

# **Vieques RAB Meeting**

Vieques, Puerto Rico

May 11, 2005

# **East Vieques Background Soil Investigation**

# Schedule

- ❖ Revised Draft Final Work Plan and Sampling and Analysis Plan, Soil Inorganics Background Investigation (March 31, 2005)
- ❖ RAB comment period: April 15 – June 15, 2005
- ❖ Submit Final Work Plan: July 15, 2005
- ❖ Begin fieldwork in July 2005

# Sample Location Selection

- ❖ Identify areas most likely unaffected by human activity
  - Within vegetated areas
  - At least 100 feet from roads
  - Away from known areas of human activity, based on historical knowledge and aerial photographs
  - Away from environmental sites, ordnance-related areas, and safety fans
- ❖ Identify areas within same geologic zones as environmental sites
- ❖ Identify sufficient numbers of samples (10) in each geologic zone in case data cannot be combined

# Background Sample Locations

- ❖ 40 sample locations (69 samples)
  - 11 existing (from previous investigation) – surface soil
  - 29 proposed – surface and subsurface soil
- ❖ Four geologic zones (10 locations per zone)
  - Qa – Alluvial deposits (18 samples)
    - ❖ 10 surface soil samples
    - ❖ 8 subsurface soil samples
  - Tl – Marine sedimentary deposits (20 samples)
    - ❖ 10 surface soil samples
    - ❖ 10 subsurface soil samples
  - Kv – Mainly sedimentary rocks (17 samples)
    - ❖ 10 surface soil samples
    - ❖ 7 subsurface soil samples
  - KTd – Igneous rocks (14 samples)
    - ❖ 10 surface soil samples
    - ❖ 4 subsurface soil samples

## Agency Site Visit

### Friday May 6, 2005

- ❖ Joint site visit performed by Navy, EPA, EQB, FWS, NOAA
  - All proposed sample locations visited (except two)
  - Nine sample locations relocated away from areas potentially affected by human activity
  - All agencies concurred on final sample locations

# Sample Depth and Analysis

## ❖ Sample Depth

- Surface soil: 0 to 6 inches
- Subsurface soil: 4 to 6 feet or just above bedrock

## ❖ Sample Analysis

- Inorganics
  - ❖ Occur naturally in the environment
  - ❖ Primary components of rocks and soil
- Soil Characteristic Data
  - ❖ pH
  - ❖ Total Organic Carbon (TOC)
  - ❖ oxidation/reduction potential
  - ❖ cation exchange capacity

# Data Evaluation and Use

## ❖ Background Data Evaluation

### ➤ Statistical evaluation

- ❖ In accordance with EPA and Navy guidance
- ❖ To combine or not combine

## ❖ Background Data Use

- Compare with soil inorganic data from environmental sites to determine whether inorganic concentrations in soil at a particular site are attributable to site-specific activities or are comparable to background



# RAB Site Visit

Thursday May 12, 2005

- ❖ Joint site visit performed by agencies and RAB members
  - Head count
  - Logistics
    - ❖ Time – recommend 7:30 am
    - ❖ Duration
    - ❖ Meeting location
    - ❖ Lunch
    - ❖ Water
    - ❖ Clothing, shoes
    - ❖ Sunscreen, bug repellent
  - Prioritize background sample locations for visit