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PUERTO RICO NS  
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PRESENTATION FROM 27 SEPTEMBER 2006 PUBLIC MEETING FOR THE RESOURCE  
CONSERVATION AND RECOVERY ACT 7003 ADMINISTRATIVE ORDER ON CONSENT  
NAVAL ACTIVITY PUERTO RICO  
9/27/2006  
NAVAL ACTIVITY PUERTO RICO

**NAVAL ACTIVITY  
PUERTO RICO  
(Former Naval Station  
Roosevelt Roads)**

**Public Meeting for the  
RCRA 7003 Administrative Order on Consent**

**27 September 2006**

# Naval Activity Puerto Rico

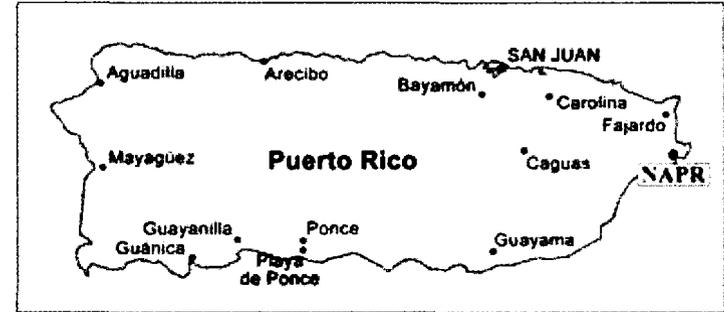
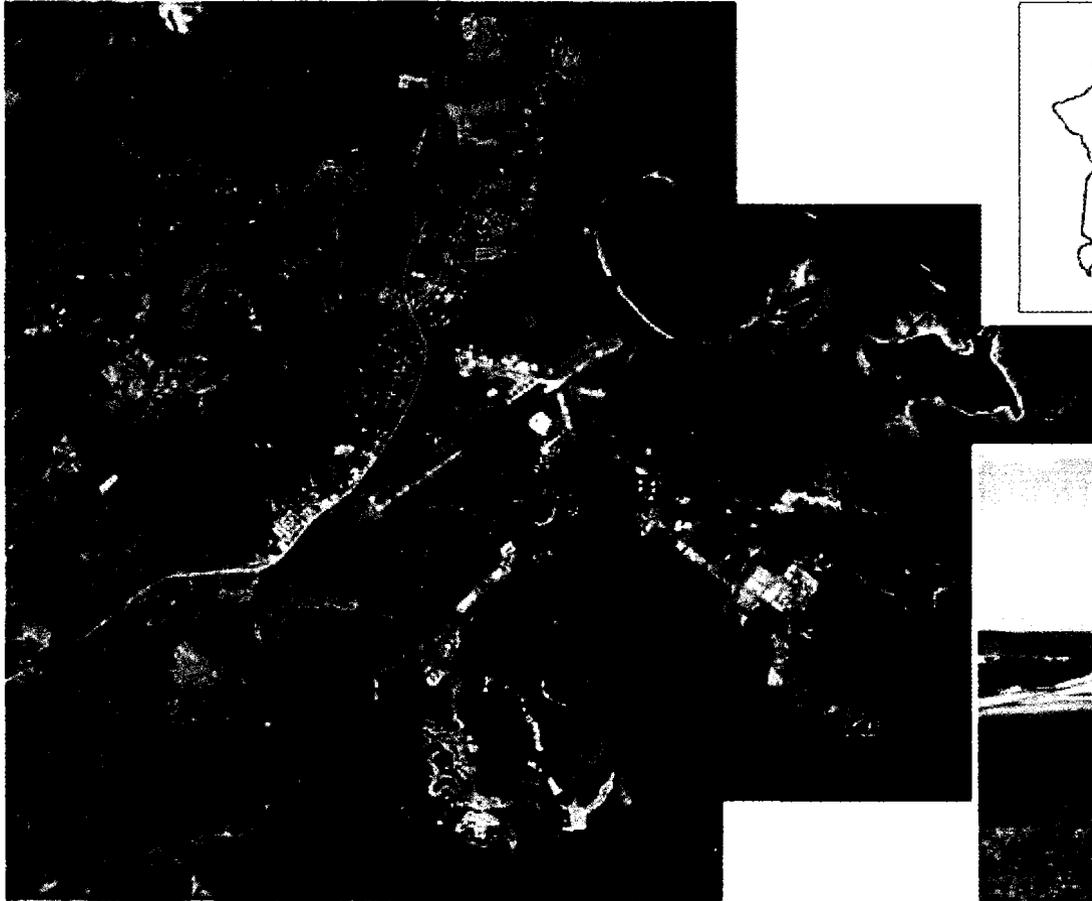
## **HISTORY**

- 8,600 acre base established in 1941
- Supported Caribbean operations and Vieques training
- 11,000' runway
- Port operations including fueling pier

## **CLOSURE LEGISLATION**

- Special legislation directed closure no later than 31 March 2003 using BRAC process: 1990 BRAC law
- Follow DoD Policies as appropriate

# Naval Activity Puerto Rico



# Closure Process

## **DRAWDOWN**

- Six months from legislation to closure
- Many operations had ceased

## **OPERATIONAL CLOSURE**

- Established Naval Activity Puerto Rico
- Develop smooth transition from operational to caretaker

## **CARETAKER**

- Security
- Maintenance of property
- Retain value

# Environmental Program

- Navy Environmental Restoration Program ongoing since 1980s
- Environmental Condition of Property (ECP) completed - July 2005
  - Review of existing documentation, interviews, and aerial photos
  - Identified 22 additional sites.
  - Performed sampling to confirm contamination
  - New sites added to RCRA Order

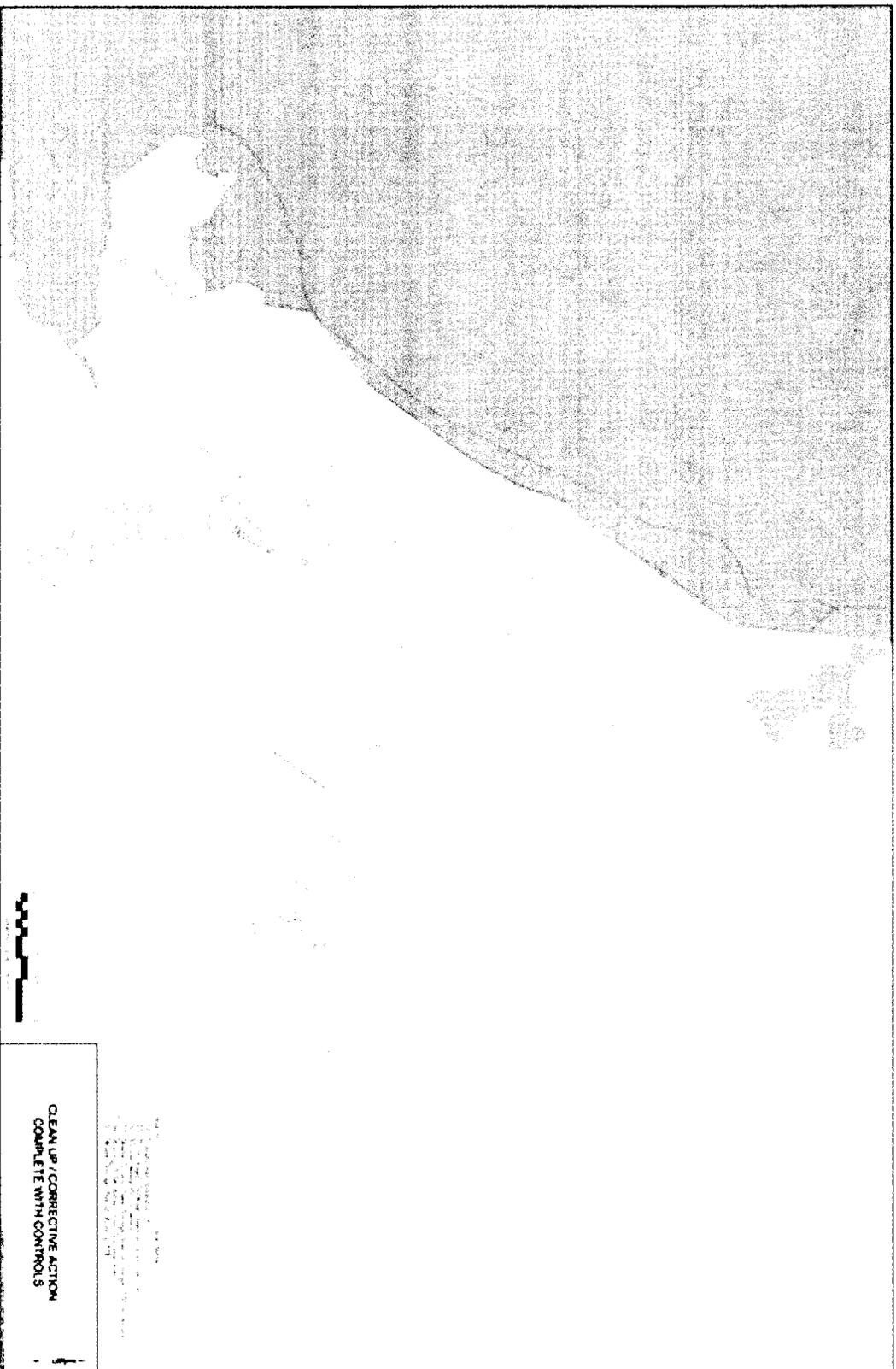
# SITES AT ROOSEVELT ROADS



# Clean/Corrective Action Complete Without Controls

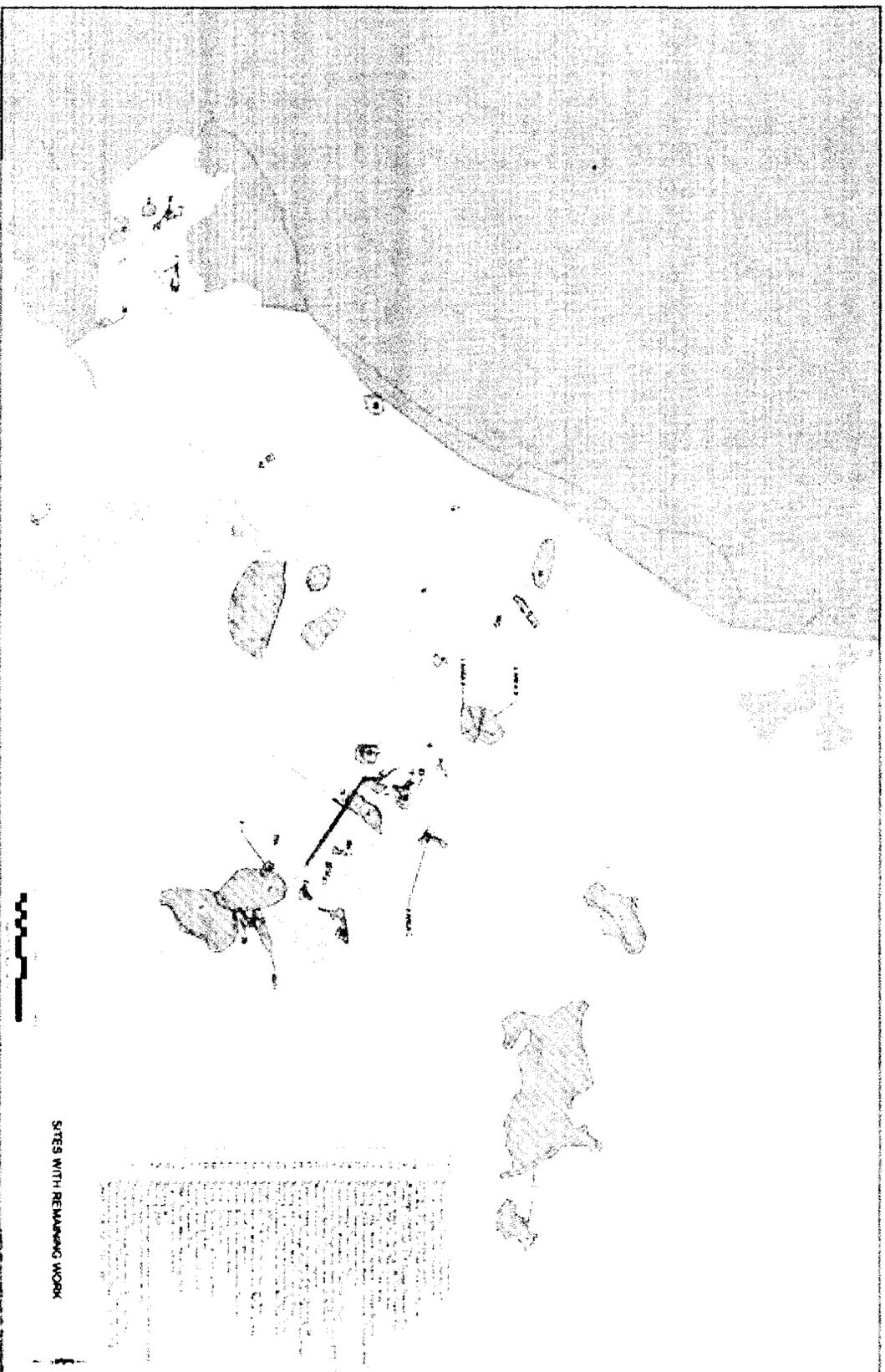


# Clean/Corrective Action Complete with Controls



CLEAN UP / CORRECTIVE ACTION  
COMPLETE WITH CONTROLS

# Sites with Remaining Work



# CLEANUP BY FUTURE OWNERS

## **Possible ESCA(s) with LRA w/ 3<sup>rd</sup> Party Order**

- PBC and EDC Parcels
- Current Negotiations
- **Sale Parcels w/ 3<sup>rd</sup> Party Consent Order**
  - Financial/Insurance Requirements
  - 3<sup>rd</sup> Party Consent Order Template
  - Navy Consent Order

# **SWMU 3:**

# **Solid Waste Landfill**

# **SWMU 3 - Solid Waste Landfill**

## **Naval Activity Puerto Rico**

### **History**

- 85-Acre Landfill operated from 1961 - Present;
- Initiated using trench fills (below grade) until it reached the original intended capacity in 1990;
- New cell designed and constructed with a capacity of 251,344 cubic yards (cy);
- Located on a peninsula at southeastern area of the Base;
- Estimated that 810,000 cy of wastes have been disposed at the landfill from 1961 to 2004;
- Asbestos disposal at select locations and discontinued in 1997.

# **SWMU 3 - Solid Waste Landfill**

## **Naval Activity Puerto Rico**

### **Contaminants of Concern - Groundwater**

- Arsenic, Benzo(a)pyrene, Chromium, and Thallium.

### **Exposure Pathways**

- Potential human receptors include on-site workers performing disposal or on-site construction of the corrective measures.
- Direct exposure to landfill waste is minimized by existing intermediate soil cover, and will be further prevented in the future by final cover system and site access and land usage restrictions
- Potential exposures due to leaching of contaminants from buried wastes into groundwater will be controlled through long-term groundwater monitoring.

# **SWMU 3 - Solid Waste Landfill**

## **Naval Activity Puerto Rico**

### **Proposed Remedy**

- A low-permeability final cover system is the selected remedy for the NAPR Landfill;
- Final cover system is in accordance with both USEPA Solid Waste and Hazardous Waste Regulations (Subpart F: Closure and Post-Closure Care Criteria) and PREQB Non-Hazardous Waste Regulations (Part IV-D Closure Criteria);
- Final cover is expected to minimize further migration of landfill contamination to the groundwater;
- Long-term groundwater monitoring will be required.
- Following USEPA's approval of the Proposed Remedy, closure activities, including installation of the final cap, are to be completed within 1 year of start-date.
- Post-closure activities, including groundwater monitoring, are planned for 30 years after closure

**SWMIU 7/8:**

**Tow Way**

**Fuel Farm**

# **SWMU 7/8 Tow Way Fuel Farm Naval Activity Puerto Rico**

## **History**

- SWMU 7 consists of the Fuel Farm constructed prior to 1957, consisting of nine USTs for storage of marine fuel and jet fuel;
- SWMU 8 consists of two pits located near Tanks 83 and 1080 where Bunker C fuel-sludge was disposed of between 1971 and 1972;
- Located on a hillside along Forrestal Road north of Ensenada Honda ;
- Numerous spills of small and large quantities of fuels stored at Tow Way Fuel Farm.

# **SWMU 7/8 Tow Way Fuel Farm Naval Activity Puerto Rico**

## **Contaminants of Concern (Groundwater, Surface & Subsurface Soils)**

- Surface Soil - Arsenic, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Indeno(1,2,3-cd)pyrene;
- Subsurface Soil – Benzo(a)pyrene;
- Groundwater Dissolved - Benzene, 1,2,4-trimethylbenzene, Ethylbenzene;
- Groundwater - PSH (phased separated hydrocarbons);

## **Exposure Pathways**

- Potential exposure route from COCs in the soils will be managed by land-use restrictions until the excavation of contaminated soils is complete;
- Potential human exposure to groundwater contaminants of concern may occur from volatilization of COCs into buildings over the contaminant plumes. Until clean-up levels are achieved, this pathway will be removed by land use restrictions.

# **SWMU 7/8 Tow Way Fuel Farm Naval Activity Puerto Rico**

## **Proposed Remedy**

- Soils: Excavation of all polyaromatic hydrocarbons (PAHs) and arsenic contaminated soils up to 2 feet below ground surface;
- Groundwater: Dissolved contaminant plumes in the groundwater only occur in one area. Sampling has shown the plume has not moved and has favorable natural attenuation parameters. When PSH is removed from this area, the naturally occurring parameters should mitigate this plume;
- Containment/Collection of phase separated hydrocarbon via collection wells using passive PSH skimmers.
- Engineering Evaluation Report (EER) will be developed after two years of passive skimming to evaluate the effectiveness of passive skimming to meet the clean-up objective.

# OUTREACH AND COORDINATION

- **BRAC Cleanup Team (BCT) has been formed**
  - EPA Region 2
  - Puerto Rico Environmental Quality Board
  - Local Reuse Authority
  - Navy BRAC Program Management Office
- **Restoration Advisory Board (RAB)**
  - Follow DoD “RAB Rule” – 32 CFR Part 202
  - DoD primary means of Outreach for Environmental Restoration
  - Community members
  - Community and Navy Co-chairs

# **Naval Activity Puerto Rico**

**Questions?**

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