

1/10/07 - 02774



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

January 10, 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 ERA and Phase II SI Work Plan, Former Vieques Naval Training Range (VNTR), Vieques, Puerto Rico.

Encl:

- 1) Response to US EPA and PR EQB comments on Final ERA and Phase II SI work plan dated December 21, 2006.
- 2) Changed page IX for Final ERA and Phase II SI work plan (CH2M HILL, November 2006).
- 3) Changed page 3-9 for Final ERA and Phase II SI work plan (CH2M HILL, November 2006).
- 4) Changed pages C-13, C-14, and C-15 for Final ERA and Phase II SI work plan (CH2M HILL, November 2006).

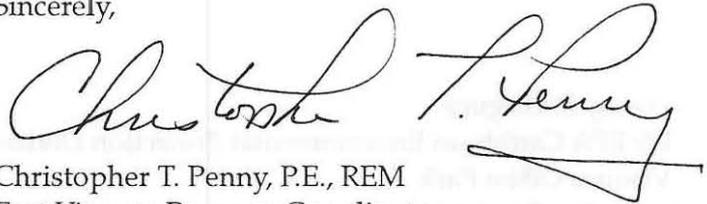
Dear Mr. Rodriguez:

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, 3 and 4 are changed pages which address the editorial changes requested by US EPA and PR EQB.

A review of the comments indicates the technical approach is not impacted and remains unchanged. NAVFAC Atlantic intends to proceed with the implementation of the work plan beginning January 29, 2007. This action will maintain the project schedule and supports ongoing risk reduction activities for the protection of the public and environment.

If you have any additional comments, or would like to request a site visit to observe any of the Phase II Site Inspection activities, 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 ERA and Phase II SI Work Plan, Former Naval Training Range (VNTR), Vieques, Puerto Rico

Please reference the number preceding the response in the December 21, 2006 comments (US EPA) for the previous comments and responses.

EPA Specific Comments:

1 - This comment requested the addition of "EOD" into the List of Acronyms. Please find attached page revision (page IX), which includes "EOD" acronym and definition.

6 - This comment was regarding the QC procedures for conducting investigation actions to identify MEC at the various MRS's. The response should read "... Section 3.2, page 3-5 ..."

All of the tasks identified in the Master Work Plan Table 9-1 as needed to complete this investigation will have the listed inspections conducted. In the case of QC failure, the action listed under the "Action If Failure Occurs" column will be taken.

There is no QC criteria related to surface removal because no removal will be conducted as part of the Phase II site inspection.

EQB Specific Comments:

1 - This comment inquired as to why the numbers of PI sites identified in the Final document did not match the numbers of PI sites in the previous comment response. The numbers in the final document are correct for the PI sites. The draft and final document Sections 3.2.4 and 3.2.5 list the specific PI sites.

2 - This comment requested a revised MRS numbering system. It is the Navy's belief that changing the numbering system at this point may create more confusion due to the numbers of documents and correspondence already produced. As a result, the Navy will retain the existing numbering system.

3 - This comment implied that MRS-12 is not identified on Figure 2-2. Please review document Figure 2-2, which shows the location of MRS-12. The debris off-shore is not considered part of EMA MRS-12. It is not associated with a "terrestrial" MRS; however will be investigated as requested by USFWS. Section 3.2.5, page 3-9, bullet number 6, line 17 has been revised as follows: "*6 sites identified by USFWS on and near EMA MRS-46 (including off-shore debris).*" The changed page (3-9) is attached.

4 - This comment was regarding the use/development of a site specific or application of an existing hazard assessment/prioritization protocol. The hazard assessment references were removed from the Final document with the exception of the statement on line 1 of page V, which states that a hazard assessment will be conducted once agreed to. The use of prioritization protocols/hazard assessments is not needed to implement this work plan and will be developed with the MRP Subcommittee and will be incorporated into the Phase II SI Report.

5 - This comment was regarding the hazard assessment presented in the ERA/Phase II SI report and the information being presented in this work plan. Please see response to comment number 4 above.

6 - This comment was regarding the QC test for the GPO, specifically the different test identified for test #8 in the Master Work Plan and the ERA/Phase II SI work plan. Table 3 of Appendix C has an editing error where the test #9 (octant test) was "cut off." Corrected pages C-13 through C-15 are attached for the ERA/Phase II SI work plan. A change for the Master Work Plan will be documented to make both plans consistent.

B-2. - This comment was in reference to FAR requirements noted in the Master Work Plan and the difference in the requirement identified in the ERA/Phase II work plan. A documented change to the MWP will be developed to address the FAR requirements.

1 Acronyms and Abbreviations

2	AFWTF	Atlantic Fleet Weapons Training Facility
3	AOI	Area of Interest
4	ATG	Air-to-Ground
5	BIP	Blow-in-Place
6	CERCLA	Comprehensive Environmental Response, Compensation and
7		Liability Act
8	CLEAN	Comprehensive Long -Term Environmental Action Navy
9	CSM	Conceptual Site Model
10	DEM	Digital Elevation Model
11	DGM	Digital Geophysical Mapping
12	DoD	Department of Defense
13	DOI	Department of Interior
14	ECA	Eastern Conservation Area
15	EMA	Eastern Maneuver Area
16	EOD	Explosive Ordnance Disposal
17	ERA	Expanded Range Assessment
18	FS	Field Superintendent
19	ft	feet/foot
20	GIS	Geographic Information System
21	GP	Gun Position
22	GPO	Geophysical Prove-Out
23	GPS	Global Positioning System
24	ID	Identification
25	LAW	Light Anti-Armor/ Anti-Tank Weapon
26	LIA	Live Impact Area
27	MEC	Munitions and Explosives of Concern
28	mm	Millimeter
29	MOA	Memorandum of Agreement
30	MRA	Munitions Response Area
31	MRP	Munitions Response Program
32	MRS	Munitions Response Site
33	NAVFAC	Naval Facilities Engineering Command
34	NOSSA	Naval Ordnance Safety and Security Activity
35	NPL	National Priority List
36	OB/OD	Open Burn/Open Detonation
37	OP	Observation Post

- 1 • Parameters to be collected for each MEC item include: item ID, item group, class,
2 category, filler type, fuzing, quantity, and date found. Photographs of representative
3 items will be taken.
- 4 • For QC purposes, evaluation of the investigated areas will be performed using the same
5 approach and equipment that the initial investigator used to verify proper identification
6 and data collection for MEC items.
- 7 • No surface or subsurface removal will be completed at the sites.

8 **3.2.5 MRA-EMA**

9 A surface MEC investigation of the following areas will be performed at the MRA-EMA and
10 are shown in Figure 3-1:

- 11 • 10 percent of MRSs 15 through 20, 25 through 29, 34, 35, and 40.
- 12 • 10 percent of the range fan areas within MRSs 30, 32, and 36 through 38 (including
13 PAOC BB).
- 14 • 100 percent of PIs 2, 3, 13, 14, 15, 16, 18, and 19.
- 15 • 100 percent of PAOCs Z, EE, and FF.
- 16 • 100 percent of the two AOIs.
- 17 • 6 sites identified by USFWS on and near EMA MRS 46 (including off-shore debris).
- 18 • 10 percent of MRSs 2 and 4 beyond the target areas.

19 The approach and objectives for the inspection of each of the sites are given below.

20 The objectives of the inspections are to: 1) collect surface data to assess the magnitude of
21 MEC present 2) gather information to determine if future inspections or investigations are
22 warranted at this site. Based on the surface MEC data, the sites can be prioritized and
23 determine what further actions should be taken. In addition, the inspection will provide
24 sufficient data to estimate the level of effort required to perform further actions if necessary.

25 The tasks to be completed at the MRA-EMA include the following:

- 26 • A preliminary survey will be conducted by a qualified biologist to evaluate the areas for
27 presence of threatened/ endangered plant species prior to any vegetation clearance
28 activities.
- 29 • Vegetation clearance will be conducted using hand tools to facilitate access to the
30 transects. The approach to vegetation clearance will be one that minimizes the amount
31 of vegetation cut and will facilitate the ability of individuals to walk transects.
- 32 • Transects of approximately 5 feet in width will be chosen to gain access to a
33 representative sample area of the EMA. Figures 3-5, 3-6, and 3-7 shows preliminary
34 transects proposed for the EMA. Sensitive vegetation/habitat, rough terrain, water, or
35 other features may have impacts on determining the location of transects, and the area
36 inspected.

- 1 3. **Personnel Test.** This test checks the response of instruments to the personnel and their
 2 clothing and proximity to the system. On a daily basis, instrument coils/sensors (for those
 3 instruments being used that day) will be checked for their response to the personnel
 4 operating the system. The response will be observed in the field for immediate corrective
 5 action and transmitted back to the processor, and analyzed and checked for spikes in the
 6 data that can possibly create false anomalies. The personnel test will be conducted at the
 7 beginning of the survey operations for each work day.

8 TABLE 3
 9 Geophysical Instrument Standardization Tests and Acceptance Criteria

Test	Test Description	Acceptance Criteria	Power on	Beginning of Day	Beginning and End of Day	1st Time Instrument Used	2% of Total Area Surveyed
1	Equipment Warm-up	Equipment specific (typically 5 min)	X				
2	Record Sensor Positions	+/- 4 inch (2.54 cm)		X			
3	Personnel Test	Based on instrument used. Personnel, clothing, etc. should have no effect on instrument response.		X			
4	Vibration Test (Cable Shake)	Data profile does not exhibit data spikes		X			
5	Static Background & Static Spike	+/- 20% of standard item response, after background correction			X		
6	Azimuthal Test *	Sensor orientation that minimizes drop-outs				X	
7	Six Line Test	Repeatability of response amplitude +/-20%, Positional Accuracy +/- 20 cm				X	
8	Repeat Data	Repeatability of response amplitude +/-20%, Positional Accuracy +/- 20 cm					X
9	Octant Test (heading error test [magnetometer only])	Document heading error for post-processing correction				X	

10

- 11 4. **Vibration Test (Cable Shake).** This test checks the response of instruments to vibration. On
 12 a daily basis, instrument coils/sensors (for those instruments being used that day) will be
 13 checked for their response to vibrations in the cables. The response will be observed in the
 14 field for immediate corrective action and transmitted back to the processor and analyzed

- 1 and checked for spikes in the data that can possibly create false anomalies. The vibration test
2 will be conducted at the beginning of the survey operations for each work day.
- 3 5. **Static Background and Static Spike.** Static tests will be performed by positioning the
4 survey equipment within or near the survey boundaries in an area free of metallic contacts,
5 and collecting data for a minimum period of three minutes. During this time, the instrument
6 will be held in a fixed position without a spike (known standard) and then with a spike. The
7 purpose of the static test is to determine whether unusual levels of instrument or ambient
8 noise exist. The static background and static spike test will be conducted at the beginning
9 and end of each survey operation.
- 10 6. **Azimuthal Test.** This test will be performed to ensure that a system's sensors are oriented in
11 such a manner that minimizes data drop-outs and maximizes instrument response. This test
12 will only be performed for magnetometer systems and will be conducted the first time the
13 system is used at the site.
- 14 7. **Six Line Test.** The Six Line test is a standard response test consisting of a predetermined
15 route (survey line) established on or near the site in an area free of metallic contacts. The
16 beginning, midpoint, and end of the line will be marked, and data will be collected along
17 the line. The line will be traversed a total of six times as follows: 1) *normal* data collection
18 speed *without* a spike at the centerpoint; 2) *normal* data collection speed *without* a spike at the
19 centerpoint; 3) *normal* data collection speed *with* a spike at the centerpoint; 4) *normal* data
20 collection speed *with* a spike at the centerpoint; 5) *fast* data collection speed *with* a spike at
21 the centerpoint; 6) *slow* data collection speed *with* a "pike at the centerpoint. (Speed of data
22 collection will also be evaluated as part of the GPO evaluation process.) The Six Line test
23 will be conducted the first time a system is used at the site.
- 24 8. **Repeat Data.** This test is performed to ensure repeatability of the data and will be
25 performed after the initial survey over an area.
- 26 9. **Octant Test (Heading Error Test):** This test is done to document "heading" error associated
27 with magnetometer systems so that the error can be corrected during data processing. This
28 test is conducted the first time a system is used at the site.

29 7.0 Records Management

30 The MRP Enterprise (described in Section 3) will be used to capture and record all field
31 and processing notes.

32 8.0 Data Delivery

33 The DGM data delivery requirements include the following:

- 34 • All sensor data will be correlated with navigational data based upon a local "third order"
35 (1:5,000) monument or survey marker. If a suitable point is not available, CH2M HILL will
36 have a professional land surveyor establish a point.
- 37 • All sensor data will be preprocessed for sensor offsets, diurnal magnetic variations, latency
38 corrections, drift corrections, etc., and correlated with navigation data.

- 1 • Diurnal magnetic variations measured at a base-station must be collected at a minimum of
2 once per minute.
- 3 • The DGM system will digitally capture the instrument readings into a file coincident with
4 the grid coordinates.
- 5 • All raw and final processed data will be delivered corrected and processed in ASCII files.
- 6 • Corrections such as for navigation, instrument bias, and diurnal magnetic shift will be
7 applied.
- 8 • All corrections will be documented (see Table 4).
- 9 • Data will be presented in delineated fields as x, y, z, v1, v2, etc., where x and y are NAD83
10 UTM Grid Plane Coordinates in Easting (meters) and Northing (meters) directions, z
11 (elevation is an optional field in meters), and v1, v2, v3, etc., are the instrument readings.
- 12 • The last data field should be a time stamp.
- 13 • Each data field will be separated by a comma or tab.
- 14 • No individual file may be more than 100 megabytes (Mb) in size and no more than
15 600,000 lines long.
- 16 • Each grid (or set) of data will be logically and sequentially named so that the file name can
17 easily be correlated with the grid name used by other project personnel.
- 18 • Within three working day after collection, the DGM subcontractor will furnish draft data
19 packages for each system's survey via internet using FTP, E-mail attachment for small files
20 under 5 Mb, digital compact disk (CD) or other approved method. Final data packages will
21 be sent similarly within 5 days of field data collection. Final data packages must include the
22 following:
 - 23 – Dig sheets (anomaly selections) in Microsoft Excel formats
 - 24 – PDF file(s) of color contoured geophysical results with anomaly selections shown and
25 labeled at a readable scale
 - 26 – Geosoft format GDB files and packed maps
 - 27 – Raw data files
 - 28 – Final processed data files
 - 29 – All quality control data files associated with the survey files
 - 30 – PDF of report from MRP Enterprise documenting the field activities associated with the
31 data, and the processing performed (see Table 4)
 - 32 – Digital planimetric map, in Geosoft and ArcView format, and coincident with the
33 location of the geophysical survey