

**PALEN SOLAR POWER PROJECT (09-AFC-7)  
CEC STAFF DATA REQUESTS 279 – 280**

**Technical Area: Waste Management (AFC Section 5.16)**

**Response Date: January 6, 2010**

**DR-WM-279**

**Information Required:**

Please provide documentation of additional research of historic military use, agency contacts and a discussion of the need for visual surveys and possibly geophysical surveys. If surveys are planned or performed identify the required qualification for UXO technicians and timing for surveys and reporting, as well as ordnance removal and disposal, if necessary.

**Response:**

According to information provided in the Reconnaissance-Level Geotechnical and Water Supply Assessment for Palen Solar Projects, prepared by CH2M HILL, there is the potential presence of unexploded ordnance (UXO) on the PSPP site. CH2M HILL reported the historical use of the site as part of General George Patton's Desert Training Camps during World War II (California-Arizona Maneuver Area [CAMA]). Historical camps include Camp Coxcomb, Camp Desert Rock, and Camp Desert Rock Army Air Field. CH2M HILL research indicated that the PSPP site is near Palen Pass, which was the site of some of the largest mock battles in the entire CAMA (CH2M HILL 2008).

As indicated in the CH2M HILL report, while no currently defined areas of interest are located within the boundary of the PSPP site (per the Formerly Used Defense Sites [FUDS] Group of the United States Army Corps of Engineers [USACE]) and no areas of historic significance were identified within the site boundaries (per Bureau of Land Management [BLM] Desert District), the BLM noted that many of the areas located at a distance from the camps or established facilities were often used for live-fire training and have been found to contain conventional and unconventional land mines and improvised personnel mines along with UXO (CH2M HILL 2008). Based on the proximity of the PSPP site to Palen Pass and the desert camps, UXO surveys should be conducted about two to four weeks before commencing construction activities at the site and/or UXO experts should be present during ground disturbances in areas that may contain UXO.

UXO surveys/construction support will be performed in accordance with applicable guidance including:

- USACE, 2004, *EP 75-1-2, Munitions and Explosives of Concern (MEC) Support during Hazardous, Toxic, and Radioactive Waste (HTRW) and Construction Activities.*
- USACE, 2007, *EM 1110-1-4009, Military Munitions Response Actions.*
- AECOM, 2009, *Program Safety Plan, Military Munitions Response Program*
- AECOM, 2005, *Safe Work Procedure, Munitions and Explosives of Concern Construction Support.*

Geophysical surveys, as appropriate, will be conducted two to four weeks prior to initiation of ground-breaking activities. The geophysical survey results will be available within three to five days following actual data collection. A geophysical report documenting the survey activities and results will be provided 30 days after completion of the geophysical survey.

All geophysical mapping surveys will be conducted under the direction of a California-registered professional geophysicist with at least 10 years of experience, including prior work on military munitions

**PALEN SOLAR POWER PROJECT (09-AFC-7)**  
**CEC STAFF DATA REQUESTS 279 – 280**

**Technical Area: Waste Management (AFC Section 5.16)**

**Response Date: January 6, 2010**

response projects. All UXO technicians will meet the specific requirements detailed in the Department of Defense Explosives Safety Board Technical Publication TP 18, Minimum Qualifications for Unexploded Ordnance (UXO) Technicians and personnel, dated December 20, 2004 available at:  
[http://www.ddesb.pentagon.mil/TP18\\_122004.pdf](http://www.ddesb.pentagon.mil/TP18_122004.pdf)

**Reference:**

CH2M HILL, 2008. Reconnaissance-Level Geotechnical and Water Supply Assessment for Palen Solar Projects. Prepared for Solar Millennium. October.

---

**DR-WM-280**

**Information Required:**

Please provide an outline of the UXO recognition training that may be required for site workers.

**Response:**

The munitions and explosives of concern (MEC)<sup>1</sup> and UXO recognition training materials and briefing will be updated one to two weeks prior to mobilization of the field crews to incorporate the most recent MEC/UXO information available for the construction sites. Actual training will be accomplished on site, prior to any ground-breaking activities.

The following is an outline for the MEC/UXO Recognition Training Program.

- 1.0 Site Military Land-Use History
- 2.0 Ordnance in General
  - 2.1 Air-to-ground ordnance
  - 2.2 Ground-to-ground
  - 2.3 Concealed/buried ordnance
- 3.0 California-Arizona Maneuver Area Ordnance
  - 3.1 Troop Munitions
    - 3.1.1 Small arms
    - 3.1.2 Flares
    - 3.1.3 Pyrotechnics
    - 3.1.4 Signals
    - 3.1.5 Grenades
    - 3.1.6 Mortars
    - 3.1.7 Landmines (practice)
  - 3.2 Tanks
    - 3.2.1 Projectiles
    - 3.2.2 Anti-tank landmines (practice)
  - 3.3 Aircraft Bombs
    - 3.3.1 Sand/water-filled

---

<sup>1</sup> MEC is a broader term which includes UXO, discarded military munitions, and munitions constituents (e.g., TNT) present in high enough concentrations to pose an explosive hazard.

**PALEN SOLAR POWER PROJECT (09-AFC-7)**  
**CEC STAFF DATA REQUESTS 279 – 280**

**Technical Area: Waste Management (AFC Section 5.16)**

**Response Date: January 6, 2010**

- 3.3.2 Inert/cast bombs
- 4.0 Types of Munitions-Related Discoveries to-Date
  - 4.1 Surface Finds
    - 4.1.1 Aerial practice bombs
    - 4.1.2 Hand grenades
    - 4.1.3 Barrage rockets
    - 4.1.4 Artillery projectiles
    - 4.1.5 Anti-tank landmines
  - 4.2 Subsurface Discoveries
    - 4.2.1 To Be Determined
- 5.0 Hazards
  - 5.1 Burns
  - 5.2 Penetration Wounds
  - 5.3 Explosions and Massive Trauma
- 6.0 What to do if Suspected Ordnance is Found
  - 6.1 Do NOT handle or disturb further
  - 6.2 Obtain GPS position
  - 6.3 Mark the area discreetly
  - 6.4 Photograph
  - 6.5 Report
- 7.0 Safety Precautions
  - 7.1 Be vigilant
    - 7.1.1 Look for man-made objects
    - 7.1.2 Do not disturb (kick, toe, throw rocks, pick up)
    - 7.1.3 Report suspect finds
  - 7.2 Be aware that ordnance may be sensitive to heat, shock, friction
  - 7.3 Communications limits
    - 7.3.1 Cell phone use – no closer than 10 feet
    - 7.3.2 Hand-held radios – no closer than 25 feet