



Dugway Proving Ground Restoration Advisory Board Meeting

November 13, 2006

English Village - Command Conference Room, Building 5450
Dugway, Utah

UPDATE

RCRA Facility Investigation

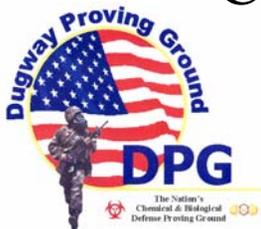
Jeff Fitzmayer
Parsons



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

RCRA Corrective Action Process

- Solid Waste Management Units (SWMU) Definition
 - "Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released."
- Four Main Steps
 - RCRA Facility Assessment (RFA)
 - RCRA Facility Investigation (RFI)– Phase I
 - RCRA Facility Investigation (RFI)– Phase II
 - Corrective Measures Study (CMS)



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

Status of RFI SWMUs

Priority 1

32 SWMUs

- **21 SWMU RFI Reports DSHW Approved**
 - SWMUs 3, 16, 17, 18, 21, 44, 52, 54, 65, 79, 98, 172, 194 (A,B,C), 199, 200, 212, 213, 215, and 207
- **1 SWMU RFI Draft-Final Report to DSHW**
 - SWMU-180
- **2 SWMU RFI Draft Reports to Army**
 - SWMUs 41, 177



Status of RFI SWMUs

Priority 1

32 SWMUs

- **1 SWMU with Draft RFI Report being prepared**
 - **SWMU 60**
- **3 SWMUs where removal actions will be conducted**
 - **SWMUs 35, 173, and 208**
- **4 SWMUs requiring additional investigation work**
 - **SWMUs 4, 15, 32, and 192**



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

Status of RFI SWMUs

Priority II

36 SWMUs

- **23 SWMU RFI Final Reports Approved by DSHW**
 - SWMUs 6, 10, 23, 25, 56, 75, 77, 113, 115, 116, 118, 171, 179, 185, 188, 189, 193, 197, 205, 206, 211, 214, and 216
- **5 SWMU RFI Final Reports in Preparation**
 - SWMUs 61, 97, 133, 150, 154.



Status of RFI SWMUs

Priority II

36 SWMUs

- **1 SWMU RFI Draft-Final to DSHW**
 - SWMU 8
- **3 SWMUs with Draft Reports being prepared**
 - SWMUs 11, 183, and 201
- **4 SWMUs requiring additional work**
 - SWMUs 31, 114, 209, and 210



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

RFI Phase II Work Completed Since August

Reports

- **Response to Army comments on Draft Downrange GMA (alternate groundwater monitoring plan)**
- **Submitted 5 RFI Reports to Army or DSHW**
- **Submitted Draft-Final RFI Work Plans on SWMUs 192, 208, 15; Draft for SWMU-180.**



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

Future Field Work

RFI Field Work –

- **Soil Sampling at SWMUs 4, 31, 114, 192, and 210**
- **Groundwater investigation at SWMU-180**

Removal Actions –

- **SWMUs 35, 173, 189 (v. cleanup), and 208**



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

Future Report Activity

- **Prepare Final RFI Reports for SWMUs 61, 97, 133, 150, and 154**
- **Prepare Draft RFI Reports for SWMUs 11, 60, 183, and 201.**
- **Prepare Final Carr Groundwater Management Plan (GMA) and Draft-Final Downrange GMA reports**
- **Prepare Draft English Village GMA report**



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

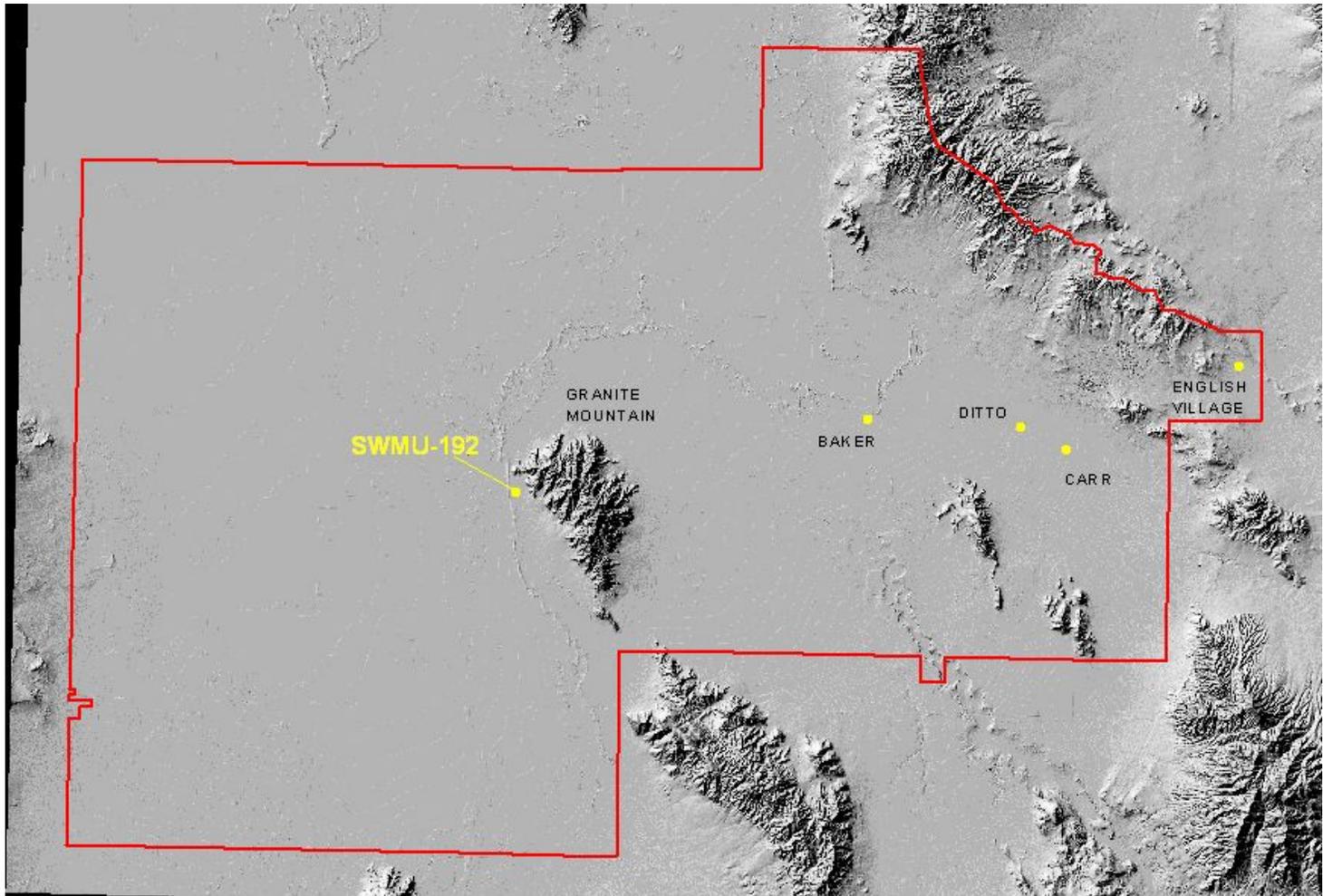
SWMU-192

Former M-55 Rocket
OB/OD Disposal Area
Granite Mountain



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

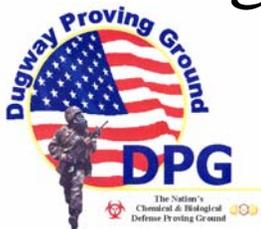
SWMU – 192 Location



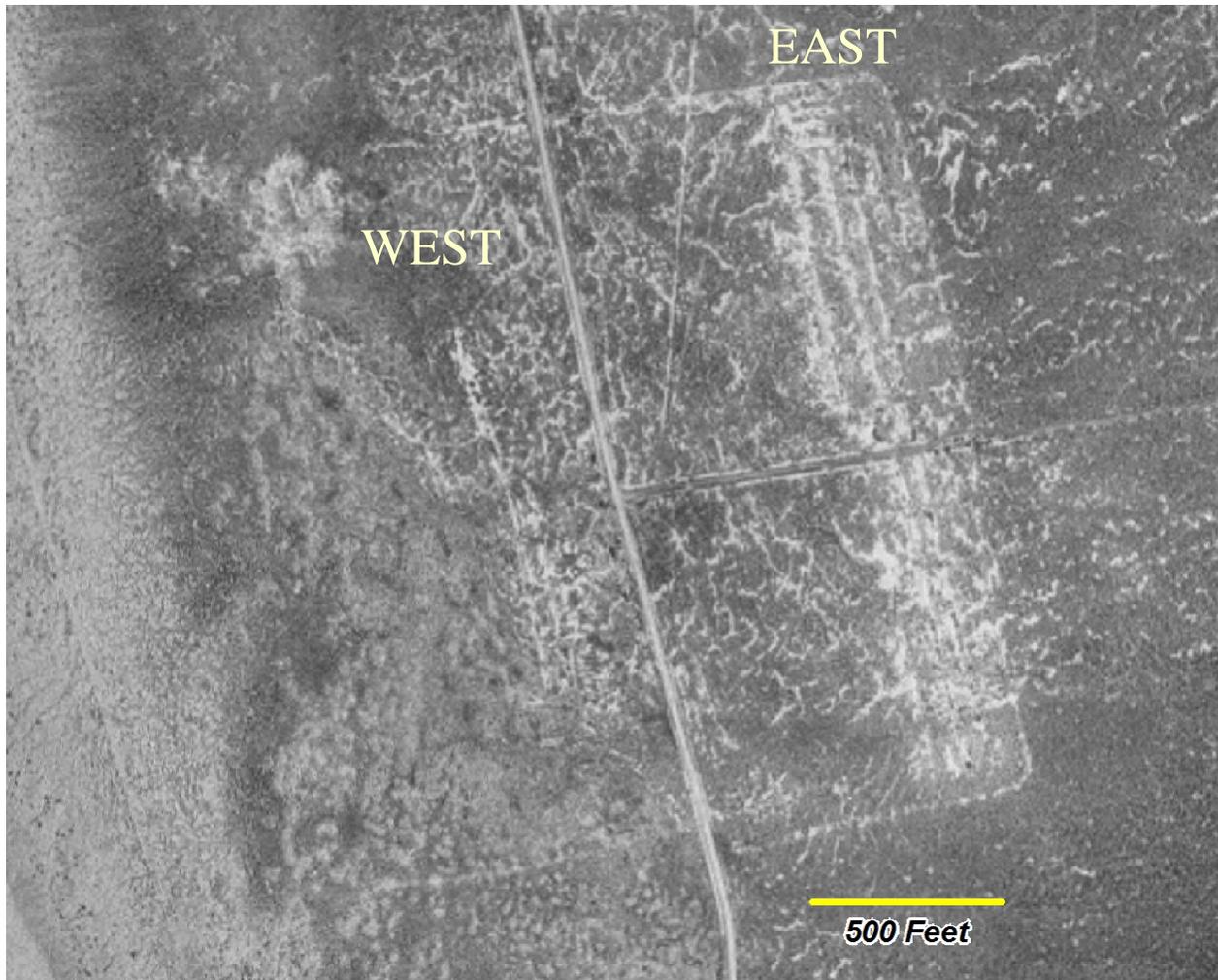
Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192 HISTORY

- Consists of 61 backfilled trenches, each 120 ft long and 30 ft wide, used in 1968-69 for open burn demilitarization of 30,000 M-55 GB-filled rockets.
- Trenches re-excavated in 1976. After further demil, rocket debris moved to HWMU-9. Debris sifted from soil and removed, trenches then backfilled and closed.
- Began RFI of SWMU-192 in 1999.

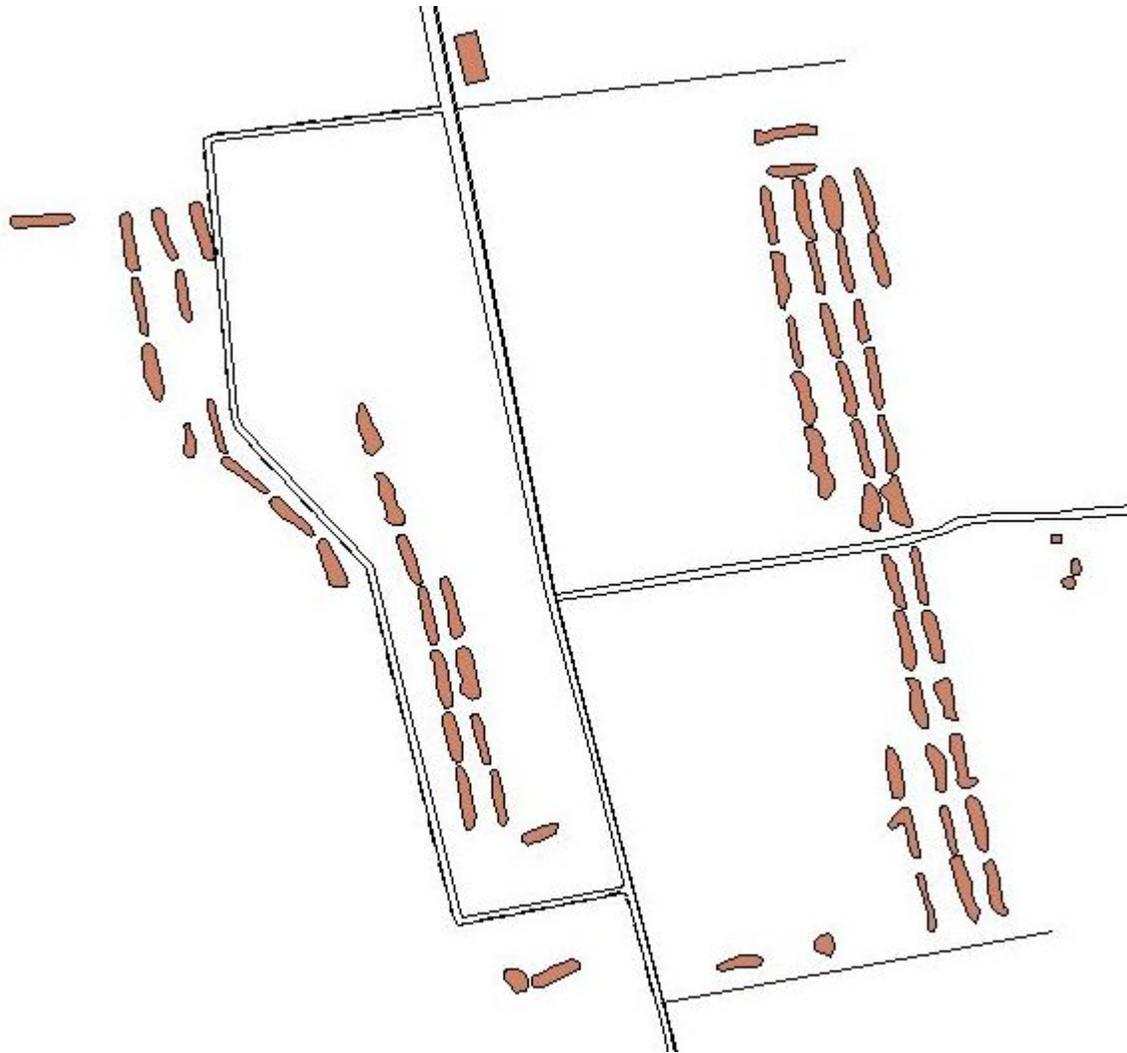


SWMU – 192 AERIAL



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU – 192



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192 RFI

- 137 soil-gas samples.
- Geophysics (magnetometer) survey.
- 35 Surface soil samples collected on trench surfaces and between trenches.
- Test pit excavations in 29 of the trenches; 56 subsurface soil samples collected.
- 11 temporary monitoring wells installed and sampled (DTW = ~ 15 ft).



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192 TEST PITS



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192 SAMPLING RESULTS

- No VOCs in soil-gas samples.
- Geophysics: No significant ferrous metal anomalies.
- Soils contain:
 - ABPs (MPA)
 - Explosives (TNT and RDX*)
 - Propellants (Nitroglycerine)*
 - Heavy metals (Arsenic and Cadmium)*
 - PAHs (Below regulatory thresholds)
- Groundwater: Low levels of VOCs, ABPs, and Explosives.



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

SWMU-192 FUTURE SAMPLING NEEDS

- PCBs: from M-55 firing tubes and paint.
- Dioxins: from incomplete burning of PCBs.
- Perchlorate: from M-55 igniters (1g/rocket)
 - Recent “hot-button” environmental issue
 - Highly water-soluble and mobile; persistent in the environment



Dugway Proving Ground
Restoration Advisory Board Meeting
November 13, 2006

A landscape photograph showing a volcanic field. In the foreground, there are dark, conical sand dunes. The middle ground features a series of rolling, light-colored hills. In the background, there are blue, hazy mountains under a sky filled with dark, dramatic clouds. The word "QUESTIONS?" is written in a yellow, serif font across the center of the image.

QUESTIONS?