

## BLM Solar Energy Program Design Features

### **Programmatic Design Features for Hazardous Materials and Waste**

The following design features have been identified to avoid, minimize, and/or mitigate potential hazardous materials and waste impacts from solar energy development identified and discussed in Sections 5.20.1 and 5.20.2 of the Draft and Final Solar PEIS.

#### *General*

- HMW1-1** Project developers shall coordinate with the BLM and other Federal, state, and local agencies early in the planning process to assess hazardous material and waste concerns and to minimize potential impacts.
- (a) Assessing hazardous material and waste concerns shall include, but is not limited to, the following:
- Identifying expected waste generation streams at the solar energy site and hazardous waste storage locations for consideration in the environmental analysis evaluating the proposed project.
  - Conducting site characterization, construction, operation, and decommissioning activities in compliance with applicable Federal and state laws and regulations, including the Toxic Substances Control Act of 1976, as amended (15 USC 2601, et seq.). An example of complying with applicable law is reporting any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, Section 102b.
  - Evaluating impacts related to potential hazardous material and waste as part of the environmental impact analysis for the project and considering options to minimize and/or mitigate impacts in coordination with the BLM.
- (b) Methods to minimize hazardous material and waste related impacts shall include, but are not limited to, the following:
- Developing a Hazardous Materials and Waste Management Plan that addresses the selection, transport, storage, and use of all hazardous materials needed for construction, operations, and decommissioning of the facility for local emergency response and public safety authorities and for the designated BLM land manager. Furthermore, the plan shall address the characterization, on-site storage, recycling, and disposal of all

## BLM Solar Energy Program Design Features

resulting wastes.<sup>1</sup> At minimum, the plan will discuss facility identification; comprehensive hazardous materials inventory; Material Safety Data Sheets (MSDSs) for each type of hazardous material; emergency contacts and mutual aid agreements, if any; site map showing all hazardous materials and waste storage and use locations; copies of spill and emergency response plans, and hazardous materials–related elements of a Decommissioning and Site Reclamation Plan.

- Planning for waste management will address all solid and liquid wastes that may be generated at the site in compliance with the CWA requirements to obtain the project’s NPDES or similar permit.
- Considering fire management in developing hazardous materials and waste management measures.
- Identifying and implementing prevention measures, including material substitution of less hazardous alternatives, recycling, and waste minimization.
- Establishing procedures for fuel storage and dispensing that consider health and safety of personnel and methods for safe use (i.e., fire safety, authorized equipment use).
- Ensuring vehicles and equipment are in proper working condition to reduce potential for leaks of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials.
- Considering establishing schedules regular removal of wastes (including sanitary wastewater generated in temporary, portable sanitary facilities) for delivery and removal by licensed haulers to appropriate off-site treatment or disposal facilities.

### *Site Characterization, Siting and Design, Construction*

**HMW2-1** Solar facilities shall be characterized, sited and designed, and constructed to minimize hazardous materials and waste management design elements.

- (a) Methods to minimize hazardous material and waste management impacts may include, but are not limited to, the following:

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<sup>1</sup> It is not anticipated that any solar energy facility would have hazardous chemicals present on-site in such quantities as to require development of a Risk Management Plan as specified in 40 CFR Part 68.

## BLM Solar Energy Program Design Features

- Indemnifying the United States against any liability arising from the release of any hazardous substance or hazardous waste on the facility or associated with facility activities.
- Providing a copy of any report required or requested by any Federal agency or state government as a result of a reportable release or spill of any toxic substances shall be furnished to the BLM authorized officer concurrent with the filing of the reports to the involved Federal agency or state government.
- Designing and operating systems containing hazardous materials in a manner that limits the potential for their release.
- Establishing measures for construction with compatible materials in safe conditions.
- Establishing dedicated areas with secondary containment for offloading hazardous materials transport vehicles.
- Implementing “just-in-time” ordering procedures designed to limit the amounts of hazardous materials present on the site to quantities minimally necessary to support continued operations. Excess hazardous materials shall receive prompt disposition.
- Surveying project sites for unexploded ordnance, especially if projects are within 20 mi (32 km) of a current DoD installation or formerly utilized defense site.
- Siting refueling areas away from surface water locations and drainages and on paved surfaces; features shall be added to direct any spilled materials to sumps or safe storage areas where they can be subsequently recovered.
- Designating hazardous materials and waste storage areas and facilities. Limiting access to designated areas to authorized personnel only.

### *Operations and Maintenance*

**HMW3-1** Compliance with the terms and conditions for hazardous materials and waste management shall be monitored by the project developer. Consultation with the BLM shall be maintained through the operations and maintenance of the project, employing an adaptive management strategy and modifications, as necessary and approved by the BLM.

## BLM Solar Energy Program Design Features

- (a) Methods for maintaining compliance with the terms and conditions for hazardous materials and waste management during operations and maintenance of the project may include, but are not limited to, the following:
- Installing sensors or other devices to monitor system integrity.
  - Implementing robust site inspection and repair procedures.

### *Reclamation and Decommissioning*

- HMW4-1** Project developers shall maintain emergency response capabilities throughout the reclamation and decommissioning period as long as hazardous materials and wastes remain on-site.
- HMW4-2** All design features developed for the construction phase shall be applied to similar activities during the reclamation and decommissioning phases.