



Vieques Restoration Advisory Board Meeting Vieques Environmental Restoration Program Update

April 2011



Expanded Site Inspection (ESI)

UXO 15

**Former Vieques Naval Training Range
Vieques, Puerto Rico**

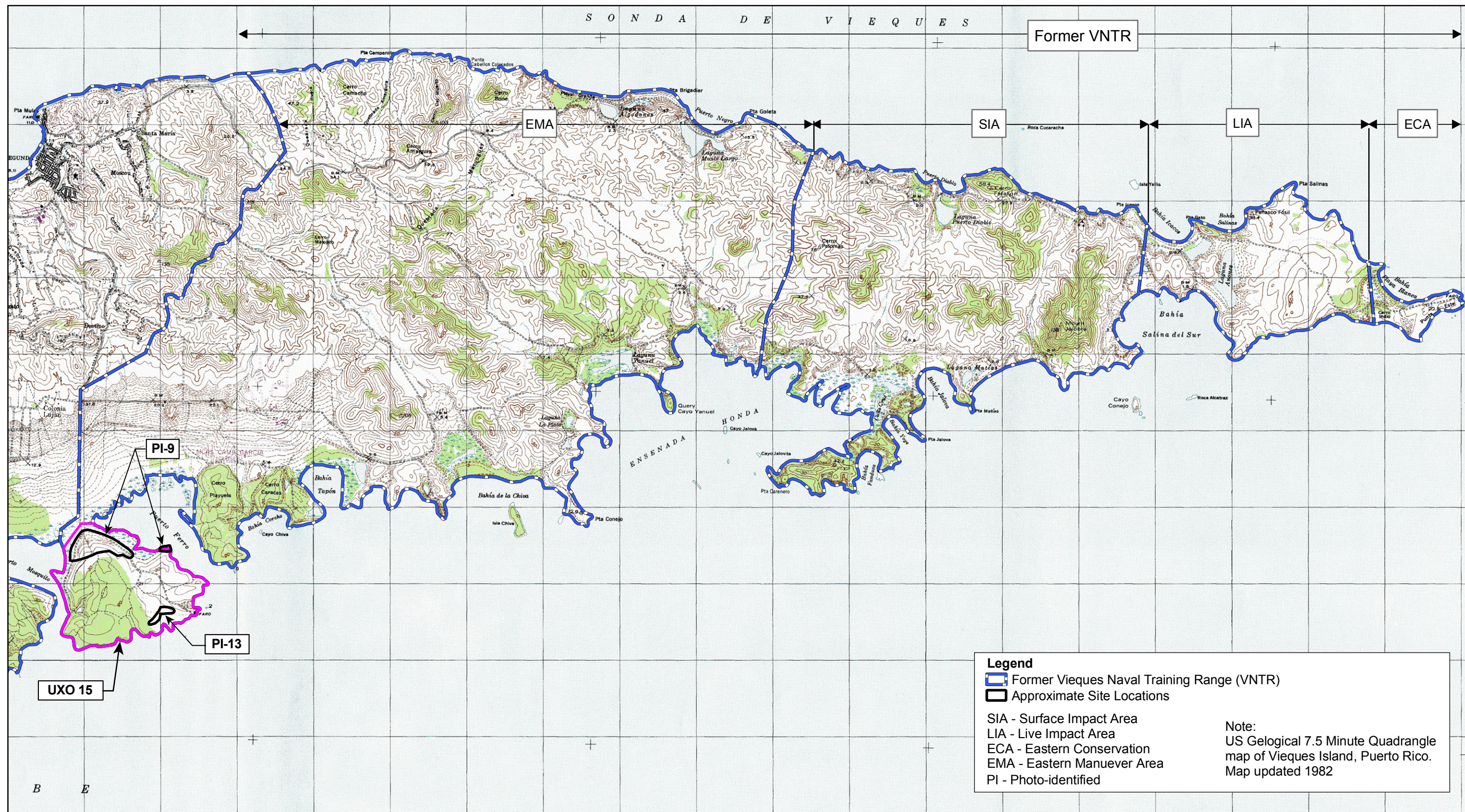


FIGURE 1
Former VNTR Site Location Map
UXO 15 - Expanded Site Inspection
Sampling and Analysis Plan
Vieques, Puerto Rico



Physical Setting and Historical Information

- **Includes Photo-Identified (PI) sites 9 and 13**
 - **Information regarding the site histories comes from interviews and aerial photographs**
 - **PI 9**
 - **Potentially used for munitions storage and disposal**
 - **PI 13**
 - **Potentially used as a firing point from which rocket-related ordnance was launched to the Live Impact Area (LIA) and Surface Impact Area (SIA)**
-

Site Use



- **PI 9**

- Unlikely to have been used for munitions disposal and long-term storage
- Likely used as staging area for transporting munitions to the Eastern Maneuver area
- Debris present is likely the result of inadvertent and/or minor discarding of empty casings

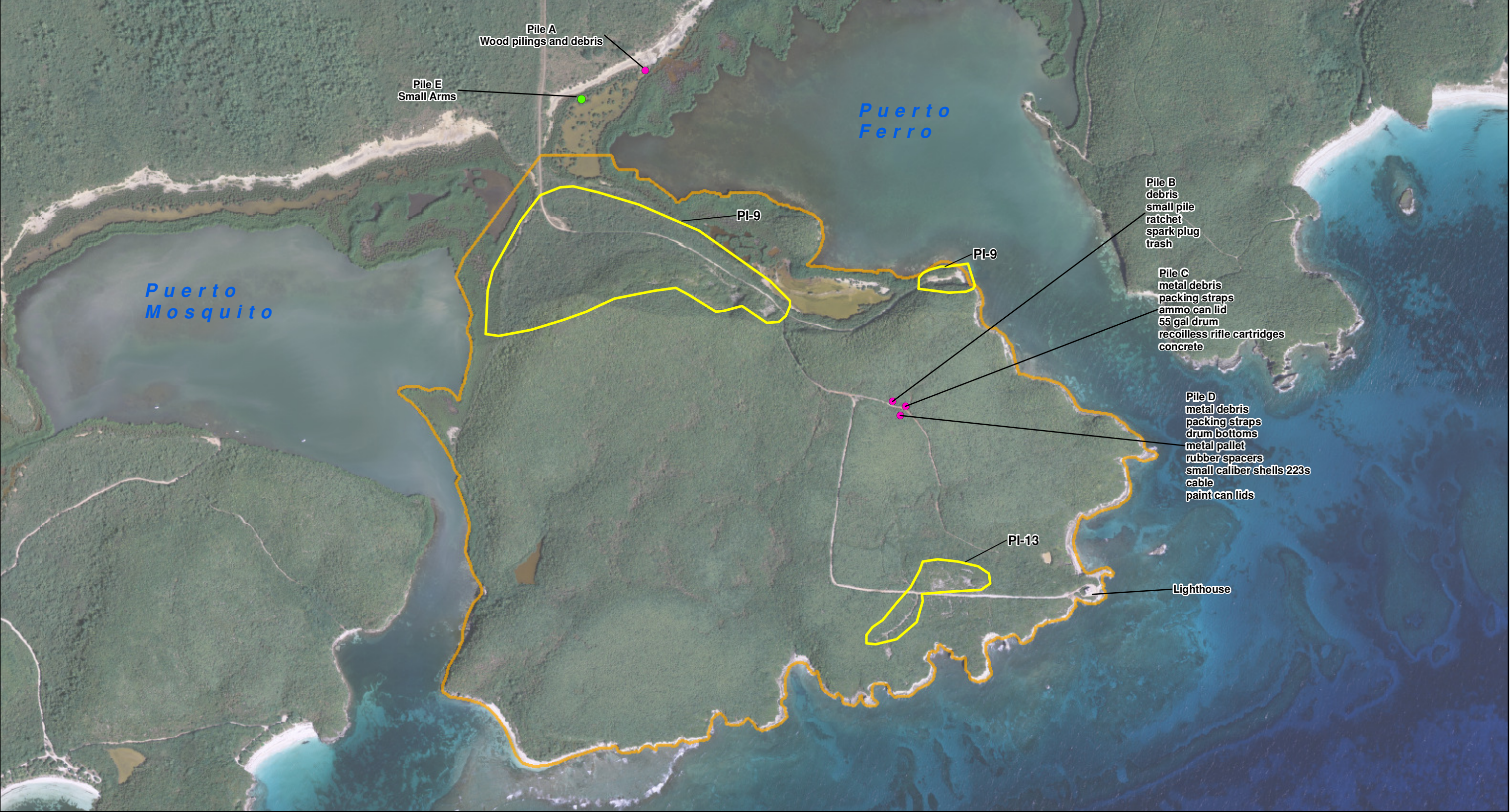
- **PI 13**

- Unlikely to have been used as a firing point due to site location relative to public areas and Camp Garcia

Findings to Date



- **No unexploded ordnance found on UXO 15**
 - 5 debris piles consisting mainly of metallic debris, munitions debris, wood, concrete, miscellaneous trash
 - Several other isolated areas of non-munitions-related scrap metal and munitions debris
 - Several munitions debris (empty casings) just offshore that have been incorporated into the reef
 - One small arms item (50-caliber projectile)
- **Aerial magnetometer survey identified two magnetic anomaly areas within PI 9 and PI 13**
- **Site visits have found no evidence of a firing point at PI 13**



Legend

- Debris Pile and Proposed Soil Sample Location
- Small Arms Pile and Proposed Sediment Sample Location
- PI Site
- UXO Site

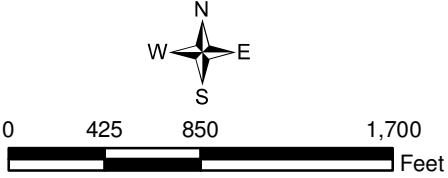


Figure 4
Debris Piles
UXO 15 - Expanded Site Inspection Sampling and Analysis Plan
Vieques, Puerto Rico



Figure 6 "Pile A" Wood pilings and debris



Figure 7 "Pile B" Trash



Figure 8 "Pile C" Empty 55 gallon drum and metal straps



Figure 9 "Pile C" Recoilless rifle cartridge and metal straps



Figure 10 "Pile D" Metal straps



Figure 11 "Pile D" Small caliber empty shells with metal straps



Figure 12 "Pile E"



- Legend**
- ▲ Non-Munitions-Related Scrap Metal
 - ▲ Munitions Debris
 - ◆ Material Potentially Presenting an Explosive Hazard
 - Transect
 - PI Site
 - UXO Site

Note:
Number next to item indicates the quantity of item.

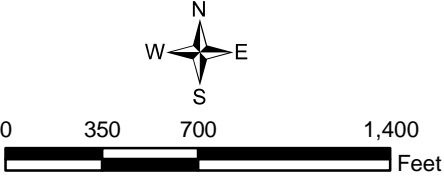


Figure 2
Location of Transect Items
UXO 15 - Expanded Site Inspection Sampling and Analysis Plan
Vieques, Puerto Rico



Legend
Magnetometer Response from "Mag and Flag"

- Low
- Medium
- High
- PI Site
- Elevated Anomaly Density Area (EADA)
- Area of Digital Geophysical Mapping

Aerial Magnetometer Survey Total Magnetic Field

-4.6 -2.3 0.0 1.9 3.8 5.8 7.7 9.6

North

350 700 1,400

Feet

Figure 3
Aerial and Hand Held Magnetometer Survey Results
UXO 15 - Expanded Site Inspection Sampling and Analysis Plan
Vieques, Puerto Rico

Study Approach



- **Remove the debris piles and isolated munitions debris (potential sources of contamination)**
- **Collect soil samples beneath the debris piles to determine if contaminant releases have occurred**
- **Perform digital geophysical mapping (DGM) in the magnetic anomaly areas to determine if there are subsurface objects present**
- **Excavate subsurface objects to determine if there are munitions or explosives of concern (MEC) present**
- **Remove any man-made objects and collect additional soil samples if MEC is identified**

QUESTIONS?