

BLYTHE SOLAR POWER PROJECT (09-AFC-6)
CEC STAFF DATA REQUESTS 253 – 258

Technical Area: Waste Management (AFC Section 5.16)

Response Date: January 6, 2010

DR-WM-253

Information Required:

Please provide documentation of additional research of historic military use in the area (including Blythe Army Air Field), agency contacts and permit requirements.

Response:

According to information provided in the Reconnaissance-Level Geotechnical and Water Supply Assessment for Blythe Solar Projects, prepared by CH2M HILL, there is the potential presence of unexploded ordnance (UXO) on the BSPP 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). The Blythe Army Airfield, which had the purpose to train bombardment squadrons, is located adjacent to the south of the Project site. Two currently defined areas of interest are located within the boundary of the BSPP site (per the Formerly Used Defense Sites Group of the United States Army Corps of Engineers [USACE]), which are determined to be small arms target ranges. The two ranges are identified as Poorman and Jeep Range (CH2M HILL 2008.).

While no currently identified camps, bivouacs, or mock battlefields (per USACE) and no areas of historical significance were currently identified within the site boundaries (per Bureau of Land Management [BLM] Desert District), the BLM noted (CH2M HILL 2008), 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 UXOs. Based on the two defined areas of interest (former small arms ranges) identified within the BSPP site and proximity of the Project site to the Blythe Army Airfield (currently an airport administered by the Riverside County Aviation Department), UXO surveys should be performed. These geophysical surveys may be performed by on-call or on-site UXO Construction Support personnel. The UXO surveys are further described in the responses to DR-WM-254 through DR WM-258 below.

Reference

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

DR-WM-254

Information Required:

Please describe the timing and methodology for completing the geophysical surveys.

Response:

Some combination of on-call or on-site Construction Support and/or munitions response geophysical surveys will be provided for all intrusive activities at the planned sites approximately two to four weeks ahead of field work. For those construction areas where no munitions and explosives of concern (MEC)¹

¹ 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.

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have been positively identified previously, but where MEC may be present, UXO Construction Support will be provided in accordance with guidance provided by:

- 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 (Draft Outline and Definitions attached)*.
- AECOM, 2005, *Safe Work Procedure, Munitions and Explosives of Concern Construction Support (Example Site)*.

For those construction areas where MEC has previously been discovered, or where two or more MEC per acre are identified during Construction Support activities, Analog and/or Digital Geophysical Mapping surveys will be performed over the footprint of the planned construction two to four weeks prior to initiation of ground-disturbing activities. Geophysical surveys will be followed-up by intrusive investigation of the 100 highest priority anomalies identified by the analog or digital mapping. If the geophysical anomalies are caused by MEC, the construction footprint will be cleared to depth of detection of the instrumentation of the most appropriate instrumentation deployed (as determined by the project design team). If the geophysical anomalies are not caused by MEC, i.e., anomalies are sourced by non-hazardous munitions debris or non-ordnance objects, then further development activities will be accompanied by a resumption of Construction Support, as provided above.

Analog Geophysical Mapping surveys will be provided in accordance with the most current version of AECOM MRG-2009-003, *Standard Operating Procedure for Analog Geophysical Mapping with Real-time Instrumentation and GPS anomaly Waypoint Mapping*.

Digital Geophysical Mapping surveys will be provided in accordance with the most current version of AECOM MRG-2009-002, *Standard Operating Procedure for Digital Geophysical Mapping, EM61 Mk2 and RTK GPS Navigation with Real-time Instrumentation and GPS anomaly Waypoint Mapping*.

UXO technician support during construction activities may require only MEC standby support or subsurface removal, depending on an assessment of the probability of encountering MEC and the level of confidence associated with the determination. If the probability of encountering MEC is low (e.g., current or previous land use leads to an initial determination that MEC may be present), only MEC standby support will be required. When a determination is made that the probability of encountering MEC is moderate to high (e.g., current or previous land use leads to a determination that MEC was employed or disposed of in the area of concern), qualified UXO technicians must conduct a subsurface removal of the known construction footprint and remove all encountered MEC.

For construction activities on sites with known or suspected MEC, a UXO team consisting of a minimum of two qualified UXO personnel (UXO Technician II or above) is required. The UXO team may include additional UXO-qualified personnel, depending on site- and task-specific conditions and requirements, and the number of UXO teams will vary depending on the total level of effort.

If subsurface removal is required in support of construction activities, UXO team(s) will consist of no more than seven UXO personnel including the team leader. A Senior UXO Supervisor will be on site during operations and will not supervise more than 10 UXO teams. A UXO Safety Officer (UXOSO) is required on site during operations. A UXO Quality Control Specialist (UXOQCS) may or may not be required to be on site full time, and may be in a dual role as the UXOSO/UXOQCS if there are less than 15 field personnel on site.

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The UXO team members have the following responsibilities for MEC support during construction on a site with known or suspected MEC:

- Provide the MEC identification, location, and safety functions for the prime contractor during construction activities.
- Conduct MEC safety briefings and UXO recognition training for all site personnel and visitors.

The UXOSO, or the senior UXO-qualified person on site if a UXOSO is not assigned, will act as the UXOSO and has final on-site authority for MEC procedures and safety issues.

DR-WM-255

Information Required:

Please provide the expertise of those conducting the geophysical surveys.

Response:

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 response projects.

DR-WM-256

Information Required:

Please provide results of the geophysical survey.

Response:

Geophysical surveys, as appropriate, will be conducted two to four weeks prior to initiation of ground-disturbing 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.

DR-WM-257

Information Required:

Please identify the qualification requirements for the UXO technicians to complete the surveys as well as ordnance removal and disposal, if necessary.

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Response:

All UXO technicians will meet the specific requirements detailed in the Department of Defense Explosives Safety Board Technical Publication TP 18, Minimum Qualifications for UXO Technicians and personnel, dated December 20, 2004 available at: http://www.ddesb.pentagon.mil/TP18_122004.pdf.

DR-WM-258

Information Required:

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

Response:

The MEC/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
 - 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

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- 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