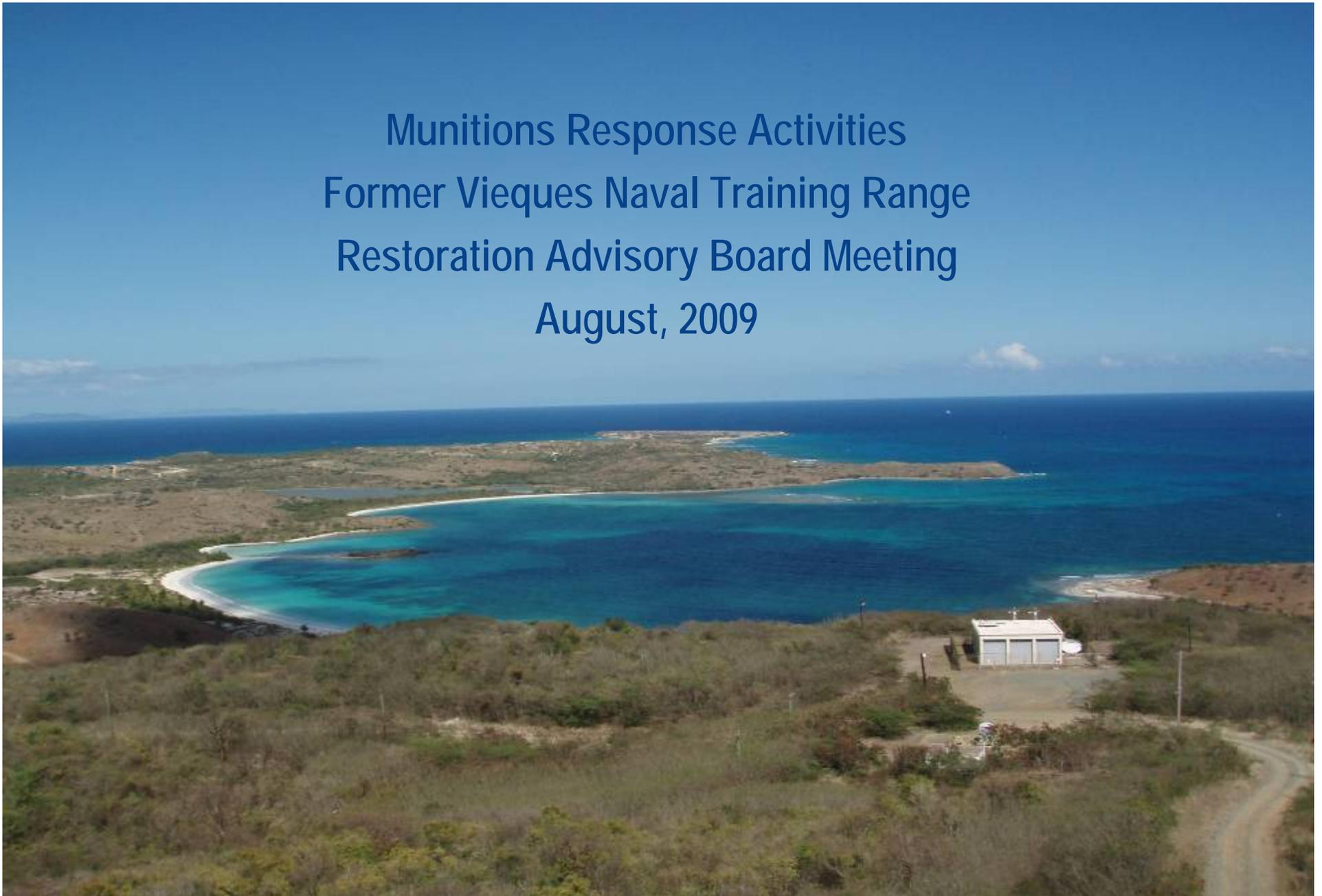


Munitions Response Activities  
Former Vieques Naval Training Range  
Restoration Advisory Board Meeting  
August, 2009



## August, 2009 RAB Presentation Overview



- Munitions Response Areas Removal Status
- MEC items Recovered and Destroyed
- Metal Debris Recovered
- Sub Surface Removal Activities
- Questions/Comments

Data presented through 31 July, 2009

# Progress Map



## ACRES Surface Cleared



- LIA 849 Acres
- ECA 136 Acres
- SIA 283 Acres
- 1268 total acres surface cleared



# Munitions and Explosives of Concern (MEC) Items Removed and Destroyed



|                  |        |
|------------------|--------|
| ❖ Bombs          | 573    |
| ❖ Projectiles    | 6,110  |
| ❖ Rockets        | 429    |
| ❖ Pyrotechnics   | 508    |
| ❖ Sub-Munitions  | 10,124 |
| ❖ MEC Components | 1,562  |
| ❖ Igniters       | 71     |

19,377 TOTAL MEC ITEMS THAT ARE NO LONGER A THREAT TO ANYONE

MEC Items recovered in the SIA significantly lower than in the LIA



- Over 14 million pounds of metal debris collected
- Over 9 million pounds already processed and shipped to recyclers

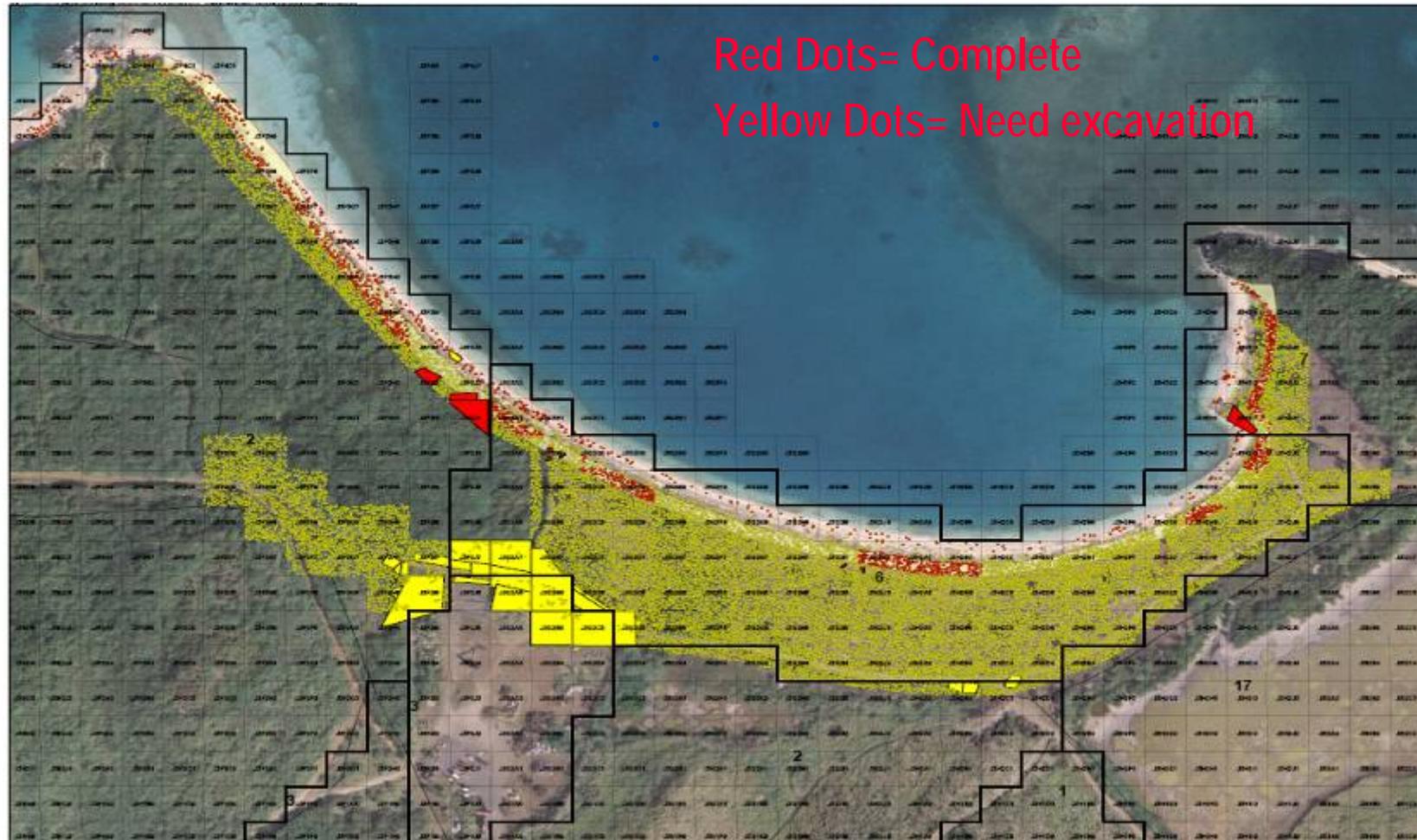


# Sub-Surface Removal Begins at Bahia Icacos



- ❖ **Over 6000 anomalies identified in the turtle nesting areas along the beach. Approximately 20,000 anomalies including buffers**
- ❖ **Approximately 1700 anomalies investigated to date**
- ❖ **Approximately 150 MEC or suspected MEC items removed**

# Anomaly Map for Bahia Icacos sub-surface removal area



- Red Dots= Complete
- Yellow Dots= Need excavation

# The Process



- ❖ A surface removal was previously completed to remove MEC and metal debris on the surface
- ❖ The area is mapped using geophysical detection equipment
- ❖ The exact location of any metal detected (anomaly) is automatically recorded
- ❖ Using sophisticated global positioning instruments, technicians reacquire the location

## The process



- ❖ **Technicians excavate the anomaly and remove all metal**



- ❖ **Using the same type of instrument that originally identified the anomaly, technicians verify that it has been removed**

# Quality Control and Assurance



- ✓ **Quality Control and Quality Assurance personnel randomly select a percentage of anomalies excavated for inspection to evaluate removal effectiveness**
- ✓ **Blind Seeds were randomly planted throughout the removal area. This evaluates the effectiveness of the initial geophysical mapping and the removal effort**



## Challenges



- ❖ Even a very small piece of metal near the surface will register as an anomaly requiring investigation
- ❖ Rocks with a high metallic content will register as anomalies
- ❖ Shallow water depth makes some anomalies unsafe to remove
- ❖ A very slow process, complicated at times by unauthorized boaters entering the area

## Unauthorized boaters cause work to stop for their safety



Gracias

Questions/Comments?

