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- (v) Plans to address spills, leaks, venting, and flaring;
- (e) An estimate of the quantity and quality of the oil shale resources;
- (f) An explanation of how MER of the resource will be achieved for each Federal lease;
- (g) Appropriate maps and cross sections showing:
- (1) Federal lease boundaries and serial numbers;
 - (2) Surface ownership and boundaries;
- (3) Locations of any existing and abandoned mines and existing oil and gas well (including well bore trajectories) and water well locations, including well bore trajectories;
- (4) Typical geological structure cross sections;
- (5) Location of shafts or mining entries, strip pits, waste dumps, retort facilities, and surface facilities:
- (6) Typical mining or in situ development sequence, with appropriate time-frames;
- (h) A narrative addressing the environmental aspects of the proposed mine or in situ operation, including at a minimum, the following:
- (1) An estimate of the quantity of water to be used and pollutants that may enter any receiving waters;
- (2) A design for the necessary impoundment, treatment, control, or injection of all produced water, runoff water, and drainage from workings; and
- (3) A description of measures to be taken to prevent or control fire, soil erosion, subsidence, pollution of surface and ground water, pollution of air, damage to fish or wildlife or other natural resources, and hazards to public health and safety;
- (i) A reclamation plan and schedule for all Federal lease(s) or exploration license(s) that details all reclamation activities necessary to fulfill the requirements of § 3931.20;
- (j) The method of abandonment of operations on Federal lease(s) and exploration license(s) proposed to protect the unmined recoverable reserves and other resources, including:
- (1) The method proposed to fill in, fence, or close all surface openings that are hazardous to people or animals; and
- (2) For in situ operations, a description of the method and materials to be

used to plug all abandoned development or production wells; and

(k) Any additional information that the BLM determines is necessary for analysis or approval of the POD.

§3931.20 Reclamation.

- (a) The operator or lessee must restore the disturbed lands to their premining or pre-exploration use or to a higher use agreed to by the BLM and the lessee.
- (b) The operator must reclaim the area disturbed by taking reasonable measures to prevent or control onsite and offsite damage to lands and resources.
- (c) Reclamation includes, but is not limited to:
- (1) Measures to control erosion, landslides, and water runoff;
- (2) Measures to isolate, remove, or control toxic materials;
- (3) Reshaping the area disturbed, application of the topsoil, and re-vegetation of disturbed areas, where reasonably practicable; and
- (4) Rehabilitation of fisheries and wildlife habitat.
- (d) The operator or lessee must substantially fill in, fence, protect, or close all surface openings, subsidence holes, surface excavations, or workings which are a hazard to people or animals. These protected areas must be maintained in a secure condition during the term of the lease or exploration license. During reclamation, but before abandonment of operations, all openings, including water discharge points, must be closed to the BLM's satisfaction. For in situ operations, all drilled holes must be plugged and abandoned, as required by the approved plan.
- (e) The operator or lessee must reclaim or protect surface areas no longer needed for operations as contemporaneously as possible as required by the approved plan.

\$3931.30 Suspension of operations and production.

(a) The BLM may, in the interest of conservation, agree to a suspension of lease operations and production. Applications by lessees for suspensions of operations and production must be filed in duplicate in the proper BLM office and must explain why it is in the

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interest of conservation to suspend operations and production.

- (b) The BLM may order a suspension of operations and production if the suspension is necessary to protect the resource or the environment:
- (1) While the BLM performs necessary environmental studies or analysis;
- (2) To ensure that necessary environmental remediation or cleanup is being performed as a result of activity or inactivity on the part of the operator; or
- (3) While necessary environmental remediation or cleanup is being performed as a result of unwarranted or unexpected actions.
- (c) The term of any lease will be extended by adding thereto any period of suspension of operations and production during such term.
- (d) A suspension will take effect on the date the BLM specifies. Rental, upcoming diligent development milestones, and minimum annual production will be suspended:
- (1) During any period of suspension of operations and production beginning with the first day of the lease month on which the suspension of operations and production is effective; or
- (2) If the suspension of operations and production is effective on any date other than the first day of a lease month, beginning with the first day of the lease month following such effective date.
- (e) The suspension of rental and minimum annual production will end on the first day of the lease month in which the suspension ends.
- (f) The minimum annual production requirements of a lease will be proportionately reduced for that portion of a lease year for which a suspension of operations and production is directed or granted by the BLM, as would any payments in lieu of production.

§3931.40 Exploration.

To conduct exploration operations under an exploration license or on a lease after lease issuance, but prior to approval of the POD, the following rules apply:

(a) Except for casual use, before conducting any exploration operations on federally-leased or federally-licensed lands, the operator or lessee must sub-

mit to the proper BLM office for approval 3 copies of the exploration plan or a copy of the plan in an acceptable electronic format. Contact the proper BLM office for detailed information on submitting copies electronically. As used in this paragraph, casual use means activities that do not cause appreciable surface disturbance or damage to lands or other resources and improvements. Casual use does not include use of heavy equipment, explosives, or vehicular movement off established roads and trails.

(b) The exploration activities must be consistent with the requirements of the underlying Federal lease or exploration license, and address protection of recoverable oil shale reserves and other resources and reclamation of the surface of the lands affected by the exploration operations. The exploration plan must meet the requirements of §3931.20 and must show how reclamation will be an integral part of the proposed operations and that reclamation will progress as contemporaneously as practicable with operations.

§3931.41 Content of exploration plan.

Exploration plans must contain the following:

- (a) The name, address, and telephone number of the applicant, and, if applicable, that of the operator or lessee of record;
- (b) The name, address, and telephone number of the representative of the applicant who will be present during, and responsible for, conducting exploration:
- (c) A description of the proposed exploration area, cross-referenced to the map required under paragraph (h) of this section, including:
- (1) Applicable Federal lease and exploration license serial numbers;
 - (2) Surface topography;
- (3) Geologic, surface water, and other physical features;
- (4) Vegetative cover;
- (5) Endangered or threatened species listed under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) that may be affected by exploration operations:
- (6) Districts, sites, buildings, structures, or objects listed on, or eligible for listing on, the National Register of