



Naval Facilities Engineering Command - Atlantic Vieques, Puerto Rico

Status Report for the Vieques Restoration Advisory Board May 2008

This report provides the Restoration Advisory Board (RAB) with a status of on-going work at the Solid Waste Management Units and Areas of Concern (SWMUs and AOCs) on the former Naval Ammunition Support Detachment (NASD) property in western Vieques and an overview of the Environmental Restoration and Munitions Response activities on eastern Vieques. The following is a summary of the activities completed through May 2008, and the activities planned for completion for the next few months.

ENVIRONMENTAL RESTORATION PROGRAM

WEST VIEQUES

- PREQB approved No Further Action (NFA) under CERCLA for nine west Vieques sites (solid waste management units [SWMUs] 5, 10, 14, 15; areas of concern [AOCs] B, C, F, K, and L) in February 2007.
- **AOC E (Former Waste Oil Tank)**
The Supplemental Remedial Investigation (RI) field work, comprising soil and groundwater sampling, began in November 2005 and was completed in December 2005. Updated human health and ecological risk assessment protocols were developed (via an interactive process with the stakeholder agencies) and are contained in the Master Environmental QAPP, which was finalized in May 2007. An interim human health risk assessment deliverable detailing the AOC E (and AOC I) risk assessment assumptions and input was submitted to the regulatory agencies in April 2007. The interim deliverable was resolved in September 2007. The (revised) Draft RI Report for AOC E was submitted for regulatory agency review in December 2007. Agency comments were received in February and March 2008. Responses to comments were submitted to the regulatory agencies in April 2008 for their consideration.
- **AOC H (Abandoned Power Plant)**
Regulatory comments on the draft RI report submitted for review in April 2004 were received in October 2005. Comment responses were prepared and submitted to the agencies for consideration in January 2006. A meeting was held among the agencies in

Note: This summary is presented in English and Spanish for the convenience of the reader. Every effort has been made for the translations to be as accurate as reasonably possible. However, readers should be aware that the English version of the text is the official version.

Nota: Este resumen se presenta en inglés y en español para la conveniencia del lector. Se han hecho todos los esfuerzos para que la traducción sea precisa en lo más razonablemente posible. Sin embargo, los lectores deben estar al tanto que el texto en inglés es la versión oficial.

May and September 2006 to discuss the comment responses and reach concurrence on an acceptable set of responses and associated report revisions. The final set of comment responses were concurred upon in December 2006.

The Draft Final RI Report, which incorporates the mutually agreed upon comment responses, was submitted to the RAB in May 2007. No comments were submitted by the RAB. The final RI Report was submitted July 2007. Based on the RI Report findings, a No Further Action Proposed Plan was prepared and submitted for regulatory agency review in August 2007. Regulatory agency comments were received in September 2007. Comments were resolved and the Proposed Plan was made available to the public on January 28, 2008 for a 45-day public comment period. A public meeting to present and discuss the Proposed Plan was held on February 7, 2008. No public comments were submitted to the Navy or EPA (other than questions asked at the Public Meeting) during the public comment period. Based on the Proposed Plan, the Draft Record of Decision was prepared and submitted for regulatory review in May 2008.

- **AOC I (Former Asphalt Mixing Plant)**

The Supplemental RI field work, comprising monitoring well installation and sampling, began in late November 2005 and completed in January 2006. See the discussion above under AOC E regarding preparation of risk assessment protocols and interim deliverables. The Draft RI Report for AOC I was submitted for regulatory agency review in November 2007. Regulatory agency comments were received in January 2008. Responses to regulatory comments were submitted for regulatory consideration in March 2008. Agency comments were resolved and the Draft Final RI Report was prepared and submitted to the RAB in April 2008.

- **AOC J (Former Operations/Staging Area Disposal Site)**

The Draft Final EE/CA for AOC J, AOC R, SWMU 6, and SWMU 7 was submitted in December 2005. The public comment period on the EE/CA was scheduled from about mid-December 2005 to mid-January 2006, but a request from a RAB member extended the public comment period for an additional 2 weeks. No public comments on the EE/CA were received. The Draft Removal Action Work Plan was submitted to the regulatory agencies in November 2005. Regulatory comments were submitted to the Navy in March 2006. Based on regulatory comments, the revised Draft Removal Action Work Plan was submitted to the regulatory agencies for review in April 2007. Agency comments were resolved and the Draft Final Removal Action Work Plan was submitted to the RAB in January 2008.

Regulatory agency approval of the Removal Action Work Plan was received in February 2008. Based on the approved work plan, the removal action was conducted in February 2008. Risk assessments are currently being performed on the waste profile sample data to determine the appropriate disposition. Physical removal of the waste is anticipated to occur in late-2008, pending finalization of the risk assessments.

Regulatory comments on the Draft RI Report submitted for review in April 2004 were received in January 2006. Comment responses were prepared, taking into consideration the removal action to be conducted at the site, and were submitted to the regulatory agencies for consideration in May 2006. A meeting was held among the agencies in September and December 2006 to discuss the comment responses and concur upon a

path forward for revising the report. Because a removal action is to be performed at the site, which will include new risk assessments, the RI Report was finalized as is (with uncertainty language added to justify the removal action) because its purpose has been met. The Final RI Report for AOC J was submitted in May 2007.

Following the removal action, a removal action report will be prepared that documents the removal action activities and the new risk assessments performed using the removal confirmatory data.

- **AOC R (Former Staging and Operations Area)**

The RI field work, comprising monitoring well installation and surface water, sediment, soil, and groundwater sampling, began in December 2005 and was completed in March 2006. Preliminary evaluation of the analytical data suggests additional data are needed to adequately delineate the nature and extent of contamination and assess potential risks. This additional data collection will take place subsequently to the planned removal action. See the discussion above under AOC J regarding the EE/CA and removal action work plan for this site.

Human health and ecological risk assessments will be conducted and an RI Report prepared following the removal action and additional data collection.

- **SWMU 4 (Former OB/OD Unit)**

Regulatory comments on the Draft RI Work Plan submitted for review in June 2004 were received in January 2006. Comment responses were prepared and submitted to the regulatory agencies for consideration in April 2006. A meeting was held among the agencies in May and September 2006 to discuss the comment responses and reach concurrence on an acceptable set of responses and associated work plan revisions.

The Draft Final Work Plan was submitted to the RAB in November 2006 and discussed at the RAB meeting held in January 2007. The Final Work Plan was submitted and the RI fieldwork initiated in January 2007 and completed in March 2007. Preliminary evaluation of the RI data suggested additional sampling was warranted to sufficiently characterize the site. The rationale for additional sampling and the proposed locations was submitted to the regulatory agencies in November 2007. Regulatory comments on the proposed additional sampling were received in January 2008. Comment responses were submitted for regulatory agency consideration in February 2008. The comment responses were resolved in March 2008. The Final Work Plan Addendum was submitted and the additional samples were collected in April 2008. Once the samples are analyzed, the newly collected data will be evaluated with the historical data to confirm the site has been sufficiently sampled to evaluate the nature and extent of contamination and assess potential risks.

It is anticipated that the risk assessment process will start in mid 2008 and the Draft RI Report will be submitted for regulatory review in late 2008.

- **SWMU 6 (Mangrove Disposal Site at Kiani Lagoon)**

Regulatory comments on the Draft RI Report submitted for regulatory review in April 2004 were received in June 2006. Comment responses were prepared and submitted to the agencies for consideration in August 2006. See the discussion above under AOC J

regarding the Final RI Report, EE/CA, and removal action work plan for this site. The final SWMU 6 RI Report was submitted in February 2007.

- **SWMU 7 (Quebrada Disposal Site)**

Responses to regulatory comments on the Draft RI Report were submitted to the regulatory agencies in November 2004. See the discussion above under AOC J regarding the Final RI Report, EE/CA, and removal action work plan for this site. The Final SWMU 7 RI Report was submitted in March 2008.

EASTERN VIEQUES

- **Original 12 SWMUs/AOCs Contained in the RCRA Consent Order**

A data summary report summarizing the data collected during the Phase I RFI was submitted to the regulatory agencies in May 2005. The draft Phase I RFI report was revised (as a PA/SI report in accordance with CERCLA terminology due to Vieques' inclusion on the National Priorities List) to incorporate the data from the soil inorganics background investigation report, which was approved by EPA on September 28, 2007. The Draft PA/SI Report was submitted for regulatory agency review in November 2007.

Regulatory agency comments on the Draft PA/SI Report were received in January 2008. Comment responses were submitted for regulatory agency consideration in March 2008. Agency comments were resolved and the Draft Final PA/SI Report was submitted to the RAB in April 2008.

Based on the findings in the PA/SI Report, an Expanded SI is recommended for 7 of the original 12 Consent Order sites. An SI/Expanded SI Work Plan is currently being prepared for these 7 sites (together with 15 PI/PAOC sites [see below]).

- **PI/PAOC sites**

The final PA/SI work plan for 8 PI/PAOC site was submitted in January 2006, based on regulatory agency approval. The field work began in January 2006 and was completed in April 2006. The data evaluation for the 8 PI/PAOC sites was included in the Draft PA/SI Report submitted for regulatory agency review in November 2007. Regulatory agency comments on the Draft PA/SI Report were received in January 2008. Comment responses were submitted for regulatory agency consideration in March 2008. Agency comments were resolved and the Draft Final PA/SI Report was submitted to the RAB in April 2008.

Based on the findings in the PA/SI Report, an Expanded SI is recommended for 5 of the 8 PI/PAOC sites discussed above. An SI/Expanded SI Work Plan is currently being prepared for these 5 sites (together with the 7 Consent Order sites [see above] and an additional 10 PI/PAOC sites [see below]).

Of the remaining PI/PAOC sites, 16 are currently included in the Environmental Restoration Program. In October 2007, the regulatory agencies and Navy met to discuss the path forward for each of the sites. The meeting included a site visit to the majority of the sites. Six sites were determined to require no further action. An SI will be performed at the remaining 10 sites (see Work Plan preparation discussed above).

- **Background Soil Inorganics**

The public comment period on the Work Plan ended on June 11, 2005. Based on the public comments, several revisions were made to the technical approach to the Background Investigation (i.e., several sampling locations relocated, explosives analysis added for each sample collected, etc.). The Final Work Plan, with these revisions incorporated, was submitted in May 2006. Agency responses to the public comments were finalized, and they were discussed with the RAB at the June 2006 RAB meeting. The field work commenced in June 2006 and was completed in early July 2006.

The draft report was submitted to the regulatory agencies on January 29, 2007 for review. Regulatory comments were submitted to the Navy in April 2007 and preliminary responses to those comments were submitted to the regulatory agencies in May 2007. The regulatory comments were resolved and the draft final report was submitted to the RAB on August 9, 2007. At the RAB's request, EPA informally extended the RAB review period several weeks beyond the normal 30-day period. EPA approved the report as final on September 28, 2007.

MUNITIONS RESPONSE PROGRAM

- **Progress through May 2008**

- 697 acres in the LIA and ECA have been surface cleared
- All beaches (65 acres) have previously been surface cleared
- Over 10,700 live munitions removed
- Approximately 4,250 tons of munitions debris (MD) and range related debris (RRD) has been recovered and is being processed for eventual shipment to a recycler.
- Over 1,700 tons of MD and RRD have been shipped off island to be recycled

WEST VIEQUES

- A draft work plan for the removal of subsurface MEC at the roads and beaches was submitted to the regulatory agencies for review and comments from the agencies were received the week of May 5, 2008. The Navy is currently developing responses to comments and a draft final work plan.
- **SWMU 4 (Open Burn/Open Detonation (OB/OD) Area)**
The Draft Munitions/Explosives Remedial Investigation Report dated April 2004 is currently on hold and will be revised to include data collected during future interim removal action.
- A draft engineering evaluation/cost analysis (EE/CA) to remove munitions at selected areas in the vicinity of SWMU 4 and East Vieques was submitted for public review on October 3, 2007. All comments were received and addressed and the EE/CA was finalized February 2008.

EASTERN VIEQUES – Munitions Response Actions

- The Time Critical Removal Action in the LIA continues to reduce risk to human health for 1,100 acres in the LIA and ECA. Six hundred seventeen acres have been surface cleared within the LIA, significantly reducing explosive risk in these areas. During these removal efforts over 10,700 live munitions items have been removed, including over 2,000 extremely sensitive sub-munitions. Additionally, 65 acres of beaches have previously been surface cleared of munitions.
- Air monitoring is being conducted along the LIA-SIA border to determine if there are metals or explosives releases above human health screening criteria from the BIP activities. To date no metals have exceeded the criteria and no explosives have been detected at these near source locations.
- The Final Expanded Range Assessment/Phase II Site Inspection report was submitted December 2006 and further investigation efforts to determine the munitions extent across the east side have been initiated including the subsurface geophysical surveys for the beach areas. The Phase II Site Inspection will also address munitions response sites not yet investigated, by conducting surface evaluations to determine if munitions items are present. The actual field work associated with the Phase II Site Inspection commenced 3 March, 2008.
- Digital Geophysical Mapping (DGM) has been conducted on 80 acres of beaches and 24 acres of selected roadways. The mapping will identify anomalies that may indicate the presence of munitions and explosives of concern (MEC) below the ground surface. DGM operations were suspended on October 12 but will resume when the sub-surface removal begins. Eventually, approximately 300 acres of beaches and roadways will be geophysical surveyed and will undergo a sub-surface removal. Biological survey of the Eastern Conservation Area was completed to support future removal action activities. An Archaeological survey of the beach areas has been conducted and additional surveys across the entire range will be conducted to support future removal action activities.
- Final EE/CA and Draft Work Plan were submitted for munitions removal action at beach areas and selected roadways on February 6, 2008.

MISCELLANEOUS

- **Master Quality Assurance Project Plan**

A draft Master Quality Assurance Project Plan (QAPP) was submitted for regulatory review in May 2006. The Master QAPP provides standard procedures for data collection, analysis, and evaluation as part of the environmental restoration program. Although project-specific deviations from the Master QAPP may be warranted, the Master QAPP facilitates consistency and efficiency across the program. Regulatory comments were received in September 2006. Comment responses were prepared and submitted for regulatory consideration in November 2006. A meeting was held among the agencies in December 2006 to discuss the comment responses and reach concurrence on an acceptable set of responses and associated work plan revisions. The concurred-upon comment responses were incorporated into the Master QAPP and the draft final

document was submitted to the RAB in February 2007. No comments were received from the RAB. The final Master QAPP was submitted in May 2007.

- **Federal Facility Agreement (FFA)**

The Federal Facility Agreement (FFA) was signed by the agencies: U.S. Environmental Protection Agency (EPA), U.S. Department of the Navy, and the Puerto Rico Environmental Quality Board (EQB). The FFA had a Public Notice with a 45 days comment period. After the comments were addressed the Responsiveness Summary finalized. The FFA was effective beginning on March 28, 2008

- **Site Management Plan**

A Site Management Plan was prepared in accordance with requirements defined in the FFA.

Public Involvement Activities

- The last RAB meeting took place on May 7, 2008 with the participation of NOAA, EPA, EQB and Navy.
- The next meeting is tentatively planned for late August 2008.
- Informational Flyers continue to be distributed widely on Vieques
- The Vieques newsletter was distributed and mailed to the entire mailing list.
- Warning signs were installed in April 2008. The buoys were donated by the Coast Guard. The Coast Guard and Army Corps of Engineers approved the permit for the installation in consultation with National Marine Fisheries. The Navy followed the Coast Guard guidance for the buoy installation

VIEQUES DOCUMENT SUBMITTAL UPDATE (As of May 2008)

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
West Vieques			
AOC E	Draft (revised) RI Report	December 2007	February and March 2008
	Preliminary responses to regulatory comments	April 2008	
AOC H	Draft RI Report	April 2004	October 2005
	Preliminary responses to	January 2006	Discussed in May, September, and

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	regulatory comments Draft Final RI Report Final RI Report submitted in July 2007 Draft Proposed Plan Preliminary responses to comments on Draft Proposed Plan Final Proposed Plan and initiation of 45-day public comment period Draft Record of Decision	Submitted to RAB in May 2007 Not Applicable August 2007 November 2007 January 28, 2007 May 2008	December 2006 No comments submitted Not Applicable September 2007 Comments resolved in January 2008 Not Applicable
AOC I	Draft RI Report Preliminary responses to comments Draft Final RI Report	November 2007 March 2008 Submitted to RAB in April 2008	January 2008 Comments resolved in April 2008
AOC R	Final RI Work Plan submitted in November 2005 Draft EE/CA Final EE/CA Draft Removal Action Work Plan Revised Draft Removal Action Work Plan Response to comments and revised Removal Action Work Plan Draft Final Removal Action Work Plan	Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008	Not Applicable October 2005 Not Applicable March 2006 June 2007 January 2008 Regulatory agency approval in February 2008
SWMU 4	Draft RI Work Plan	June 2004	January 2006

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Preliminary responses to regulatory comments	April 2006	Discussed in May and September 2006
	Draft Final Work Plan	Submitted to RAB in November 2006	Not Applicable
	Final Work Plan submitted in January 2007	Not Applicable	Not Applicable
	Proposed additional sampling locations	November 2007	January 2008
	Preliminary responses to comments	February 2008	Comments resolved in March 2008
	Final Work Plan addendum submitted in April 2008	Not Applicable	Not Applicable
SWMU 6	Draft RI Report	April 2004	June 2006
	Preliminary responses to regulatory comments	August 2006	Discussed in December 2006
	Final RI Report submitted in February 2007	Not Applicable	Not Applicable
	Draft EE/CA	August 2005	October 2005
	Final EE/CA	Submitted to RAB/Public in December 2005	Not Applicable
	Draft Removal Action Work Plan	November 2005	March 2006
	Revised Draft Removal Action Work Plan	April 2007	June 2007
	Responses to comments and revised Removal Action Work Plan	August 2007	January 2008
	Draft Final Removal Action Work Plan	January 2008	Regulatory agency approval in February 2008
SWMU 7	Response to comments on Draft RI Report	November 2004	Discussed in September 2006
	Final RI Report submitted in	Not Applicable	Not Applicable

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	March 2008 Draft EE/CA Final EE/CA Draft Removal Action Work Plan Revised Draft Removal Action Work Plan Responses to comments and revised Removal Action Work Plan Draft Final Removal Action Work Plan	August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008	October 2005 Not Applicable March 2006 June 2007 January 2008 Regulatory agency approval in February 2008
AOC J	Draft RI Report Preliminary responses to regulatory comments Final RI Report submitted in May 2007 Draft EE/CA Final EE/CA Draft Removal Action Work Plan Revised Draft Removal Action Work Plan Responses to comments and revised Removal Action Work Plan Draft Final Removal Action Work Plan	April 2004 May 2006 Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008	January 2006 Discussed in December 2006 Not Applicable October 2005 Not Applicable March 2006 June 2007 January 2008 Regulatory agency approval in February 2008
NFA Sites	PREQB Response to Public Comments on No Further Action Report	Not Applicable	Not Applicable

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Final NFA Report submitted in October 2006	Not Applicable	PREQB issued a Resolution and Notification concurring with NFA in February 2007
Eastern Vieques			
LIA, SIA, EMA	Revised Draft ERA/Phase I Site Inspection Report	May 2007	
Former VNTR	Draft EE/CA for subsurface removal of MEC of roads and beaches Draft Work Plan for subsurface removal of MEC of roads and beaches	May 2007 To RAB October 3 2007 February 6, 2008	July, 2007
East Vieques Munitions Sites	Final MEC Master Work Plan	Final Submission – November 2006	
Various Munitions Response Sites and Beaches on East Vieques	Final Expanded Range Assessment/Phase II Site Inspection Work Plan	Final submission – December 2006. Editorial comments addressed and submitted – January 2007	
Background Soil	Revised Draft Final Background Soil Inorganics Investigation Work Plan Final Background Soil Inorganics Investigation Work Plan Draft Background Soil Inorganics Investigation Report Preliminary responses to comments Draft Final Background Soil Inorganics Report Final Background Soil Inorganics Report submitted in October 2007	Public Comments Submitted to EPA in June 2005 Not Applicable January 2007 May 2007 Submitted to RAB August 2007 Not Applicable	November 2005 Not Applicable April 2007 Comments resolved July 2007 No written RAB comments submitted; verbal comments addressed via conference call Not Applicable
Original 12 Consent Order Sites	Data Summary Report Draft PA/SI Report	May 2005 November 2007	Not Applicable January 2008

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Preliminary responses to comments Draft Final PA/SI Report	March 2008 Submitted to RAB in April 2008	Comments resolved in April 2008
8 PI/PAOC Sites	Final PA/SI Work Plan submitted in January 2006 Draft PA/SI Report Preliminary responses to comments Draft Final PA/SI Report	Not Applicable November 2007 March 2008 Submitted to RAB in April 2008	Not Applicable January 2008 Comments resolved in April 2008
Baseline Groundwater	Draft Final Groundwater Baseline Investigation Report	May 2005	