mention a GPO anywhere else. Please either provide information on the GPO, or indicate how this QC criteria will be met without establishing the detection depth criteria in a GPO.</li> </ol>

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			<p>On the third page for “DGM Data Processing”:</p> <ol style="list-style-type: none"> <li>1. The Project Geophysicist is again shown as the “responsible person”. This is further evidence of an error in the table. This same person (Tamir Klaff) cannot be on-site performing DGM survey audits (see above) and off-site performing audits of DGM data processing.</li> <li>2. There are many “audit procedures” that are not relevant to this project and some that are required by the Geophysical Investigation Plan (Appendix C) which are not included.</li> </ol> <p>It is recommended that this important table be reviewed and appropriate revisions be made.</p>
15	4-32	4.4.4	<p>This is the first mention of MRSIMS. If this system is going to be used to record field data for the project it, and procedures for its use, should be described in Chapter 3. It is recommended that additional information on this system, its capabilities and use, be added to the operational section of the work plan.</p>
16	4-37	4.4.8	<p>This section references Figure 4-2, but this figure doesn't exist. It is possible that this reference should be to Table 4-2. Please correct this reference.</p>
17	4-38 4-40 C-10 C-11	Table 4-2 4.4.8 C.22 C.23	<p>This table (Table 4-2) provides QC inspections for DGM instruments including information of the frequency of the checks and the acceptance criteria. It is recommended that this information either be added to Table 4-1, which includes some checks for DGM instruments but not the ones on Table 4-2, or explain why some of the QC inspection criteria for the project is on Table 4-1 and other QC inspection criteria is on Table 4-2.</p> <p>This same comment applies to the “QC of DGM Data and Deliverables” information on Page 4-40. This bulleted information describes other required QC checks that are not listed on Table 4-1. Listing QC checks in various locations is more confusing than listing them all in one place. It is recommended that Table 4-1 be used for this purpose.</p> <p>Also, Appendix C, Section C.22 has another entire section on QC checks to be performed on DGM instruments. It is difficult to find all of the different QC checks that need to be performed on DGM instruments and it is recommended that this information, or at least references to where it can be found, be included in Table 4-1.</p>

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			<p>Also, Section C.23 on Page C-11 and C-12 contains a whole list of QC checks that must be performed on DGM data. Again, it is recommended that this information be added to Table 4-1 or at least reference in Table 4-1 where these required QC checks are described and who is responsible for completing them and how often.</p>
18	N/A	Appendix A	<p>The ASR contains almost no new data on the two islands. Of particular note is that the personnel interviewed have almost no knowledge of Pineros. For example, according to Attachment A, Lt. Klinker has never been to Pineros and CPO Marlow has only been to Pineros once to provide UXO escort for the site visit team in late 2004. EQB believes there is a wealth of information among the former SEAL Team members who used to perform training on Pineros.</p> <p>For example, EQB interviewed one recently retired Navy veteran who has intimate knowledge of Pineros from operations there as a SEAL and later as the OIC of the Roosevelt Roads EOD team. The following is a partial excerpt from our interview with him:</p> <p style="padding-left: 40px;">“He claims that “Pineros was our island, and it was like the wild, wild west”. He states the entire island was a shooting gallery. They fired mortars, flares, grenades, 40-mm grenades, Bangalore torpedoes, and that helicopters fired mini-guns and hellfire missiles into the island. The hill on top of the island has an extensive tunnel network and they live-fired into the tunnel network as well as booby-trapped it and the rest of the island for that matter. He feels that the tunnel network is extremely hazardous to personnel unfamiliar with it due to the booby traps and potential for UXO. Additionally while assigned to the EOD detachment, he notes that EOD never did any clearance work at Pineros.</p> <p style="padding-left: 40px;">His Seal team also trained special-forces from a number of different nations on Pineros. This training often included live firing 40-mm projectiles and mortars into the water in the bay on the North East side (the side away from Roosevelt Roads). He recalls that the shallow bay that is on the Vieques side was not used for live fire, but underwater demolition operations were conducted there.”</p>

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			<p>This person is easy to contact and interview and there are likely to be many more recently retired veterans who will provide information on their operations on Pineros. It is highly recommended that the ASR be revised to include interviews with persons knowledgeable of the operations that took place on Pineros.</p> <p>Also, ASR Attachment A contains a list of documents that were obtained and reviewed. But, there is no information on what was contained in the documents or any analysis of this information. It is recommended that the description of the documents be supplemented with a description of what useful information, if any, they contained.</p> <p>Also, it would be interesting to see if the British have any archival information available about what they did on Pineros during World War II. It should be possible to contact them and see if they have any records of those activities that can be released for this ASR. It is recommended that this be done.</p>
19	3	App. C, Att. 1, Table 1	This table contains several references to "Section 6". However, the only "Section 6" in this plan appears to be the section on "References" which doesn't apply to this table. It is recommended that this reference to "Section 6" be corrected.
20	N/A	N/A	There are several references made in the work plan to a surface survey of Pineros and Cabeza de Perro performed by NAVEODTECHDIV in late 2004. EQB reviewed the report of this site visit and EQB's comments on this report are attached below for information.

**UXO Pro, Inc. Comments on the  
UXO Site Analysis of Pineros and Cabeza de Perro Islands  
Roosevelt Roads, Puerto Rico  
Prepared by the Naval Explosive Ordnance Disposal Technical Division  
Dated December 2004**

**Comments Developed July 13, 2005**

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1	5	1.0	<p>Review of this summary section resulted in the following comments:</p> <ol style="list-style-type: none"> <li>1. The field investigation for this site analysis was accomplished in only ten days. This is sufficient time to walk around the islands and get a feeling for the terrain and obvious types of contamination. But it is not sufficient time to produce data on which future decision making can be based. The contents of this report should be viewed as important information that will be useful when planning future site characterization efforts.</li> <li>2. The first paragraph contains a list of MEC that were identified during the site inspection. However several MEC shown in photos elsewhere in the report or listed in Appendix C are not included in this list including an orange drone, missile cases, and expended 2.75-in. rocket motors.</li> <li>3. The first paragraph also lists one item (a percussion grenade) as the only live and dud fired UXO found. However, Appendix C also lists a 40-mm flare as dud fired.</li> <li>4. It is noted in this section that no geophysical survey was accomplished during the site inspection and that only a surface walk was conducted. This supports the conclusion in #1 above that this site inspection did not produce adequate data for future decision making and should only be used as helpful information for planning future site characterization efforts.</li> <li>5. The observation in the final sentence that land-clearing (vegetation removal) is required in order to perform a thorough site characterization is probably correct. The continued statement that this “may not be appropriate for the ecological well being of the islands” is not supported by the evidence presented in the report and is not an appropriate conclusion for this report since no ecological expertise</li> </ol>

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			was associated with this site analysis and ecological evaluation is not included in the stated "Purpose" of the site analysis (Section 2.2 on page 6).
2	7	2.3	This section includes a description of the geophysical equipment that was transported to the islands. However, it should be noted that only the two Schonstedt magnetometers were used during the site walks and no subsurface geophysical surveys were conducted because of difficult terrain and vegetation conditions as described in Section 5.1 on page 13. This supports the conclusion in #1 above that this site inspection did not produce adequate data for future decision making and should only be used as helpful information for planning future site characterization efforts.
3	8	2.4	<p>1. This section, and several other sections in the report, state that there is no evidence of "crew-served weapons" use on the islands. The term "crew-served weapons" isn't very useful for this type of site inspection and report because this term seems to mean different things to different authorities. The U.S. Army website (go to <a href="http://www.army.mil/fact_files_site/index.html">http://www.army.mil/fact_files_site/index.html</a> then click on "Individual and Crew Served Weapons and Equipment) lists bayonet, M-4 Carbine, M-9 Pistol, M-16 Rifle, MK 19-3 Grenade Machine Gun, M203 Grenade Launcher, M-240B Machine Gun, and M-249 Squad Automatic Weapon as "crew served" weapons. However, the website "Janes Infantry Weapons" states, "<b>Crew-served weapons</b>, including machine guns, automatic grenade launchers, cannons, anti-tank weapons and mortars". It doesn't appear, therefore, that this term is very useful in describing a particular class of weapon system. For example, are the missiles and 2.75-in rockets described in #2 below "crew-served weapons"? If not, what does it matter whether or not evidence of "crew-served weapons" was found if evidence of 2.75-in. rockets and missiles was found? The main point is that the site inspection produced ample evidence of MEC including 40-mm grenades, hand grenades, 2.75-in. rockets and missiles and the references to "crew-served weapons" is not relevant and may be confusing.</p> <p>2. This section also states that there is no evidence of "heavy weapons usage". This term is not identified, however, the presence of missile cases and 2.75-in. rocket motors would indicate that "heavy weapons" (as opposed to only small arms) were used on Pineros Island.</p> <p>3. The statement that "no UXO was identified or found" is not correct. The report documents that a dud-fired percussion grenade and a dud-fired 40-mm flare were found. These are UXO according to the commonly used definition of that term and the formal definition contained in DoD 6055.9-STD.</p> <p>4. The statement that the "Environmental Condition of Property (ECP) investigation uncovered no</p>

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			evidence that either island was ever used as an impact area” indicates that the ECP was not very thorough. As evidenced by the results of this brief site analysis Pineros island is littered with the remnants of MEC and the evidence of 40-mm targets is overwhelming. Based on the omission of this information from the ECP it is likely that the adequacy of the ECP itself is suspect.
4	10	Figure 4	This figure identifies the location of two underwater demolition areas. These two areas should be investigated to determine if any MEC or explosive hazards remain.
5	10	Figure 5	The area on the southeast of this map called “Demo Beach” is adjacent to one of the underwater demolition area identified in Figure 4. This is further evidence that this site should be adequately investigated for MEC and explosive hazards.
6	13	5.1	<p>1. The first paragraph states that a geophysical survey was not conducted during the site inspection and that the site inspection was accomplished in only ten days. This supports the conclusion in #1(1) and #1(4) above that this site inspection did not produce adequate data for future decision making and should only be used as helpful information for planning future site characterization efforts.</p> <p>2. The first paragraph also states that, “Pineros Island is cluttered with remnants of military maneuver, ambush, and breaching activities”. This statement supports the conclusion that a more thorough site characterization is required to determine the nature and extent of remaining contamination.</p> <p>3. The first paragraph also again refers to “crew-served weapons” and this time defines this term as “mortars, heavy machine guns, artillery”. As noted in comment 3(1) above, the use of this term is problematic because it is not specifically defined. Also, as noted in comment 3(2) above, there is evidence of other significant MEC (missiles and 2.75-in. rockets) which may not fit the definition of “crew-served weapons” but are still significant explosive ordnance.</p>
7	13	5.1	In the last line of the second paragraph it is theorized that the 40-mm impact area is incorrectly located on the map shown in Figure 5. It is good that the field observers note their impressions, but conclusive evidence for this is not presented in the report. It is recommended that an Archive Search Report be conducted to provide additional background information. For example, the source of the map in Figure 5 is not currently known. Performing research for an Archive Search Report may locate the source of this map and other range maps that will either confirm or contradict the suspected location of the 40-mm range.
8	13	5.1.1	The list of “ordnance and UXO related debris” in this section is missing the following items:

Cmt. No.	Pg.	Sec.	Comment/Recommendation
			<ul style="list-style-type: none"> <li>• Orange drone</li> <li>• 2.75-in. rocket motors</li> </ul>
9	14	5.2	This section notes that the terrain and vegetation on Cabeza de Perro prevented the site inspection team from performing a significant inspection of this site. This is further support for the conclusion that additional site characterization is required.
10	17	6.0	<p>1. The conclusion that “over half the island is probably UXO and clutter free” is not adequately supported in the report. Data required to support this conclusion requires vegetation removal and geophysical survey which were not performed during this site inspection.</p> <p>2. The statement that land clearing and UXO surveying “would be potentially harmful to the environment” is also not supported. Vegetation removal and geophysical surveys have been performed in environmentally sensitive areas in the past and it is likely that they can be performed on these sites. In addition, environmental professionals were not consulted on this issue. This results in lack of support for this statement.</p>
11	18	6.0	The conclusion that “the current warning signs that are posted around the island would suffice for engineering controls” if the property is going to be used as a wildlife refuge is not supported and is not appropriate. Use of property as a wildlife refuge requires access to the property for wildlife observation, research, management, fire fighting, etc. Erecting warning signs may or may not be adequate and appropriate. This is a complex decision that must include consultation with the end user in order to accurately develop appropriate institutional controls. This conclusion that the existing warning signs represent adequate institutional controls is not adequately supported.

## EPA Comments on Preliminary Assessment/Site Investigation Work Plan for Piñeros &amp; Cabeza de Perro Islands

Comment Number	Section	Comment
1	General	Per CERLCA, PA/SI stands for Preliminary Assessment/Site <u>Inspection</u> , not investigation.
2	General	What is the procedure when a MEC item is discovered on the surface? Leaving MEC in place where it is accessible is unacceptable. A procedure for guarding the item and having EOD respond needs to be added to this work plan.
3	General	What work is being done on Cabeza de Perro? If none, the reason needs to be explained in the plan so regulators can review and comment.
4	1.2	The "land use plan that would allow limited public access for recreational purposes" should be developed separately but can be based on the findings of this PA/SI. It should not be a part of the PA/SI report.
5	1.5.4	What is the intention for "reconnaissance" for the underwater areas? Will video or photos records be retained? Will underwater geophysics be performed and for what purpose?
6	2.1.3	Where is the schedule for performing the ESI, Figure 2-2?
7	3.1	Please include the distance on either side of the trail for DGM in this description. Later discussions indicate 4' on either side of the trail.
8	3.1	How many transects and what spacing will be used at the illegal crabbing area of Figure 1-5? A more detailed figure would be helpful.
9	3.1	This section indicates 3 beach areas, but Figure 1-5 and later discussions indicate 4 areas.
10	3.2.2	This section indicates the total area of vegetation removal will be approximately 0.75 acres. Section 5.4 indicates the total area of vegetation removal will be approximately 0.30 acres.
11	4.4.8	Figure 4-2 does not exist. It should reference Table 4.2.
12	5.5	RCRA is possibly an ARAR, especially if MEC is found on the surface and needs to be blown in place.
13	Appendix A	The ASR plan is not very extensive. Please refer to PR EQB's recommendations on personnel to interview to expand the historical knowledge of the site.
14	Appendix C C.3	What is a "MEC qualified geophysicist"? The qualifications are not listed in the subsequent specific qualifications for that job function.
15	Appendix C C.4	Item 4 lists the four underwater demo areas. Section 1.5.4 indicated that the decision had not been made to do geophysics for these areas. What is your intent for investigation of these underwater areas?

16	Appendix C	There is no mention in this section of the geophysical prove out which defines the depth criteria for QC acceptance in Table 4-1. Is there going to be a geophysical prove out for the DGM work?
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