



Naval Facilities Engineering Command - Atlantic Vieques, Puerto Rico

Status Report for the Vieques Restoration Advisory Board

Through September 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 September 2008, and the activities planned for completion for the next few months.

ENVIRONMENTAL RESTORATION PROGRAM

WEST VIEQUES

- PREQB approved the proposed 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 Draft Final Remedial Investigation (RI) Report for AOC E was submitted to the RAB in June 2008. No RAB comments were received. The Final RI Report was issued in July 2008. Based on the recommendations in the RI Report, additional sampling to support the Feasibility Study (FS) for AOC E was conducted in July 2008. Following validation of the data, the data will be evaluated to determine whether a pilot study to field-test treatment option(s) is warranted or whether to proceed with the FS to evaluate remedial alternatives.
- **AOC H (Abandoned Power Plant)**
Based on the RI Report findings, a No Further Action 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 Record of Decision was signed by the Navy, EPA, and PREQB in September 2008, which releases the site from CERCLA without restriction.

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.

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

The Draft Final RI Report was prepared and submitted to the RAB in April 2008. No RAB comments were received on the Draft Final RI Report. The Final RI Report was issued in June 2008. Based on the recommendations in the RI Report, additional sampling to support the FS for AOC I was conducted in July 2008. Following validation of the data, the data will be evaluated to determine whether an additional round of groundwater sampling is warranted (if the data indicate declining contaminant concentrations) or wither to proceed with the FS to evaluate remedial alternatives.

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

The Final RI Report for AOC J was issued in May 2007. Because waste at the site may pose a potential risk of future releases of contaminants, the RI Report recommended a waste removal action.

Regulatory agency approval of the Removal Action Work Plan was received in February 2008. Based on the approved work plan, waste profile sampling to determine the appropriate disposition of soil associated with the waste 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 early 2009, pending finalization of the risk assessments.

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 removal action work, which includes AOC R.

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)**

An RI was performed at SWMU 4 in 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. The comments were resolved in March 2008. The Final Work Plan Addendum was submitted and the additional samples were collected between April and August 2008. Risk assessments for SWMU 4 are underway, the results of which will be included in an RI Report. It is anticipated that the Draft RI Report will be submitted for regulatory review in early 2009.

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

The Final SWMU 6 RI Report was issued in February 2007. Because waste at the site may pose a potential risk of future releases of contaminants, the RI Report recommended a waste removal action. See the discussion above under AOC J regarding the removal action work, which includes SWMU 6.

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

The Final SWMU 7 RI Report was issued in March 2008. Because the waste at the site may pose a potential risk of future releases of contaminants, the RI Report recommended a waste removal action. See the discussion above under AOC J regarding the removal action work, which includes SWMU 7.

EASTERN VIEQUES

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

The Draft Final PA/SI Report (which included 8 PI/PAOC sites, as stated below) was submitted to the RAB in April 2008. No RAB comments were received. The Final Report was issued in June 2008. Based on the findings in the PA/SI Report, an Expanded SI was recommended for 7 of the original 12 Consent Order sites; no action was recommended for 4 of the sites; and no action pending the outcome of a groundwater study was recommended for the remaining site.

An SI/Expanded SI Work Plan for the aforementioned 7 Consent Order sites (together with 15 PI/PAOC sites [see below]) was submitted for regulatory agency review in July 2008. Regulatory review is underway.

A Draft No Action Decision Document for the aforementioned 4 Consent Order sites (together with 7 PI/PAOC sites [see below]) was submitted for regulatory agency review in August 2008. Regulatory review is underway.

- **PI/PAOC sites (24 sites currently in the Environmental Restoration Program)**

The Draft Final PA/SI Report (which included the Consent Order sites discussed above) for 8 PI/PAOC sites was submitted to the RAB in April 2008. No RAB comments were received. The Final Report was issued in June 2008. Based on the findings in the PA/SI Report, an Expanded SI was recommended for 5 of the 8 PI/PAOC sites discussed above; no action was recommended for 1 of the sites; and no action pending the outcome of a groundwater study was recommended for the remaining 2 sites.

For the remaining 16 PI/PAOC sites, the regulatory agencies and Navy met in October 2007 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 action. An SI was determined to be necessary for the remaining 10 sites.

The sites requiring an SI were included in the Draft SI/Expanded SI Work Plan discussed above. The sites requiring no action were included in the Draft No Action Decision Document discussed above.

MUNITIONS RESPONSE PROGRAM

- **Progress through September 2008**
 - 821 acres in the LIA and ECA have been surface cleared
 - All beaches (65 acres) have previously been surface cleared
 - Over 5,000 live munitions removed
 - Approximately 5,300 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 Munitions and Explosives of Concern (MEC) at selected 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 developed responses to comments and the regulatory agencies are currently reviewing. The draft final document was completed by mid August 2008. The final work plan will be delivered October 2008.
- **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 actions.
- 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. Eight hundred twenty one acres have been surface cleared within the LIA, significantly reducing explosive risk in these areas. During these removal efforts over 15,000 munitions items have been removed, including over 8,200 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 National Ambient Air Quality Standards from the BIP activities. To date no metals have exceeded the regulatory standards and no explosives have been detected at these near source locations.

- The Final Expanded Range Assessment/Phase II Site Inspection work plan was submitted December 2006 and further investigation efforts to determine the munitions extent across the east side has 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
- An amendment to the Phase II Site Inspection work plan was submitted to the regulatory agencies for review on July 14, 2007. This amendment includes inspection of additional areas at the former VNTR. As part of this work plan an aerial magnetometer survey will be performed. The aerial survey is expected to be conducted November 2008 through January 2009.
- 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.
- A draft Engineering Evaluation/Cost Analysis (EE/CA) was submitted to the regulatory agencies on June 24, 2008 for the removal of surface MEC in the former Surface Impact Area. A draft final EE/CA was published for public review the beginning of August 2008. The final EE/CA will be delivered October 2008.

A draft work plan for removal of MEC from the surface of the former Surface Impact Area was sent to the regulatory agencies for review on July 14, 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 issued 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. The draft final Fiscal Year 2009 SMP will be available for review October 14, 2008 through November 15, 2008.

Public Involvement Activities

- The Navy participated in the Second Child Health Fair held on Vieques on July 9, 2008. The Navy's message was safety: stay away from the restricted areas and obey the warning signs.
- The next RAB meeting took place on October 9, 2008 at the Lighthouse in Isabel Segunda
- Informational Flyers continue to be distributed widely on Vieques
- Warning buoys were installed in April 2008. The buoys were donated by the Coast Guard. The Coast Guard, the Army Corps of Engineers, and the National Marine Fisheries concurred with the petition for the installation of the buoys

VIEQUES DOCUMENT SUBMITTAL UPDATE
(As of September 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	Comments resolved in June 2008
	Draft Final RI Report	Submitted to RAB in June 2008	No comments submitted
	Final RI Report submitted in July 2008	Not Applicable	Not Applicable
AOC H	Draft RI Report	April 2004	October 2005
	Preliminary responses to regulatory comments	January 2006	Discussed in May, September, and December 2006
	Draft Final RI Report	Submitted to RAB in May 2007	No comments submitted
	Final RI Report submitted in July 2007	Not Applicable	Not Applicable
	Draft Proposed Plan	August 2007	September 2007
	Preliminary responses to comments on Draft Proposed Plan	November 2007	Comments resolved in January 2008
	Final Proposed Plan and initiation of 45-day public comment period	January 28, 2007	Not Applicable
	Draft Record of Decision	May 2008	July 2008
Final Record of Decision signed by Navy, EPA, PREQB in September 2008	Not Applicable	Not Applicable	
AOC I	Draft RI Report	November 2007	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 RI Report Final RI Report submitted in June 2008	March 2008 Submitted to RAB in April 2008 Not Applicable	Comments resolved in April 2008 No comments submitted Not Applicable
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 Waste Characterization HHRA Interim Deliverables	Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008 July 2008	Not Applicable October 2005 Not Applicable March 2006 June 2007 January 2008 Regulatory agency approval in February 2008 August 2008
SWMU 4	Draft RI Work Plan Preliminary responses to regulatory comments Draft Final Work Plan Final Work Plan submitted in January 2007 Proposed additional sampling locations Preliminary responses to comments	June 2004 April 2006 Submitted to RAB in November 2006 Not Applicable November 2007 February 2008	January 2006 Discussed in May and September 2006 Not Applicable Not Applicable January 2008 Comments resolved in March 2008

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Final Work Plan addendum submitted in April 2008 HHRA Interim Deliverables	Not Applicable October 2008	Not Applicable
SWMU 6	Draft RI Report Preliminary responses to regulatory comments Final RI Report submitted in February 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 Waste Characterization HHRA Interim Deliverables	April 2004 August 2006 Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008 July 2008	June 2006 Discussed in December 2006 Not Applicable October 2005 Not Applicable March 2006 June 2007 January 2008 Regulatory agency approval in February 2008 August 2008
SWMU 7	Response to comments on Draft RI Report Final RI Report submitted in March 2008 Draft EE/CA Final EE/CA Draft Removal Action Work Plan	November 2004 Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005	Discussed in September 2006 Not Applicable October 2005 Not Applicable March 2006

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Revised Draft Removal Action Work Plan Responses to comments and revised Removal Action Work Plan Draft Final Removal Action Work Plan Waste Characterization HHRA Interim Deliverables	April 2007 August 2007 January 2008 July 2008	June 2007 January 2008 Regulatory agency approval in February 2008 August 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 Waste Characterization HHRA Interim Deliverables	April 2004 May 2006 Not Applicable August 2005 Submitted to RAB/Public in December 2005 November 2005 April 2007 August 2007 January 2008 July 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 August 2008
NFA Sites	PREQB Response to Public Comments on No Further Action Report Final NFA Report submitted in October 2006	Not Applicable Not Applicable	Not Applicable PREQB issued a Resolution and Notification concurring with NFA in February 2007

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
Eastern Vieques			
SIA	Draft Work Plan for Removal of Surface MEC	July 14, 2008	
SIA	Draft EE/CA for Surface MEC Draft Final EE/CA for Surface MEC	June 24, 2008 August 2008	
LIA, SIA, EMA	Draft ERA/Phase II SI Work Plan Amendment Final ERA/Phase II SI Work Plan Amendment	July 14, 2008 September 2008	
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 Draft Final Work Plan for subsurface removal of MEC of roads and beaches	May 2007 To RAB October 3 2007 February 6, 2008 August 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	Public Comments Submitted to EPA in June 2005 Not Applicable January 2007 May 2007 Submitted to RAB	November 2005 Not Applicable April 2007 Comments resolved July 2007 No written RAB comments

Site	Document	Submitted By Navy To Regulators or RAB for Review	Regulator or RAB Comments Submitted To Navy
	Inorganics Report	August 2007	submitted; verbal comments addressed via conference call
Original 12 Consent Order Sites	Final Background Soil Inorganics Report submitted in October 2007	Not Applicable	Not Applicable
	Data Summary Report	May 2005	Not Applicable
	Draft PA/SI Report	November 2007	January 2008
	Preliminary responses to comments	March 2008	Comments resolved in April 2008
	Draft Final PA/SI Report	Submitted to RAB in April 2008	No comments received
	Final PA/SI Report submitted in June 2008	Not Applicable	Not Applicable
	Draft SI/Expanded SI Work Plan for 7 sites	July 2008	August 2008 (PREQB)
	Draft No Action Decision Document for 4 sites	August 2008	
PI/PAOC Sites	Final PA/SI Work Plan for 8 sites submitted in January 2006	Not Applicable	Not Applicable
	Draft PA/SI Report for 8 sites	November 2007	January 2008
	Preliminary responses to comments	March 2008	Comments resolved in April 2008
	Draft Final PA/SI Report for 8 sites	Submitted to RAB in April 2008	No comments received
	Final PA/SI Report for 8 sites submitted in June 2008	Not Applicable	Not Applicable
	Draft SI/Expanded SI Work Plan for 15 sites	July 2008	August 2008 (PREQB)
	Draft No Action Decision Document for 7 sites	August 2008	
Baseline Groundwater	Draft Final Groundwater Baseline Investigation Report	May 2005	Not Applicable