

DEPARTMENT OF THE INTERIOR

4310-84 P

Bureau of Land Management

43 CFR Parts 3900, 3910, 3920, and 3930

WO-320-1310-OSHL

RIN 1004-AD90

Oil Shale Management – General

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed rule.

SUMMARY: The Bureau of Land Management (BLM) is proposing regulations to set out the policies and procedures for the implementation of a commercial leasing program for the management of federally-owned oil shale and any associated minerals located on Federal lands. The Energy Policy Act of 2005 (EP Act) directs the Secretary of the Interior to: make public lands available for conducting oil shale research and development activities; complete a Programmatic Environmental Impact Statement (PEIS) for a commercial leasing program for both oil shale and tar sands resources on the BLM administered lands in Colorado, Utah, and Wyoming; and issue regulations establishing a commercial oil shale leasing program.

These proposed regulations would incorporate specific provisions of the Mineral Leasing Act of 1920 (MLA) and the EP Act relating to: maximum oil shale lease size; maximum acreage limitations; rental; and lease diligence.

These proposed regulations would also address the diligent development requirements of the EP Act by establishing work requirements and milestones to ensure diligent development of leases. The proposed rule would also provide for other standard components of a BLM mineral leasing program, including lease administration and operations.

DATES: Send your comments to reach the BLM on or before [INSERT DATE 60 DAYS AFTER THE DATE OF PUBLICATION OF THIS RULE IN THE FEDERAL REGISTER]. The BLM will not necessarily consider any comments received after the above date during its decision on the proposed rule.

ADDRESSES: Mail: U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 401 LS, 1849 C St., N.W., Attention: 1004-AD90, Washington, D.C. 20240.

Personal or messenger delivery: 1620 L Street, N.W., Room 401, Washington, D.C. 20036.

Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions at this website.

You may also send comments on the information collection aspects of this proposed rule directly to: Interior Desk Officer (1004-AD90), Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), (202) 395-6566 (facsimile); e-mail: oir_docket@omb.eop.gov. Please also send a copy to the BLM.

FOR FURTHER INFORMATION CONTACT: Mitchell Leverette, Chief, Division of Solid Minerals at (202) 452-5088 for issues related to the BLM’s commercial oil shale leasing program or Kelly Odom at (202) 452-5028 for regulatory process issues. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339, 24 hours a day, 7 days a week, to leave a message or question with the above individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

- I. Public Comment Procedures
- II. Background
- III. Discussion of the Proposed Rule
- IV. Procedural Matters

I. Public Comment Procedures

A. How do I comment on the proposed rule?

If you wish to comment, you may submit your comments by any one of several methods:

- You may mail comments to U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 401 LS, 1849 C St., N.W., Attention: 1004-AD90, Washington, D.C. 20240.

- You may deliver comments to Room 401, 1620 L Street, N.W., Washington, D.C. 20036.
- You may access and comment on the proposed rules at the Federal eRulemaking Portal by following the instructions at that site (see "ADDRESSES").

Please make your comments on the proposed rule as specific as possible, confine them to issues pertinent to the proposed rule, and explain the reason for any changes you recommend. Where possible, your comments should reference the specific section or paragraph of the proposal that you are addressing.

The BLM may not necessarily consider or include in the Administrative Record for the final rule comments that we receive after the close of the comment period (see "DATES") or comments delivered to an address other than those listed above (see "ADDRESSES").

B. May I review comments submitted by others?

Comments, including names and street addresses of respondents, will be available for public review at the address listed under "ADDRESSES: Personal or messenger delivery" during regular hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays. The comments are also available for public review on <http://www.regulations.gov>.

Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment--including your personal identifying information--may be made publicly available at any

time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

II. Background

The BLM is proposing these regulations to implement the EP Act (42 U.S.C. 15927), which became law on August 8, 2005. Section 369 of the EP Act addresses oil shale development and authorizes the Secretary of the Interior to establish regulations for a commercial leasing program. The MLA of 1920 (30 U.S.C. 241(a)) provides the authority for the BLM to allow for the exploration, development, and utilization of oil shale resources on the BLM-managed public lands. Additional statutory authorities for these proposed regulations are:

- (1) The Mineral Leasing Act for Acquired Lands of 1947 (30 U.S.C. 351-359); and
- (2) The Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq., including 43 U.S.C. 1732).

Oil shale is a fine-grained sedimentary rock containing organic matter from which shale oil may be produced. Oil shale is a marlstone and contains no oil; rather, it contains un-decayed algae called kerogen (not oil). In fact, the word kerogen is a Greek word interpreted to mean “to produce wax” - “kero” (wax), “gen” to produce. The waxy substance produced from oil shale rock is not the same as conventional crude oil. The

kerogen only has a market value as an energy source after it has been refined and converted to synthetic crude oil.

Oil shale is a solid rock and must be mined or treated in place to release the kerogen oil from the rock. Energy companies and petroleum researchers have, over the past 60 years, developed and tested a variety of technologies on a small scale for recovering shale oil from oil shale and processing it to produce fuels and byproducts. Both surface processing and in-situ technologies have been examined. Generally, surface processing consists of three major steps: (1) oil shale mining and ore preparation; (2) pyrolysis of oil shale to produce kerogen oil; and (3) processing kerogen oil to produce refinery feedstock and high-value chemicals. This sequence is illustrated below.

Conversion of Oil Shale to Products (Surface Process)

Resource → Ore Mining → Retorting → Oil Upgrading → Fuel and Chemical Markets

For deeper, thicker deposits, not as amenable to surface- or deep-mining methods, the shale oil can be produced by in-situ technology. In-situ processes minimize or, in the case of true in-situ, eliminate the need for mining and surface pyrolysis by heating the resource in its natural depositional setting. This sequence is illustrated below.

Conversion of Oil Shale to Products (True In-Situ Process)

Resource → In-Situ Pyrolysis → Oil Upgrading → Fuel and Chemical Markets

The American Association of Petroleum Geologists estimates that the total world oil shale resources contain the equivalent of 2.6 trillion barrels of oil. According to estimates by the U.S. Geological Survey, the United States holds more than 50 percent of the world's oil shale resources.

The largest known deposits of oil shale in the world are located in a 16,000 square mile area in the Green River formation in Colorado, Utah, and Wyoming (underlying the Piceance, Uinta, Green River, and Washakie Basins), which is estimated to contain the equivalent of between 1.5 and 1.8 trillion barrels of oil. Federal lands comprise 72 percent of the total surface of oil shale acreage and 82 percent of the oil shale resources in the Green River formation.

As stated in the June 9, 2005 call for nominations for the research, development, and demonstration (R, D and D) (70 FR 33753) leases, the BLM opted for a staged oil shale leasing program. The first stage is the research and development program followed by these proposed commercial leasing regulations.

BLM oil shale initiatives since 1983.

In 1973, four leases were issued in the oil shale prototype leasing program. During the 1973-74 oil shale prototype program, there were expectations of an economic boom in western Colorado which never materialized. The oil shale industry collapsed on May 2, 1982, commonly referred to as Black Sunday.

In 1983, the BLM established an Oil Shale Task Force to address:

- (1) Access to unconventional energy resources (such as oil shale) on public lands;
- (2) Impediments to oil shale development on public lands;
- (3) Industry interest in research and development and commercial opportunities on public lands; and
- (4) Secretarial options to capitalize on these opportunities.

On February 11, 1983, the BLM published a proposed rule for an oil shale leasing program (48 FR 6510). Due to apparent lack of interest in the development of oil shale, the BLM withdrew the proposed rule, effective September 25, 1985 (50 FR 38867).

In order to be better able to expand and diversify domestic energy production, on November 22, 2004, the BLM published a notice in the Federal Register (69 FR 67935) requesting public comments on the potential for oil shale development within the Piceance Creek Basin in Colorado, the Uinta Basin in Utah, and the Green River and Washakie Basins in Wyoming. The Federal Register notice also requested comments on a proposed draft oil shale R,D and D lease form. Comments received were incorporated, as appropriate, into the final R, D and D lease form.

On June 9, 2005, the BLM published a notice in the Federal Register (70 FR 33753) which initiated a R, D and D leasing program by soliciting nominations of 160-acre parcels of public land to be leased in Colorado, Utah, and Wyoming for conducting

oil shale recovery technologies. In response to the 19 nominations of parcels that the BLM received, the BLM issued 6 R, D and D leases-- 5 in Colorado that were effective January 1, 2007, and an additional R, D and D lease in Utah that was effective on July 1, 2007. Each of the R, D and D leases contains a preference right for conversion to a commercial lease of additional acreage upon demonstration of a successful method of producing oil from shale rock.

One of the purposes of the R, D and D leases, as stated in the notice was to provide the BLM, state and local governments, and the public with important information that could be utilized as the BLM works with communities, states, and other Federal agencies to develop strategies for managing the environmental effects of production. The R, D and D lease form was published as an attachment (Appendix A) to the June 9, 2005, Federal Register notice.

The PEIS and National Environmental Policy Act (NEPA) Compliance

On December 13, 2005, the BLM published in the Federal Register a notice of intent (NOI) to prepare a PEIS (70 FR 73791) for oil shale and tar sands resources leasing on lands administered by the BLM in Colorado, Utah, and Wyoming. The NOI alerted the public that the BLM was intending to amend several resource management plans (RMPs) to open lands for oil shale and tar sands resources leasing in Colorado, Utah, and Wyoming. The NOI also informed the public of the development of the oil shale regulations required by Section 369(d)(2) of the EP Act. The RMPs are BLM planning

documents prepared under Section 202 of the FLPMA that present guidelines for making resource management decisions.

The draft PEIS evaluates the following RMPs for possible amendment:

- (1) Wyoming: Green River, Great Divide, and Kemmerer;
- (2) Utah: Price River, San Juan, San Rafael, Henry Mountain, Book Cliffs, and Diamond Mountain; and
- (3) Colorado: Grand Junction, White River, and Glenwood Springs.

Although the PEIS covers planning for tar sands, these proposed regulations do not address tar sands leasing since the BLM has regulations in place that address tar sands leasing (see 43 CFR part 3140).

On December 21, 2007, the BLM published the notice of availability for the draft PEIS and has made the draft PEIS available for public comment (72 FR 72751). The BLM intends to finalize the PEIS before these regulations are final. The PEIS is primarily intended to analyze the impacts of land use allocation and not site specific oil shale leasing.

Advance Notice of Proposed Rulemaking

The BLM recognizes that the creation of the rules governing the development of oil shale would need to address different possible technologies that have different

associated impacts and costs. Therefore, to increase public participation and to aid in the development of oil shale regulations, the BLM published in the Federal Register an advance notice of proposed rulemaking (ANPR) (71 FR 50378) on August 25, 2006. The ANPR requested public comments on the following five key components of the proposed regulations:

- (1) What should be the royalty rate and point of royalty determination?
- (2) Should the regulations establish a process for bid adequacy evaluation, i.e., Fair Market Value (FMV) determination, or should the regulations establish a minimum acceptable lease bonus bid?
- (3) How should diligent development be determined?
- (4) What should be the minimum production requirement?
- (5) Should there be provisions for small tract leasing?

On September 26, 2006, the BLM published a Federal Register notice reopening the comment period for the ANPR and extending the comment period until October 25, 2006 (71 FR 56085). In response to the ANPR, the BLM received 48 comments. Comments were received from individuals, public interest groups, and industry representatives. Although the ANPR focused on the 5 areas previously identified, commenters addressed a variety of topics, including whether or not they were supportive of a commercial oil shale leasing program. Below is a discussion of the ANPR organized by topic. Public comments BLM received on the ANPR are discussed in this preamble at the appropriate section of this rule.

Royalty Rate and Point of Royalty Determination – Section 369(o) of the EP Act does not prescribe a royalty rate, but does provide that the royalty rate for oil shale should encourage development of the resource and should ensure a fair return to the United States. The ANPR comments received were extremely varied and recommended a wide range of royalty rates. Discussion of the ANPR royalty comments can be found in the discussion of section 3903.52 of this rule.

Bid Adequacy Evaluation (Fair Market Value) – It is the policy of the United States, stated in Section 102(a) of FLPMA (43 U.S.C. 1701(a)(9)) and Section 369(o)(2) of the EP Act, that the United States receive FMV for the issuance of Federal mineral leases. The BLM's purpose for requesting comments on the FMV it should receive for lease tracts was to solicit ideas on how FMV would be determined for a resource that has little or no history of comparable sales. The public comments received on the ANPR are discussed in section 3924.10 of this rule.

Diligent Development – Section 369(f) of the EP Act requires that the BLM establish work requirements and milestones to ensure diligent development of Federal oil shale leases. The BLM requested public comment on diligent development to assist us in determining lease diligence requirements for an industry that has yet to be successfully established. A discussion of the ANPR comments we received on diligence can be found in section 3927.50 of this proposed rule.

Minimum Production Requirement – The BLM specifically asked in the ANPR for suggestions from the public about what the minimum production requirement should be to assist us in determining lease production requirements for an industry that has yet to be successfully established. A discussion of the public comments we received on minimum production requirements can be found in section 3903.51 of this proposed rule.

Small Tract Leasing – In the ANPR the BLM requested comments on whether there should be small tract leasing or leasing small acreages of land for oil shale development. A discussion of the public comments we received on small tract leasing can be found in section 3927.20 of this proposed rule.

We also received several comments unrelated to the five questions in the ANPR. Those comments are discussed in the respective section discussions for the rule.

Listening Sessions with Governor’s Representatives from Colorado, Utah, and Wyoming

The BLM, in coordination with the Minerals Management Service (MMS), held three “listening sessions” with representatives of the governors of the States of Colorado, Utah, and Wyoming. The BLM and the MMS met with these representatives in Denver, Colorado (December 14, 2006), Salt Lake City, Utah (April 26, 2007), and Cheyenne, Wyoming (August 8, 2007). The purpose of the listening sessions was to provide the governors’ representatives the opportunity to share their ideas, issues, and concerns relating to the proposed commercial oil shale leasing regulations.

Section 369(e) of the EP Act requires the Department of the Interior to consult with the governors of Colorado, Utah, and Wyoming, representatives of local governments, interested Indian tribes, and the public to determine the level of support for conducting oil shale lease sales. The BLM plans to consult with the affected states prior to conducting the first oil shale lease sale, and following publication of the final rule.

Consolidated Appropriations Act of 2008

A provision in section 433 of the Consolidated Appropriations Act of 2008 (Public Law 110-161) prohibits the use of funds for the preparation or publication of final oil shale regulations, but does not apply to a proposed rule. Therefore, the BLM is publishing this proposed rule and will analyze comments received on the proposed rule, but will not prepare or publish a final rule using fiscal year 2008 funds as provided by this Congressional directive.

III. Discussion of the Proposed Rule

Part 3900 -- Oil Shale Management - General

This part would contain regulations on the general management of the oil shale program, including discussions of the descriptions and acreage in oil shale leases,

qualifications requirements, fees, rentals, royalties, bonds and trust funds, and lease exchanges.

Subpart 3900 – Oil Shale Management -- Introduction

This subpart would establish competitive oil shale leasing administrative procedures for implementing a long-term commercial oil shale leasing program.

The proposed rule would contain specific provisions required by Section 369 of the EP Act. Many of the sections of the proposed rule contain regulatory requirements similar to the regulations in the BLM's existing mineral programs namely, coal, non-energy leasable minerals, and oil and gas. In creating a regulatory framework for this proposed oil shale commercial leasing program, the BLM proposes to adopt certain basic components and processes common to the BLM's leasing programs. Most of the BLM's leasing programs are governed by the MLA. The regulations governing those programs and this program would include the following types of provisions: pre-lease exploration; leasing processes; bonding; operations (including plan of development); reclamation; and inspection and enforcement.

Section 3900.2 would contain the definitions and terms used in these proposed regulations. Many of the terms and definitions found in this section would be similar to terms and definitions in the regulations of other BLM mineral leasing programs. Because most of the terms and concepts in this section are well-established, this section of the

preamble does not address each of the definitions, but focuses only on definitions for certain terms that directly affect the reader's understanding of the regulatory framework of the oil shale leasing program or that are unique to these regulations.

The term "commercial quantities" means production of shale oil quantities in accordance with the approved Plan of Development for the proposed project through the research, development, and demonstration activities conducted on the lease, based on and at the conclusion of which a reasonable expectation exists that the expanded operation would provide a positive return after all costs of production have been met, including the amortized costs of the capital investment.

The term "infrastructure" means all support structures necessary for the production or development of shale oil. The definition lists examples of the different types of support structures that the BLM would consider to be infrastructure. This term is defined in these proposed regulations because it is critical to the BLM's review of lease applications. Infrastructure impacts are a key component of the plan of operations that the BLM will review when undertaking various analyses such as those required by NEPA. Furthermore, the BLM believes that a detailed itemization of examples is necessary since installation of infrastructure is one of the proposed diligent development milestones.

The term "oil shale" means a fine-grained sedimentary rock containing:

- (1) Organic matter which was derived chiefly from aquatic organisms or waxy spores or pollen grains, which is only slightly soluble in ordinary petroleum solvents, and of which a large proportion is distillable into synthetic petroleum; and
- (2) Inorganic matter, which may contain other minerals. This term is applicable to any argillaceous, carbonate, or siliceous sedimentary rock which, through destructive distillation, will yield synthetic petroleum.

The BLM defined the term “production” to acknowledge the various technologies associated with operations for extraction of shale oil, shale gas, or shale oil by-products.

Section 3900.5 would leave a place holder for the information collection requirements in parts 3900-3930 under 44 U.S.C. 3501 et. seq. The BLM will add the OMB form number once we receive OMB’s approval for information collection in the final regulations. The table in paragraph (d) of this section lists the subparts in the rule requiring the information and its title and summarizes the reasons for collecting the information and how the BLM would use the information.

Section 3900.10 would identify which lands would be subject to leasing under parts 3900 through 3930. Section 21 of the MLA authorizes the issuance of oil shale leases (30 U.S.C. 241(a)).

Section 3900.20 would address the right to appeal the BLM decisions issued under these regulations to the Interior Board of Land Appeals under 43 CFR part 4. This section would adopt standard appeals language found in the regulations of other BLM mineral programs.

Section 3900.30 would contain standard language providing that documents (i.e., applications, statements of qualification, plans of development and supporting information, etc.) required by these proposed regulations be filed in the proper BLM office with the required fees. The term “proper BLM office” is defined in the definitions section of this rule.

Section 3900.40 would address the multiple use mandate of FLPMA, by providing that the BLM’s issuance of an exploration license or lease for the development or production of oil shale would not preclude the issuance of other exploration licenses or leases on the same lands for deposits of other minerals or other resource uses. This provision is similar to regulatory provisions in the BLM’s other leasing programs, which also promote multiple use of the public lands.

Section 3900.50 would clarify the relationship of land use plans and NEPA to the BLM’s proposed commercial oil shale leasing program. This section would provide that any lease or exploration license issued under these regulations would be issued under the decisions, terms, and conditions of a comprehensive land use plan. The land use planning process is the key tool used by the BLM to protect resources and designate uses

for BLM-administered lands. Compliance with NEPA and land use planning is required prior to the BLM's issuing a lease or exploration license.

Section 3900.61 would address the procedures the BLM would follow concerning consent and consultation where the surface of public land is administered by other Federal agencies outside of the Department of the Interior and procedures for particular situations where the U.S. has conveyed title to or transferred control of the surface. Paragraphs (a) and (b) would address those procedures the BLM would follow concerning consent and consultation where the surface of public lands is administered by other agencies outside of the Department of the Interior. Paragraph (c) would provide procedures an applicant may pursue in challenging a decision issued by a particular agency outside of the Department of the Interior relating to special stipulations or refusal of consent. Paragraph (d) would not allow the BLM to issue a lease or license on National Forest Service lands without the consent of the Forest Service. Under paragraph (d), the BLM's decision whether to issue the lease or license is based on a determination as to whether the interests of the United States would best be served by issuing the lease or license. The provisions of this section closely mirror BLM regulations for oil and gas, coal, and non-energy leasable minerals. Paragraph (e) would provide that the BLM make the final decision as to whether to issue a lease or license in those cases not involving a Federal agency, where the United States has conveyed title to any state or political subdivision or agency, including a college or any other educational corporation or association, to a charitable or religious corporation or association, or to a private entity.

Section 3900.62 would address situations where the BLM may require lease or exploration license stipulations to protect lands and resources. Stipulations are site specific provisions that the BLM may add to standard lease or license terms prior to issuance for the purpose of protecting Federal resource values and mitigating impacts to other values identified in a NEPA document. Stipulations frequently restrict operations on the lease or permit by limiting surface disturbance for the purpose of protecting the environment. This includes the protection of wildlife, plants, and cultural or other resources. This provision is similar to those found in the BLM's other mineral leasing programs.

Subpart 3901 -- Land Descriptions and Acreage

Section 3901.10 would contain the BLM's requirements for land descriptions in applications or documents submitted to the BLM. This section is similar to the regulatory provisions addressing land descriptions found in other BLM leasing programs and would establish consistent standards for land descriptions in applications submitted to the BLM.

Sections 3901.20 and 3901.30 would incorporate the provisions of Section 369(j)(2) of the EP Act that 50,000 acres would be the maximum acreage of oil shale leases on public lands that any entity may hold in any one state and that the oil shale lease acreage would not count toward acreage limitations associated with oil and gas leases. Another 50,000 acres may be held on acquired lands. Since the provisions in this section

relating to maximum acreage holdings are statutory, the BLM does not have the authority to revise the requirements in this section.

Subpart 3902 -- Qualification Requirements

Sections under this subpart would detail the various statutory requirements under Section 27 of the MLA relating to who can hold Federal oil shale leases and interests. These proposed regulations would mirror many of the qualification provisions of the BLM's other mineral leasing regulations, namely oil and gas (43 CFR subpart 3102), geothermal (43 CFR subpart 3202), coal (43 CFR subpart 3425), and non-energy leasable minerals (43 CFR subpart 3502).

Section 3902.10 would enumerate the requirements of the MLA relating to who is authorized to hold leases or interests in leases (30 U.S.C. 181, 352). These requirements have a longstanding statutory and regulatory history and are found in the regulations for the BLM's mineral leasing programs.

Sections 3902.21 and 3902.22 would explain the filing procedures for qualification documents, including when and where to file documents. Section 3902.21 would also require that all documentation submitted to the BLM as evidence of qualifications be current, accurate, and complete.

Sections 3902.23 through 3902.29 would detail the type of qualifications documentation that the BLM would require from:

- (1) Individuals (section 3902.23);
- (2) Associations, including partnerships (section 3902.24);
- (3) Corporations (section 3902.25);
- (4) Guardians or trustees (section 3902.26);
- (5) Heirs and devisees (section 3902.27);
- (6) Attorneys-in-fact (section 3902.28); and
- (7) Other parties in interest (section 3902.29).

The requirements proposed in these sections are similar to the standard requirements of other BLM regulations to show evidence of qualifications to hold a lease under the MLA.

Subpart 3903 -- Fees, Rentals, and Royalties

For payments of required rental and royalties, sections 3903.20 and 3903.30 would address the acceptable forms of payment (section 3903.20) and where to submit payment for processing or filing fees, rentals, bonus payments, and royalties (section 3903.30). The acceptable forms of payment listed in section 3903.20 would mirror the forms of payment accepted in the BLM's other mineral leasing regulations.

Section 3903.40 would incorporate the requirement of Section 369(j) of the EP Act that the annual rental rate for an oil shale lease would be \$2.00 per acre. Since the statute sets the rental rate, the BLM has no discretion to revise it.

Section 3903.51 would address the minimal annual production requirement that would apply to every lease. It also would discuss payments in lieu of production beginning with the 10th lease year. The BLM would determine the payment in lieu of annual production, but in no case would it be less than \$4 per acre. Payments in lieu of production are not unique to this proposed rule. They are a requirement of other BLM mineral leasing regulations and the BLM believes they provide an incentive to maintain production.

Setting the payment in lieu of production at no less than \$4 per acre should be an adequate payment to the Federal government to justify allowing the lessee to continue holding a lease absent production, but should not be high enough to cause the lessee to relinquish the lease. A payment in lieu of production of \$4 per acre for the maximum lease size of 5, 760 acres equals a payment of \$23, 040 per year.

In response to the ANPR, the BLM received comments expressing various ideas concerning minimum production amounts and requirements. The comments are summarized as follows:

- (1) Minimum production should be 1,000 barrels a day;
- (2) Minimum production should be based on the viability of the operation;

- (3) Minimum production levels should be based on resource potential and production levels identified in the plan of development;
- (4) Minimum royalties should be assessed at the end of the primary term;
- (5) Minimum production should be based on a percentage of the projected resource base;
- and
- (6) There should not be a minimum production requirement.

We agree with several of the commenter's suggestions. The suggestions to base minimum production on the approved plan of development and the specifics of the operation were incorporated into proposed sections 3930.30(c) and 3930.30 (d). The suggestions related to defining the minimum production on a percentage of the resource base were not incorporated into the proposed rule because of the difficulties associated with defining the recoverable resource, the variables associated with the different development technologies, and the differing kerogen content of the shales. We consider the suggestion that identified 1,000 barrels a day as the correct minimum production requirement too inflexible a standard because it does not allow for differences in shale quality and differences in extraction technology.

Section 3903.52 – Royalty Rates on Oil Shale Production

Section 3903.52 would establish a royalty rate for all products that are sold from or transported off of the lease area. The BLM recognizes that encouraging oil shale development presents some unique challenges compared to BLM's traditional role in

managing conventional oil and gas operations. We received a wide range of comments presenting alternative royalty approaches as part of the ANPR process, and we address those comments below. However, while we have narrowed the range of options based on the ANPR comments, we have not yet settled on a single royalty rate for this proposed rule. Instead, we are presenting two royalty rate alternatives in the proposed rule (as outlined later in this section), and requesting public comment on those specific alternatives. In addition, we are considering a third alternative, a sliding scale royalty rate (also outlined in this preamble), and we are seeking public comment on the appropriate parameters for the sliding scale royalty rate should the BLM choose to adopt this alternative. We anticipate adopting one of these alternatives, or variations on one of these alternatives, at the final rule stage.

EP Act (Section 369(o)) directs the agency to establish royalties and other payments for oil shale leases that “shall-

- (1) Encourage development of the oil shale and tar sands resources; and
- (2) Ensure a fair return to the United States.”

The market demand for oil shale resources based on the price of competing sources (e.g., crude oil) of similar end products is expected to provide the primary incentive for future oil shale development. Additional encouragement for development may be provided through the royalty terms employed for oil shale relative to conventional oil and gas royalty terms, but we recognize that such incentives must be balanced against the objective of providing a fair return to taxpayers for the sale of these

resources. Through the ANPR process, the BLM initially examined a wide range of royalty options, including:

- (1) 12.5 percent royalty rate on the first marketable product;
- (2) 12.5 percent royalty rate on the value of the mined oil shale rock, as proposed in 1983;
- (3) 8 percent royalty rate on products sold for 10 years with optional increases of 1 percent per year up to a maximum of 12.5 percent, similar to the rates established by the State of Utah in 1980;
- (4) Initial 2 percent royalty to encourage production and a 5 percent maximum upon establishment of infrastructure;
- (5) Sliding scale royalty rate tied to timeframes up to a maximum of 12.5 percent;
- (6) Sliding scale royalty rate tied to production amounts up to a maximum of 12.5 percent;
- (7) Sliding scale royalty rate with royalty rates tied to the price of crude oil;
- (8) Royalty rate of 1 percent of gross profit before payout and royalty rate of 25 percent net profit after payout – (Canadian oil sands model);
- (9) Royalty based on cents per ton as proposed in the 1973 oil shale prototype program;
and
- (10) Royalty based on British Thermal Unit (Btu) content as compared to crude oil.

In evaluating an appropriate royalty rate system for oil shale that would meet the dual EP Act objectives of encouraging development and ensuring a fair return to the government, the BLM also reviewed other Federal royalty rates for Federal minerals set

by statute and under existing regulations administered by Department of the Interior bureaus, and royalty rates applied to oil shale production in other countries.

The royalty rates for other Federal energy minerals vary. Specifically, current royalty rates for Federal energy minerals under Department of the Interior leasing programs include:

- (1) Onshore oil and gas (12.5 percent);
- (2) Offshore oil and gas (16.67 percent), Gulf of Mexico Region (18.75 percent);
- (3) Underground coal (8 percent);
- (4) Surface coal (12.5 percent) and
- (5) Geothermal (for new leases: 1.75 percent for the first 10 years and 3.5 percent thereafter. For leases issued prior to the EP Act, 10 percent on net proceeds after deductions).

Many of these programs allow for royalty rate relief under certain circumstances.

The BLM also looked at royalty applications for oil shale and similar unconventional fuels in other countries, including:

- (1) For oil sands, Canada applies a royalty rate of 1 percent of the gross revenue before payout (before companies have recouped investment costs) with a 25 percent net profit royalty rate applied after payout;
- (2) Australia has a 10 percent gross royalty on the value of the shale oil produced;

- (3) Brazil applies a 3 percent gross royalty rate;
- (4) Estonia does not have a royalty; and
- (5) No information on a royalty rate for shale oil produced in China was available.

It should be noted that Canada produces oil from oil sands, not oil shale. The oil in the sands is the same as crude oil, but dispersed in sand. Extraction and processing is more expensive than for conventional crude oil production, but less expensive than is anticipated for oil shale. Canadian operators have never reached the payout point due to the continued capital expenditures in new equipment, so to date, Canada has received a 1 percent royalty on oil sands production.

Australian operations are using the Alberta Taciuk Process, which is the same type of technology currently used by the Oil Shale Exploration Company (OSEC) in Utah. Despite their 10 percent royalty rate, the Australian oil shale project (the Stuart Project) was heavily subsidized by the Australian government through other means (tax incentives). Even the government subsidies could not sustain oil shale operations in Australia. The last three operators went into bankruptcy after brief operations. Suncor, the founder of the Stuart Project and a successful developer of the Canadian tar sands, exited the Australian oil shale business after losing approximately one hundred million dollars¹. For its Utah demonstration project, OSEC is also expected to test the Petrosix horizontal retort process, which is currently being used by Petrobras, Brazil, for oil shale operations.

¹ Environmental News Service, July 22, 2005, www.ens-newswire.com.

Australia and Brazil are the only other known countries that are producing or have produced oil shale using the same technologies as in the U.S. Oil shale developmental efforts in China and Estonia are owned by their respective governments. Because no other country has yet achieved successful commercial oil shale operations and because of the wide variety of oversight and revenue structures employed in each country, the BLM's review of these systems did not identify a useful model for a royalty system to be used for oil shale development on Federal lands in the U.S.

In the ANPR, the BLM solicited public input on the royalty rate and point of royalty determination. The BLM's purpose for requesting comments was to solicit ideas on these royalty issues for a resource that has little or no history of commercial development.

There were approximately thirty-one entities that provided comments through the ANPR process that were specific to royalty rate and royalty point of determination. The comments suggested royalty rates that ranged from a royalty rate of zero to a royalty rate of 12.5 percent. Of the royalty-related comments, three suggested that the royalty be set at 12.5 percent, the same rate as in BLM's oil and gas program, while some comments described a 12.5 percent royalty rate as unreasonable. It is contemplated that the primary products produced from oil shale will compete directly with those from onshore oil and gas production, which has a 12.5 percent royalty rate. However, the BLM recognizes that the nature of potential oil shale operations differs from that of conventional oil and gas

operations and that these differences may suggest the need for a royalty system other than the traditional flat rate of 12.5 percent used for conventional onshore oil and gas operations.

In determining the royalty rate for oil shale, it should be noted that there is a significant difference between oil shale mineral deposits and a conventional crude oil reservoir. As discussed in the Background section of this preamble, oil shale is a marlstone that contains no oil, but kerogen, that needs to be refined and converted to synthetic crude oil.

Currently, proposed processes to extract kerogen from an oil shale deposit are also considerably different, as well as labor and capital intensive. Oil shale is a solid rock that must be mined or treated in place to release the kerogen. Two of these processes are discussed in the Background section of this preamble.

Seven of the comments recommended that a “very low royalty rate” be established until after companies have recouped the costs of their investments (debt service and capital investment). Many among the seven recommended that a 1 percent royalty rate be the starting point, and they used the Canadian oil sands royalty scheme as an example. As discussed above, the BLM looked at royalty applications for oil shale and similar unconventional fuels in other countries. The Canadian tar sand model presents two challenges. First, because of the continual infusion of capital to acquire new

equipment the payout point is never being reached. Secondly, because of the complexity of determining when payout may occur, such a royalty scheme is subject to easy manipulation and higher administrative costs. Therefore, the BLM considered the investment payout scheme as inconsistent with the premise of “a fair return” to the taxpayers as mandated in EP Act.

Three of the ANPR comments recommended that “royalties must be high enough” to support local communities and infrastructure; however, these comments did not provide specific royalty rates. Oil shale royalties are not designated for community and infrastructure support, but by statute are required to be split between the Federal Treasury and the states (30 U.S.C. 191). Presumably states could choose to direct a portion of the royalty revenues they receive to local community and infrastructure support, but that would be a state choice, and for the purposes of this rulemaking, these comments were not considered because they assume a use of royalty revenues not available under current law.

Three comments suggested that royalties should not be charged on hydrocarbons unavoidably lost or used on the lease for the benefit of the lease, but did not directly address the royalty rate issue.

One comment suggested the royalty be “based on the material as it exists naturally in the land, and as it is removed from the land.” This comment seems to suggest that royalty should be based on mined raw shale. While the BLM acknowledges

the inherent differences between an oil shale deposit and other deposits from which similar products can be produced, this suggestion was not considered because there is no known value for raw oil shale since there is no oil shale industry or an established market for raw oil shale. However, it should be noted that in 1983 the BLM proposed a rule to establish a royalty rate equivalent to 12.5 percent of the value of oil shale after mining or resource extraction and before processing, as determined by the BLM. The 1983 proposed rule was published on February 11, 1983 (48 FR 6510). The 1983 proposed rule provided that “the derivation methodology for this value shall be announced prior to the solicitation of bids.” The proposed rule further stated that “the royalty rate shall, to the extent practicable, not be levied on any value added by the production process after the point of resource extraction.” It would be unreasonable to adopt such a proposal today, due to the changes in extraction methodology (in situ versus ex situ). It would also be challenging to develop a fair and transparent process to calculate the royalty equivalent in today’s economic environment, and no values were assigned to the mined or unprocessed rock and tonnage in the 1983 proposed rule. As noted, the 1983 proposed rule deferred the determination of those parameters to a later date.

In addition to ANPR comments received on royalty rates, the BLM looked at an initial 2 percent royalty to encourage production and a maximum 5 percent rate upon establishment of infrastructure. This method recognizes the high costs involved in producing shale oil. However, we dismissed this approach because of the difficulty involved in determining when necessary infrastructure is in place.

The BLM also considered the 8 percent royalty rate established by the State of Utah for state oil shale leases. It was determined that this rate represents the historic base royalty rate for solid fuel minerals on the State of Utah School and Institutional Trust Lands Administration lands--including asphaltic sands, uranium, and coal. To date, none of the state leases in Utah have been developed. Based on these facts, the BLM determined that there is not currently a sufficient basis for simply adopting the State of Utah's royalty rate for oil shale on Federal lands.

After examining the basis for setting rates, as suggested in the ANPR comments, the BLM determined that a flat 12.5 percent royalty rate for all future production may not allow oil shale to become competitive with traditional oil and gas development and therefore could be viewed as inconsistent with the requirements of EP Act. The BLM has decided to consider other alternatives in this proposed rule that may provide some additional incentive beyond that of a flat 12.5 percent royalty rate while also meeting the EP Act objective of providing a fair return to taxpayers.

Royalty Rate Alternatives Proposed for Further Consideration.

As noted previously, we are not proposing a single royalty system in the proposed rule. Based on the information the BLM has reviewed to date and considering the unique challenge of trying to set a royalty rate on oil shale production in light of the many

uncertainties regarding the economics and technology of a potential future oil shale industry, we are instead presenting two different royalty rate alternatives in the proposed rule text:

1. A flat 5 percent royalty rate; and
2. A 5 percent royalty rate on a specific volume of initial production beginning within a prescribed timeframe, with a 12.5 percent rate applied thereafter.

In addition, we are seeking comment on the appropriate parameters for a third option: a two- three tiered sliding scale royalty based on the market price of competing products (e.g., crude oil and natural gas). A further explanation of each of these proposals is presented below. We are requesting the public to comment on these specific options.

Option 1. Flat 5 percent royalty.

Although mitigated somewhat by the much greater geographic concentration of oil shale resources, there is a significant difference between the energy value of oil shale and crude oil. On a per-pound basis, very high quality oil shale rock generates 4,300 Btu, coal generates an average of 10,600 Btu, while crude oil generates 19,000 Btu. Even wood has more heating capacity than oil shale rock, generating an average of 6,500 Btu. Applying the relative Btu value of oil shale to crude oil would result in a 2.6 percent royalty for oil shale. Using the same comparison to the royalty rate for underground coal would result in a 3.2 percent royalty rate for oil shale. In other words, it would require

almost 5 times as much oil shale to produce the Btu value of crude oil and more than 2 times as much oil shale to produce the equivalent Btu value of coal.

The BLM looked at royalty rates on leases issued under Interior's 1973 Prototype Leasing Program. The prototype leases provided for royalties of \$.12 per ton for oil shale with a quality of 30 gallons of oil per ton (30g/t) with the addition of \$.01 for every increase in gallon per ton of oil shale. In 1973, the average price of a barrel of oil was \$3.89. At \$.24 per ton of 42g/t or one barrel/ton of oil shale, the royalty per barrel of oil would have been 5 percent. This rate is similar to the rate derived by comparing production costs to royalty rates as recommended by these proposed regulations.

The BLM also estimated what royalty rates for shale oil might be, based on comparisons of production costs for similar products. The cost of removing oil from shale rock is currently estimated to be two to three times higher than the current cost of producing conventional crude oil from onshore operations. The current estimated production cost for shale oil ranges from about \$37.75-\$65.21 a barrel. The production cost for conventional onshore crude is approximately \$19.50 a barrel². The table below compares the estimated cost of shale oil production for different technologies with the estimated cost of current onshore U.S. conventional oil production. The table also estimates what royalty rates for oil shale production might be, for the different production

² Energy Information Administration, Crude Oil Production, dated July 3, 2008. <http://www.eia.doe.gov/neic/infosheets/crudeproduction.html> and http://www.eia.doe.gov/emeu/perfpro/tab_12.htm. The production cost at the time of analysis was approximately \$18 per barrel.

methods, compared to a 12.5 percent royalty rate for conventional oil production, if the higher anticipated production costs for oil shale are taken into account.

Technology	Estimated shale oil production costs per barrel	Royalty calculation based on difference in production cost of a barrel of conventional oil versus shale oil	Adjusted royalty for shale oil
Surface mining	\$44.24	$\$19.50/\$44.24 = 44.07\% \times 12.5\% = 5.51\%$	5.5 percent
Underground mining	\$54.00	$\$19.50/\$54 = 36.11\% \times 12.5\% = 4.51\%$	4.5 percent
Fracturing and heating in place	\$65.21	$\$19.50/\$65.21 = 29.90\% \times 12.5\% = 3.74\%$	3.75 percent
Heating only in place	\$37.75	$\$19.50/\$37.75 = 51.65\% \times 12.5\% = 6.46\%$	6.5 percent

Adjusting royalty rates based on higher anticipated production cost for oil from oil shale is not a new concept and is similar to the situation in the coal program where underground coal operations compete with surface coal operations, which have lower production costs. Congress addressed this disparity in production costs by allowing for different royalty rates for coal mined underground versus coal mined at the surface.

Please specifically comment on whether or not the anticipated costs of producing oil shale should be considered in establishing the royalty rate for all oil shale products and whether the BLM has chosen appropriate reference points for this production cost comparison.

Therefore, one alternative that considers the decreased energy content and increased production costs, while encouraging production and ensuring an appropriate return to the government is to set a flat royalty rate of 5%. This alternative assumes that oil shale will continue to be more expensive to produce for many years when compared to new conventional oil.

Option 2. A 5 percent royalty on initial production, with 12.5 percent thereafter.

This alternative would provide a reduced royalty rate of 5% as a temporary incentive for early production of oil shale (similar to royalty incentives offered to spur initial Outer Continental Shelf (OCS) deepwater production), but with the standard 12.5% onshore oil and gas royalty rate applying to all oil shale production after a set timeframe and a set amount of production has taken place. Like the other royalty options, this option would require oil shale lessees to pay royalties on the amount or value of all products of oil shale that are sold from or transported off of the lease. This section would explain that the standard royalty rate for the products of oil shale is 12.5

percent of the amount or value of production. However, under this option, for leases that begin production of oil shale within 12 years of the issuance of the first oil shale commercial lease, the royalty rate would be 5 percent of the amount or value of production on the first 30 million barrels of oil equivalent produced.

The advantage of this alternative over a flat 5% royalty (Option 1) is that it provides a better return to taxpayers on later production if oil prices remain high and oil shale production becomes competitive with new conventional oil projects. At \$60/barrel, this would amount to roughly \$1.8 billion in production allowed per lease at the lower 5% royalty rate, providing roughly a \$135 million in savings per lease compared to using the standard onshore oil and gas royalty rate of 12.5%.

One potential downside to this alternative is that offering royalty incentives without regard to oil prices increases the likelihood that, if oil prices remain high, the government will sacrifice revenue without affecting actual oil shale development. For example, at \$120/barrel, the savings would be worth \$270 million, even though oil shale operations would be more profitable than at oil prices of \$60/barrel.

Therefore, we are also requesting comment on whether, if this proposal were adopted in the final rule, the temporary 5% royalty on initial production should also be conditioned on crude oil and natural gas prices (similar to OCS deepwater royalty incentives) and if so, what oil and gas price level would trigger payment at the higher 12.5% rate if prices exceeded the threshold. We would also like comments on the 12 year timeframe for reduced royalty.

Option 3. Sliding scale royalty based on the market price of oil.

Two comments suggested a sliding scale royalty format. One comment specifically suggested a sliding scale royalty scheme based on a royalty schedule that varies with the price of conventional crude, as follows:

At \$10 per barrel of conventional crude, the royalty rate should be zero;

At \$15 per barrel, royalty should be 0.25 percent and should increase by 0.25 percent for every \$5 per barrel increase up to \$35 per barrel;

At \$40 per barrel, the royalty rate should be 2 percent and should increase by 0.5 percent for every \$5 per barrel increase in the price of conventional crude oil until the price of conventional crude reaches \$100 per barrel; and

At \$100 per barrel, royalty rate should be 8 percent and should remain at 8 percent at prices above \$100 per barrel.

Another comment suggested two approaches to calculating royalty. The first part of the comment suggested that a simple way to accomplish royalty rates would be to index the value of barrels of oil equivalent to some percentage of NYMEX futures (say, 30 day average front month) prices. The commenter suggested that the index should be some fraction of the price, such as 50 to 65 percent. In the second part of the comment, the commenter suggested that, as an alternative to indexing, the BLM use a sliding royalty rate that is calculated on the difference between product price and the highest-cost production in the industry. The commenter cautioned that “there need to be provisions

that deferred portions of the royalty do not reduce mineral lease payments to the States, if an escalating royalty rate is used.”

The BLM, in consultation with the MMS, evaluated these variable royalty options, but decided that as presented, they would be highly complex, and therefore, cumbersome to administer. With price volatility in the crude oil market, an intricate sliding scale royalty scheme could make enforcing compliance very difficult for the MMS. In addition, there is uncertainty about the types of products that would be derived from oil shale refining. Royalties based on oil shale quality would also be difficult for the BLM to administer when attempting to verify production quantities. For instance, if oil shale is extracted in an underground heating system, it would be extremely difficult for the BLM to determine how much oil or other product came from a particular volume or area of in-place oil shale.

While the BLM and MMS are concerned about the complexity of administering some of the proposed sliding scale royalty proposals, we recognize that there is some merit to the sliding scale concept, and in a simpler form, a sliding scale royalty may prove useful in meeting the dual goals of encouraging production and ensuring a fair return to taxpayers from future oil shale development.

One of the concerns that has been expressed regarding oil shale development is that potential oil shale developers may be reluctant to make the large upfront investments required for commercial operations if they believe there is a chance that crude oil prices

might drop in the future below the point at which oil shale production would be profitable (i.e., competitive with new conventional oil production). A sliding scale royalty system could allow the government to at least partially mitigate this development risk by providing for a lower royalty rate if crude oil prices fall below a certain price threshold. The basic concept is that in return for the government accepting a greater share of the price risk that an operator faces when prices are low (in the form of a lower royalty), the government would receive a greater share of the rewards (through a higher royalty) when prices are high.

The BLM has not decided on the specific parameters of a sliding scale royalty system, but is considering a simplified, two- or three-tiered system based on the current royalty rates already in effect for conventional fuel minerals and with a 5 percent royalty rate (Option 1) representing the first tier. The applicable royalty rate would be determined based on market prices of competing products (e.g., crude oil and natural gas) over a certain time period. If prices remain below a certain point during the applicable period, the royalty rate on oil shale products would be 5 percent for that period. If prices are above that range for the period, a higher royalty would be charged. In a three-tiered system, a third royalty rate would apply if prices rise above a second price threshold during the applicable period.

The BLM seeks comment on the specific parameters that could be applied to a sliding scale royalty system, should the BLM choose to adopt such a system in the final rule. More specifically, the BLM would like feedback on the following questions:

1. Should a sliding scale system include two or three tiers? Assuming a 5 percent royalty for the first tier, what would be appropriate royalty rates for the second and/or third tiers?
2. What are appropriate price thresholds to apply to each tier? Should the thresholds be fixed (in real dollar terms), or should they float relative to a published index?
3. Should the sliding scale apply to all products, or should nonfuel products pay a traditional flat rate?
4. Are there other ways to simplify a sliding scale royalty to reduce the administrative costs for BLM, MMS, and producers?

Under a sliding scale system, if prices fall below the lower range, producers would have a “safety net” in the form of the lower 5% royalty rate. Whether or not the lower royalty kicks in at some point, simply having it in place provides some added certainty for investors that would help encourage oil shale production. In return for this “safety net” that conventional oil and gas producers do not enjoy, oil shale producers would be required to pay a higher royalty rate(s) when crude oil and/or natural gas prices are high (and where oil shale is expected to be substantially more profitable).

There are a couple of advantages of this alternative. It reduces the risk for oil shale operators that oil prices might fall below the point that continued oil shale production would be economic. However, it also ensures an improved return to the government if prices remain within one of the higher expected ranges at which oil shale

may be profitable. One disadvantage is that taxpayers accept a greater risk of lower returns if prices fall and remain well below the lowest threshold. However, with the lowest royalty rate step set at 5 percent, this risk is no greater than under a flat 5 percent royalty system (Option #1).

Other Royalty Issues

The BLM also received 5 comments specific to the royalty point of determination. Two of the comments suggested that royalty should be determined “at the point at which the oil product exits a process facility in a marketable state.” One comment suggested that “the point of royalty determination be at the earliest point of liquid or gaseous product marketability.” Another comment suggested that “the oil produced should be measured at the point at which the oil product exits a processing facility in a marketable state.” The last comment did not provide a specific suggestion; rather, it stated that the BLM “must set the royalty rate and point of royalty determination with reference to the economic cost of emissions that would be created from developing, and then burning, the oil shale resource.” After a careful evaluation of these comments and consultation with the MMS, under the proposed rule the royalty would be assessed on all products of oil shale that are sold from or transported off of the lease. This proposed point of royalty determination is similar to points of royalty determination for other Interior Department minerals programs.

The BLM received three ANPR comments relating to the oil shale research, development, and demonstration (R, D and D) program. One comment encouraged the BLM to “continue the existing BLM R, D and D leasing program for access to oil shale for companies wishing to test unproven technologies.” Another comment suggested that the BLM “should let several ‘boutique’ small companies with large R, D and D budgets to develop a small number of sites,” on the condition that those companies “would have to agree to allow their findings to be shared.” The last comment specifically requested that the “commercial leasing regulations make clear that the BLM will not hold a commercial lease sale for Federal oil shale resources until successful technologies have been developed and demonstrated on R, D and D leases.” These proposed regulations do not address the first comment. The Secretary has discretion under the EP Act to offer additional tracts for R, D and D leasing. These regulations do not decide whether additional R, D and D leasing is necessary. Although the BLM could require that proprietary information be made public as a condition of further R, D and D leasing, we believe that the industry would not be interested in leasing under such conditions. Furthermore, as previously explained, these regulations do not address any new R, D and D leases. The BLM could not incorporate the third comment, because it suggested a limitation that is inconsistent with the terms of the EP Act. Sections 369(c) and 369(e) of EP Act authorize the commercial leasing of oil shale following promulgation of regulations and consultation with interested parties without the limitations sought by the comment.

Finally, it is important to note that the proposed rule allows the Federal Government to readjust royalty rates on leases after the first 20-year term.

Currently, there is no oil shale industry and the oil shale extractive technology is still in its rudimentary stages; as such, commercial oil shale production does not exist anywhere in the world. As research and development of oil shale technology progresses, the BLM will have adequate time to reexamine and readjust royalty rates for oil shale production, either up or down. Please specifically comment on the time necessary to develop an oil shale industry.

The BLM is proposing alternatives for the royalty rate and the products on which the royalties will be collected. The BLM anticipates selecting one of these alternatives, or based on public comment and further analysis, variations on these alternatives in the final rule in order to provide predictability for the industry and ease of administration both for the United States and for payers. However, the Department is not proposing corresponding MMS valuation regulations at this time. Because the oil shale industry is still in the research and development phase, it would be speculative to predict whether the industry as it matures would predominantly sell from its leases mined solid oil shale, shale oil, synthetic petroleum, shale gas, natural gas, or products in several different forms or stages of processing. It is also difficult to predict whether or when multi-buyer/multi-seller markets would develop that would provide FMV pricing for products of oil shale. Therefore, the MMS will promulgate royalty valuation regulations before oil shale leases are required to begin paying production royalties under this rule.

To the extent possible, the MMS will ensure that any oil shale valuation regulation is consistent with other valuation regulations and will incorporate principles of simplicity, early certainty, and reduced administrative costs in the oil shale valuation regulations it promulgates. For example, the MMS could promulgate regulations similar to the current Federal oil valuation regulation to value crude oil produced from oil shale. Under this regulation, the value of oil sold at arm's-length would be based on gross proceeds less allowable costs of transporting oil to the point of sale. The value of oil not sold at arm's-length would be based on a market index price or the affiliate's arm's-length resale price. In both arm's-length and non-arm's-length situations, the regulations provide for adjustments for location, quality, and transportation allowances. Further, lessees also can petition for alternate valuation agreements that are situation specific when regulatory provisions do not apply.

Royalties would not be payable on potentially valuable minerals or inorganic matter that are not sold or transported off the lease for commercial purposes. Those materials would be considered waste, and would be subject to management and reclamation requirements as provided in the lease or in an approved plan of development.

The Department seeks comments on what future royalty valuation regulations need to contain. In particular, the Department is seeking comments on the potential types of oil shale products, the most equitable and practical point and method to determine the value on which to apply the royalty rate, and whether there are or should be opportunities

to determine value by market proxy or indices. The Department also seeks comments on alternative approaches to valuation and royalty rates.

In the economic analysis for this rule, the BLM analyzed the royalty implications of a range of royalty rates. Specifically, the BLM conducted a simulation-based analysis to estimate the revenue, profit, and royalty implication of a production scenario³ using three discount rates (7 percent, 3 percent, and 20 percent), three world crude oil price projections (EIA's 2007 reference, high, and low price projections⁴), and six different royalty rates (1 percent, 3 percent, 5 percent, 7 percent, 9 percent, and 12.5 percent). The likelihood of a company, in the face of numerous technological challenges, having the incentive to develop Federal oil shale reserves and experiencing economic success will depend on a number of factors. However, because the simulated scenario analysis is based on a given production scenario and set production costs, the analysis did not assist in determining the project(s) economic viability due to the royalty rate applied. The analysis did, however, clearly identify world oil price as a critical variable determining a project's economic viability. Under EIA's 2007 low oil price projection all operations are assumed to be uneconomic based on the set production costs used in the analysis of the rule.

Section 3903.53 would require the filing of documentation of all overriding royalties associated with a lease and would require that the filing must occur within 90

³ *America's Strategic Unconventional Fuels Resources, Volume III Resource and Technology Profiles*, Task Force on Strategic Unconventional Fuels, September 2007, page III-17, Table III- 4. Potential Oil Shale Development Schedule – Base Case, (<http://www.unconventionalfuels.org>).

⁴ Department of Energy, Energy Information Administration, Annual Energy Outlook 2007, Report #: DOE/EIA-0383(2007), February 2007.

days of the date of execution of the assignment. This section is similar to that of the BLM's other mineral leasing programs.

Section 3903.54 would contain the requirements for filing an application for waiver, suspension, or reduction of rental or payment in lieu of production, or a reduction in royalty, or waiver of royalty in the first 5 years of the lease. As with the BLM's other mineral leasing programs, this section is intended to encourage the maximum ultimate recovery of the mineral(s) under lease. This section is similar to the BLM's coal leasing regulations and similarly includes a case-by-case processing fee under 43 CFR 3000.11.

Section 3903.60 would provide that late payments or underpayment charges would be assessed under MMS regulations at 30 CFR 218.202.

Subpart 3904 – Bonds and Trust Funds

Sections in this subpart would address the requirements associated with bonding and trust funds, including the:

- (1) Types of bonds the BLM requires and when bonds would be required (section 3904.10);
- (2) When and where bonds would be filed (sections 3904.11 and 3904.12);
- (3) Acceptable types collateral for personal bonds (section 3904.13);
- (4) Individual lease, exploration license, and reclamation bonds (section 3904.14);
- (5) Amount of bond coverage (section 3904.15);

- (6) Default (section 3904.20); and
- (7) Long-term water treatment trust funds (section 3904.40).

Since all of the BLM's mineral leasing programs require bonds, the requirements in subpart 3904 would be similar to the regulatory provisions in the BLM's other mineral leasing programs. The bonding requirements in this rule are consistent with the bonding requirements under the BLM's mining law program. Both programs require that bonds cover the full cost of reclamation. Both programs also allow for the use of long-term trust funds as a mechanism to address potential long-term water issues.

Bonding ensures performance at a cost up to the bond amount in the event of default by a lessee or licensee. Sections of this subpart would establish that the BLM would require two types of bonds; a lease or exploration license bond and a reclamation bond. This subpart would also explain that reclamation bonds would be required to be in an amount sufficient to cover the entire cost of reclamation of the disturbed areas as if they were to be performed by a contracted third party.

Section 3904.10 would provide that prior to lease or an exploration license issuance, the BLM would require a lease or exploration license bond for each lease or exploration license to cover all liabilities on a lease, except reclamation, and all liabilities on a license. The bond would be required to cover all record title owners, operating rights owners, operators, and any person who conducts operations on or is responsible for making payments under a lease or license. This section would also require the lessee or

operator to file a reclamation bond to cover all costs the BLM estimates would be necessary to cover reclamation on a lease. This is similar to the requirement found in other BLM mineral regulations.

Section 3904.11 would require the lessee or operator to file a lease bond prior to issuance of a lease, file a reclamation bond prior to approval of a plan of development, and file an exploration bond prior to exploration license issuance. This section is similar to other BLM bonding regulations as it would require the filing of a bond before liabilities may accrue.

Section 3904.12 would require that a copy of the bond with original signatures be filed in the proper BLM office and section 3904.13 would describe the different types of bonds that the BLM would accept. These sections are similar to the bonding regulations in other BLM mineral leasing programs.

Section 3904.13 would address the types of personal and surety bonds the BLM would accept. Personal bonds would be limited to pledges of cash, cashier's check, certified check, or U.S. Treasury bond. The BLM state offices would list qualified sureties for bonds.

Section 3904.14 would provide that the BLM will establish bond amounts on a case-by-case basis. These regulations would set the minimum lease bond amount at \$25,000. Although the minimum lease bond amount is greater than that required in other

BLM mineral leasing programs, the BLM believes that it is justified because the potential liability may be greater and there are still some unknowns. Reclamation and exploration bond amounts would be established to cover the costs of reclamation as if it were to be performed by a contracted third party.

Past oil shale operations have required extensive reclamation, and this has demonstrated the need to have a reclamation bond that covers the full cost of reclamation. By requiring that the bond equal the estimated costs of having a third party perform the reclamation, the BLM anticipates that the cost of reclamation would be covered.

This section would provide that the BLM may enter into agreements with states to accept a state-approved reclamation bond to satisfy the BLM's reclamation requirements and protect the BLM to the extent the bond is adequate to cover all the operator's liabilities on Federal, state, and private lands. This would avoid duplicate procedures and the inconvenience and cost of filing separate bonds with both the state and the BLM. Such agreements were recommended by state representatives at the BLM listening sessions and are also addressed in regulatory provisions of other BLM mineral leasing programs.

Section 3904.15 would explain that under this proposed rule the BLM may increase or decrease the bond amount if it determines that a change in coverage is warranted to cover the costs and obligations of complying with the requirements of the lease or license and these proposed regulations. This section would also explain that the

BLM would not decrease the bond amount below the minimum established in section 3904.14(a). This section would require the lessee or operator to submit a revised cost estimate of the reclamation costs to the BLM every three years after reclamation bond approval. If the current bond would not cover the revised estimate of the reclamation costs, the lessee or operator would be required to increase the reclamation bond amount to meet or exceed the revised cost estimate. This section is consistent with the bonding regulations that currently exist for other BLM minerals programs.

Section 3904.20 would describe what actions the BLM would take in the event of a default payment from a lease, exploration, or reclamation bond to cover nonpayment of any obligations that were not met. It also would require the bond to be restored to the pre-default level. This section is similar to sections in the other BLM mineral regulations regarding default.

Section 3904.21 would allow the termination of the period of liability of a bond. The BLM will not consent to the termination of the period of liability under a bond unless an acceptable replacement bond has been filed or until all of the terms and conditions of the license or lease have been fulfilled. Termination of the period of liability of a bond would end the period during which obligations continue to accrue, but would not relieve the surety of the responsibility for obligations that accrued during the period of liability.

Section 3904.40 would establish trust funds or other funding mechanisms to ensure the continuation of long-term treatment to achieve water quality standards and for

other long-term, post-mining maintenance requirements. Experience in other mineral programs has shown the need for a mechanism to ensure the long-term treatment of water. This provision is similar to regulations in the BLM's mining law program under 43 CFR 3809.552 and is designed to address similar long-term water protection issues. In determining whether a trust fund will be required, the BLM will consider the following factors:

- (1) The anticipated post-mining obligations (PMO) that are identified in the environmental document and/or approved plan of development;
- (2) Whether there is a reasonable degree of certainty that the treatment will be required based on accepted scientific evidence and/or models;
- (3) The determination that the financial responsibility for those obligations rests with the operator; and
- (4) Whether it is feasible, practical, or desirable to require separate or expanded reclamation bonds for those anticipated long-term PMOs.

The determination that a trust fund is needed and the amount needed in the fund may be made during review of the proposed plan of development or later as a result of further inspections or reviews of the operations.

Subpart 3905 -- Lease Exchanges

This subpart would allow the BLM to approve oil shale lease exchanges.

Section 3905.10 would explain that the BLM would approve a lease exchange if it would facilitate the recovery of oil shale and it would consolidate mineral interests into manageable areas. It also states that oil shale lease exchanges would be governed by the regulations under 43 CFR part 2200. Section 206 of FLPMA authorizes land exchanges of interests in Federal lands for non-Federal lands (43 U.S.C. 1716).

Part 3910 -- Oil Shale Exploration Licenses

The regulations proposed under this part would address exploration licenses. An exploration license would allow a licensee to enter the Federal land covered by an exploration license and explore for minerals, but it would not authorize the licensee to extract any minerals, except for experimental or demonstration purposes. Since regulatory provisions for the issuance and approval of exploration licenses are common to the BLM mineral leasing programs, this part would contain similar regulatory provisions, particularly with respect to:

- (1) Lands that are subject to exploration (section 3910.21);
- (2) Lands managed by agencies other than the BLM (section 3910.22);
- (3) Requirements for conducting exploration activities (section 3910.23);
- (4) Application procedures (section 3910.31);
- (5) Environmental analysis (section 3910.32);
- (6) License requirements (section 3910.40);

- (7) Issuance, modification, relinquishment, termination, and cancellation (section 3910.41);
- (8) Limitations on exploration licenses (section 3910.42);
- (9) Collection and submission of data (section 3910.44); and
- (10) Surface use (section 3910.50).

Section 3910.21 would authorize the issuance of oil shale exploration licenses on all Federal lands subject to leasing under section 3900.10, except lands within an existing oil shale lease or in preference right lease areas under the R, D and D program. This type of limitation on which lands the BLM may issue an exploration license is consistent with that of other BLM minerals exploration regulations.

Section 3910.22 would make it clear that the consent and consultation procedures under section 3900.61 that apply to leases also apply to exploration licenses. The BLM would issue these licenses under the terms and conditions prescribed by the surface managing agency concerning the use and protection of the nonmineral interests in those lands. Section 3910.22 is similar to regulations for BLM's other mineral leasing regulations requiring consent and consultation for exploration licenses.

Section 3910.23 would require the operator to have a lease or license before conducting any exploration activities on Federal lands. This section would also allow that under an exploration license small amounts of material may be removed for testing purposes only; however, any material removed cannot be sold. This is similar to

regulations in other BLM mineral programs that recognize that some removal of material is necessary for testing purposes.

Section 3910.31 would identify specific requirements for filing an application for an exploration license. Application requirements under this section would include:

- (1) Submission of a nonrefundable filing fee;
- (2) Description of lands covered by the application;
- (3) An exploration plan;
- (4) Compliance with maximum acreage limitations for an exploration license; and
- (5) Submission of information to prepare a notice of invitation for other parties to participate in exploration.

Mirroring the coal regulations, this section would establish an acreage limit of 25,000 acres as the maximum size allowable for an exploration license. As is the case for other BLM leasing programs which provide for exploration licenses, there would be no required application form. The \$295 filing fee for an exploration license is based on the current filing fee for a coal exploration license. The BLM anticipates that the time required to process an oil shale exploration license would be similar to that for a coal exploration license, and therefore believes the same filing fee is justified.

Section 3910.32 would require the BLM to perform the appropriate NEPA analysis before issuing an exploration license. The section also explains that the BLM would include in an exploration license terms and conditions to mitigate impacts to the

environment analyzed in a NEPA document and to protect Federal resource values of the area and to ensure reclamation of the lands disturbed by exploration activities.

Section 3910.40 would provide that a licensee must comply with all applicable Federal laws and regulations and the terms and conditions of the license and approved exploration plan as well as applicable state and local laws not otherwise preempted by Federal laws, such as FLPMA.

Section 3910.41 would explain provisions relating to the administration of the exploration license, including the license term, the effective date of an exploration license, conditions for approval, and provisions relating to the modification, relinquishment, and cancellation of an exploration license. Like exploration licenses for other BLM mineral leasing programs, the term of an exploration license would be 2 years. The requirements proposed here for oil shale exploration licenses are similar to existing requirements in regulations relating to exploration licenses in other BLM minerals programs, particularly coal.

Section 3910.42 would provide that issuance of an exploration license would not preclude the issuance of a Federal oil shale lease for the same area. This section would also make it clear that if an oil shale lease is issued for an area covered by an exploration license, the BLM would cancel the exploration license effective the date of lease issuance.

Section 3910.44 would address collection and submission of data relating to an exploration license and would include provisions relating to confidentiality of data. This section is similar to provisions in other BLM minerals programs.

Section 3910.50 would address the issue of surface damage resulting from exploration operations and would require that exploration activities not unreasonably interfere with or endanger any other lawful activity on the same lands or damage any surface improvements on the lands. This is similar to other BLM minerals regulations that address surface use.

Part 3920 – Oil Shale Leasing

The foundation for the proposed oil shale leasing program would be a competitive leasing process similar to the BLM's coal leasing program. Prior to making areas available for consideration for leasing through a competitive lease sale, the BLM is proposing a 2-step process that would begin with a call for expressions of leasing interest (section 3921.30), to be followed by a call for applications (section 3921.60) if the BLM determines that there is interest in a competitive lease sale. In addition to contributing to the orderly development of the resource, this process would facilitate compliance with NEPA by focusing the analysis on areas in which there is active interest in obtaining a lease.

Subpart 3921 -- Pre-Sale Activities

The sections under this subpart would contain regulatory provisions relating to pre-leasing activities. Many of the sections would be similar to existing provisions of other BLM mineral leasing programs, particularly coal.

Section 3921.10 would explain that a BLM State Director may announce in the Federal Register a call for expressions of interest for those areas identified in the land use plan as available for oil shale leasing.

Section 3921.20 clarifies that the appropriate NEPA analysis must be prepared for the proposed leasing area under the Council on Environmental Quality's regulations at 40 CFR parts 1500 through 1508 and Department of the Interior methods and procedures developed pursuant to NEPA.

Section 3921.30 would provide that the notice announcing calls for expressions of leasing interest would be published in the Federal Register and in at least 1 newspaper of general circulation in the affected state. The notice would allow a minimum of 30 days to submit expressions of leasing interest, including a legal land description and other specified information.

Section 3921.40 would require that the BLM notify the appropriate state governor's office, local governments, and interested Indian tribes of their opportunity, after the BLM receives responses to the call for expression of leasing interest, to provide

comments regarding the responses and other issues related to oil shale leasing. The BLM included this requirement in the proposed rule in response to discussion at the three listening sessions with the governors' representatives.

Section 3921.50 would explain that after analyzing expressions of leasing interest, the BLM would determine a geographic area for receiving applications to lease. This section would also explain that the BLM may add lands to those areas identified by the public in the expressions of leasing interest.

Under proposed section 3921.60, the BLM's call for applications would be published in the Federal Register and would identify the geographic area available for application under proposed subpart 3922. Under this section, the public would have at least 90 days to submit applications for lease.

Subpart 3922 -- Application Processing

The sections under this subpart would contain regulatory provisions relating to application requirements, including:

- (1) A nonrefundable case-by-case processing fee (section 3922.10);
- (2) Content of application (section 3922.20);
- (3) Additional information (section 3922.30); and
- (4) Tract delineation (section 3922.40).

These provisions are similar to existing regulations of other BLM mineral leasing programs.

Section 3922.10 would require an applicant nominating a tract for competitive leasing to pay a cost recovery or processing fee that the BLM will determine on a case-by-case basis as described in 43 CFR 3000.11 and as modified by provisions of section 3922.10. The section would provide that the applicant who nominates a tract will pay to the BLM the processing costs that the BLM incurs up to the publication of the competitive lease sale notice. That fee amount would be included in the sale notice. If the applicant is the successful bidder, the applicant would then also pay all processing costs the BLM incurs after the date of the sale notice. Payment of all cost recovery fees is required prior to lease issuance.

If the successful bidder is someone other than the original applicant, the successful bidder would be required to submit an application under section 3922.20 within 30 days after the lease sale and would be responsible for paying to the BLM the fee amount included in the sale notice. In such circumstances, the BLM will refund the fees the original applicant paid to the BLM. The successful bidder would also be responsible for any processing costs the BLM incurs after the date of the sale notice. If there is no successful bidder, the applicant would be responsible for processing costs, and there would be no refund.

With respect to costs incurred relating to the NEPA analysis to support a competitive lease sale, the BLM processing fees noted in the sale notice would include, if applicable, the BLM's costs associated with preparation of the NEPA analysis, which may include BLM costs incurred in contracting with a third party to perform the NEPA analysis. In cases where there are several applications that have been filed for the same area, it is likely that the BLM would prepare a single NEPA analysis, which would address issues related to environmental impacts identified in all applications that were filed in response to the call for applications.

In the case where the successful bidder for a tract is not the original applicant, the successful bidder would be responsible for paying the fee noted in the sale notice and any additional BLM processing costs, including any additional NEPA analysis.

For example, in the case where a successful high bidder is not the original applicant and the technology that the successful bidder proposes to use was not previously analyzed in the NEPA analysis, the successful bidder would be responsible for paying for the cost of that NEPA analysis and any additional NEPA analysis that would be necessary.

It should be noted that an applicant would not be reimbursed for moneys the applicant (and not the BLM) may pay directly to third persons to perform studies, including any required analyses under NEPA.

Under section 3922.10, the BLM is proposing adopting case-by-case processing fees for applications that would mirror case-by-case fee requirements applicable to the leasing of coal and non-energy leasable minerals offered through competitive lease sales. The BLM's minerals material sales regulations also contain case-by-case processing fees. Case-by-case fees would allow the BLM to recoup its processing costs by charging an applicant the reasonable costs the BLM incurs in processing a particular application. Cost recovery is authorized under the Independent Offices Appropriation Act of 1952, as amended, 31 U.S.C. 9701, which states that Federal agencies should be "self-sustaining to the extent possible" and authorizes agency heads to "prescribe regulations establishing the charge for a service or thing of value provided by the agency." The BLM also has specific authority to charge fees for processing applications and other documents relating to public lands, including Environmental Impact Statements (EISs), under Section 304(b) of FLPMA (43 U.S.C. 1734(b)). Cost recovery policies are explained in Office of Management and Budget Circular A-25 (Revised), entitled "User Charges." The general Federal policy stated in Circular A-25 (Revised) is that a charge will be assessed against each identifiable recipient for special benefits derived from Federal activities beyond those received by the general public.

Additionally, this section states that the BLM will not issue a lease offered by competitive sale without having first received an application from the successful bidder under section 3922.20. Under section 3922.10(b)(5) a successful bidder at a competitive lease sale who was not an applicant must file an application within 30 calendar days after the lease sale.

Section 3922.20 would identify specific information that an applicant would be required to include in a lease application to enable the BLM to have sufficient information to prepare the appropriate NEPA analysis to evaluate the impacts of proposed leasing. The amount of information requested as part of an oil shale lease application differs from other mineral leasing programs because the methodology for recovering oil shale is not as standardized as it is for more conventional fuels. The NEPA compliance documents at this stage in the leasing process are necessary because the PEIS addresses land use planning decisions and not leasing decisions and was unable to anticipate with any certainty the effects of oil shale leasing development due to the newness of the industry.

The possible oil shale development technologies are very different from conventional mining methods associated with other BLM minerals programs, as are the impacts associated with each. The technologies are yet to be proven, or commercially viable and their associated impacts are unknown. Because the BLM is presently uncertain of the mining methods (and associated impacts) that may be used for oil shale development, additional NEPA analysis will be performed during the application and leasing process. When required by applicable law, the BLM will conduct site-specific NEPA analysis, including a period of public review, to evaluate the impacts on known resource values on the lands in any application. Although no specific form is required, information the applicant would be required to provide includes, but is not limited to:

- (1) Proposed extraction method (including personnel requirements, production levels, and transportation methods) and estimate of the maximum surface area to be disturbed at any one time;
- (2) Sources and quantities of water to be used and treatment and disposal methods necessary to meet applicable water quality standards;
- (3) Air emissions;
- (4) Anticipated noise levels from proposed development;
- (5) How proposed lease development would comply with all applicable statutes and regulations governing management of chemicals and disposal of waste;
- (6) Reasonably foreseeable social, economic, and infrastructure impacts of the proposed development on the surrounding communities and on state and local governments;
- (7) Mitigation of impacts on species and habitats; and
- (8) Proposed reclamation methods.

Section 3922.30 would provide that the BLM could request additional information from the applicant, and explain that failure to provide the best available and most accurate information might result in suspension or termination of processing of the application or in a decision to reject the application. The BLM's ability to obtain additional information at this stage is essential to the NEPA analysis to support leasing. Failure to provide the needed information would have a direct impact on the adequacy of the NEPA analysis and therefore could greatly impact the BLM's decision to proceed with a lease sale.

Section 3922.40 would make it clear that the purpose of tract delineation for a competitive lease sale is to provide for the orderly development of the oil shale resource. This section would also clarify that in addition to adding or deleting lands from an area covered by an application, where lands covered by applications overlap, the BLM may delineate those lands that overlap as separate tracts. The BLM may delineate tracts in any area acceptable for further consideration for leasing, regardless of whether it received expressions of interest or applications for those areas. The need to delineate tracts for adequate development of the mineral resource is recognized in all the BLM mineral leasing programs, and provisions similar to this are contained in the other BLM mineral leasing regulations.

Subpart 3923 – Minimum Bid

Section 3923.10 would implement the policy of the United States under Section 102(a) of FLPMA (43 U.S.C. 1701(a)(9)) that the Federal government should receive a FMV for leasing its minerals. Also, Section 369(o) of the EP Act which requires that payments for leases under that section must ensure a fair return to the United States. Under section 3924.10 of the proposed rule, the BLM sales panel would determine if the high bid reflects the FMV of the tract, which we equate to fair return. We anticipate that the sales panel will analyze the bids and make a determination, taking into account, among other things, the geology, market conditions, mining methods, and industry economics.

The BLM recognizes the difficulty in determining a value for a resource (oil shale) that has tremendous potential, but has not yet been proven to be economic to develop. The risk of setting pre-sale FMVs that are too high and would discourage development of a commercial leasing program is very real. The BLM is also aware that the oil shale industry is presently in the research and development stage and comparable lease sales might be rare or unavailable when leasing first occurs under these regulations, but this will not always be the case. Competitive lease sales of Federal oil shale leases in the 1970s resulted in bids of \$10,000 per acre, or higher, indicating that even though development risks are high, the potential reward is also high. Both the economic and the technological circumstances have changed since the 1970s, but the vast quantities of oil shale within the Federal acreage weigh in favor of high minimum bid amounts. For comparison purposes, the coal program has a minimum bid amount of \$100 per acre and the oil and gas program has a minimum bid amount of \$2 per acre. This section would set a minimum bid of \$1,000 per acre, but the BLM invites comments supporting reasonable alternative minimum bid amounts.

Subpart 3924 – Lease Sale Procedures

Provisions of this subpart would identify the process by which tracts of land would be made available for competitive lease sale. The BLM proposes to lease oil shale through a competitive bidding leasing procedure that would mirror competitive lease sales procedures currently in place for other solid minerals leasing programs, particularly coal.

Section 3924.5 would detail the contents of the sale notice that the BLM would publish in the Federal Register and newspapers of general circulation in the area of the proposed lease. The purpose of the notice is to alert the public that the BLM will be holding an oil shale lease sale and to provide enough of the details about the proposed lease terms and conditions, lease area, and leasing limitations for the public to make an informed decision whether to participate in the lease sale. This section would be similar to other BLM mineral leasing regulations that require notification of the lease sale and is a necessary part of the oil shale leasing program.

Section 3924.10 would detail competitive lease sale procedures, including receipt and opening of sealed bids, submission of the one-fifth of the amount of the bonus bid, requirements for future submission of remaining installments of the bonus bid, and post-sale procedures for determining the successful bidder. This section would also address the actions of the sale panel in determining whether or not to accept the high bid, including a FMV determination. This section is similar to the BLM's competitive leasing regulations for coal and non-energy leasable minerals. The BLM is proposing to adopt this process because it has been successful in these other mineral leasing programs and because we believe this process is appropriate for oil shale leasing.

The BLM will rely on the appraisal process to estimate the fair market value (FMV) for commercial oil shale leases under the proposed regulations. An appraisal is an unbiased estimate of the value of property. The appraisal process is a systematic

approach to property valuation. It consists of defining data requirements, assembling the best available data, and applying an appropriate appraisal method. The principles of property valuation are presented in the Uniform Appraisal Standards for Federal Land Acquisitions and in The Appraisal of Real Estate. The term “fair market value” is defined in the Uniform Appraisal Standards for Federal Land Acquisitions as the amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would be sold by a knowledgeable owner willing, but not obligated, to sell to a knowledgeable purchaser who desired, but is not obligated, to buy.

In ascertaining that figure, consideration should be given to all matters that might be brought forward and substantial weight given in bargaining by persons of ordinary prudence. Factors that will affect the market value of an oil shale lease include the lease terms which encompass rental and royalty obligations. The bonus bid for the lease must be equal or greater than the lease FMV.

There are three methodologies generally used in appraising real property: the comparable sales approach, income approach, and replacement cost approach. Normally, the replacement cost approach is not applied to appraisals involving property such as mineral leases.

In the comparable sales approach, the value of a property is estimated from prior sales of comparable properties. The basis for estimation is that the market would impute value to the subject property in the same manner that it determines value of comparable

competitive properties. When reliable comparable sales data are available, it generally is assumed that the comparable sales approach will provide the best indication of value.

In the income approach, the value assigned to the property is derived from the present worth of future net income benefits. If sufficiently similar sales are not available, the FMV determination will generally rely on the income approach.

The FMV determination follows a pre-existing valuation standard, which utilizes the circumstances of place, time, the existence of comparable precedents, and the evaluation principles of each involved party. In determining the FMV under this rule, our determination would be based on comparison with identical or similar past, actual, or expected services and goods relating to oil shale. It is the policy of the United States, stated in Section 102(a) of FLPMA (43 U.S.C. 1701(a)(9)) and Section 369(o)(2) of the EP Act, that the United States receive FMV for the issuance of Federal mineral leases.

In the ANPR, the BLM solicited public input on the process for bid adequacy evaluation and minimum acceptable lease bonus bid. The BLM's purpose for requesting comments on the FMV it should receive for lease tracts was to solicit ideas on how FMV would be determined for a resource that has little or no history of comparable sales.

The public comments received were primarily concerned with the need to receive an appropriate value for the lease. The BLM received comments from 6 entities related to this question, specifically mentioning that: a FMV determination needs to reflect

private sector valuations; competitive bidding should establish a lease's FMV; the process for establishing FMV should be modeled after the Federal coal leasing program; bonus payments are needed to stop speculation; and sealed bidding ensures the most competitive bonus bid. The comments also posed arguments for and against using a minimum acceptable bonus bid. In addition, the BLM received comments that bonus bids should be high and suggested that the 1974 bonus bid amounts pertaining to 4 oil shale leases that were offered in Colorado and Utah, with bonus bids that ranged from \$74 million to \$210 million, were indicative of expected bonus bid amounts.

In response to the ANPR comments and other considerations, the BLM proposes to establish oil shale lease FMV using a process similar to that used in the Federal coal leasing program. This proposed process relies on the appraisal process in an attempt to estimate the market value for those leases. As such, the proposed process relies on many of the procedures used in private sector valuations, and where available, will rely on private sector transactions to establish the market value for Federal oil shale leases. The Federal coal leasing program and this proposed rule, utilize competitive bidding, specifically sealed bidding, for determining who receives the lease.

In the rule, the BLM is proposing to establish a minimum acceptable bonus bid for Federal oil shale leases. The amount is not a reflection of FMV, but is intended to establish a floor value to limit or dissuade nuisance bids. The proposed rule requires a minimum acceptable bonus bid of \$1,000 per acre. The assumption is that such an amount will not exceed FMV or be a deterrent to companies interested in bidding for the

lease tracts. At the same time, the BLM has requested further comments on the value proposed.

As per comments on specific values, the proposed rule does not attempt to establish actual FMV for future Federal oil shale leases. Values received in the 1970's may not be an accurate indicator for future values.

Subpart 3925 – Award of Lease

Section 3925.10 would provide that the lease would ordinarily be awarded to the qualified bidder submitting the highest bid which exceeds the minimum bid amount. It also contains requirements for the submission of the necessary lease bond, the first year's rental, any unpaid cost recovery fees, including costs associated with the NEPA analysis, and the bidder's proportionate share of the cost of publication of the sale notice. The provisions in this section are similar to regulations in the BLM's competitive leasing regulations for coal and non-energy leasable minerals.

Subpart 3926 – Conversion of Preference Right for Research, Demonstration, and Development Leases

Section 3926.10 would provide application procedures or requirements to convert R, D and D leases and preference rights acreages to commercial leases. Under this section, a lessee of any of the R, D and D lease would be required to apply for conversion

to a commercial lease no later than 90 days after the BLM determines that commencement of production in commercial quantities had occurred. As stated in Section 23 of the R, D and D leases (issued in response to the BLM's call for nominations of parcels for R, D and D leasing (70 FR 33753 and 33754, June 9, 2005) R, D and D lessees can acquire contiguous acreage of the remaining preference right lease area up to a total of 5,120 acres. In order to acquire the contiguous acreage and convert to a commercial lease, the lessee would be required to demonstrate to the BLM that the technology tested in the original lease would have the ability to produce shale oil in commercial quantities. In addition, the lessee, as required in R, D and D leases, would be required to submit to the BLM:

- (1) Documentation that there have been commercial quantities of oil shale produced from the lease, including the narrative required by Section 23 of R, D and D leases;
- (2) Documentation that the lessee consulted with state and local officials to develop a plan for mitigating the socioeconomic impacts of commercial development on communities and infrastructure;
- (3) A bid payment no less than that specified in section 3923.10 and equal to the FMV of the lease; and
- (4) Bonding as required by section 3904.14.

The BLM would approve the conversion application , in whole or in part, if it determined that:

- (1) There have been commercial quantities produced from the lease;
- (2) The bid payment for the lease met or exceeded FMV;

- (3) The lessee consulted with state and local officials to develop a plan for mitigating the socioeconomic impacts of commercial development on communities and infrastructure;
- (4) The bond provided is consistent with section 3904.14; and
- (5) Commercial scale operations can be conducted, subject to mitigation measures to be specified in stipulations or regulations, without unacceptable environmental consequences.

Subpart 3927 -- Lease Terms

Sections in this subpart would address lease form, lease size, lease duration, dating of leases, diligent development, and production.

Section 3927.10 would provide that the BLM would issue oil shale leases on a standard form approved by the BLM Director. This section mirrors similar requirements in other BLM mineral leasing regulations.

Section 3927.20 would set the maximum oil shale lease size at 5,760 acres, which is the maximum size authorized under Section 369(j) of the EP Act. Several comments received in response to the BLM's ANPR included lease size recommendations varying from 500 acres to 10 square miles as the appropriate maximum lease size. Of those comments, one commenter supported a maximum lease size of 5,760 acres, which is consistent with the EP Act. One commenter stated that "Leases need to be large enough to encourage development yet not outlandishly large to allow for speculation." The

maximum lease size contained in this section is not discretionary since it was established by statute (see Section 369(j) of the EP Act).

Although the EP Act does not establish a minimum lease size, in keeping with the size restrictions of the oil shale R, D and D leases, section 3927.20 would also establish 160 acres as the minimum size of an oil shale lease. The BLM received several comments relating to whether the BLM's commercial oil shale leasing regulations should include provisions for small tract leasing, all of which generally were in favor of making small lease tracts available. One comment suggested that smaller tracts would be particularly appropriate in the early years of the commercial leasing program in light of new technologies, and it recommended a minimum tract size of 1,280 acres. Recommendations relating to a minimum tract size stated in other comments ranged from over 320 acres to one square mile. Two comments suggested that there should be restrictions for small tract leasing. Of those comments, one commenter stated that small tract leasing should not be a mechanism to thwart potential development. Another commenter recommended that small tracts should only be allowed in cases where "the tracts have been orphaned, in between larger leases, basin edge or other fee-owned lands." Although section 3927.20 would not formally establish small tract leasing, the 160-acre minimum lease size set by this section would provide a lessee the opportunity to develop a relatively small-scale leasehold, identical to the lease size authorized under the BLM's oil shale R, D and D program. Thus, rather than the BLM incorporating small tract leasing as a separate component of the commercial oil shale leasing program, establishing a minimum lease size of 160 acres provides an opportunity for a lessee to

utilize a preferred technology on a relatively small tract that is consistent with the size of existing R, D and D leases. For this reason, the BLM did not adopt ANPR comments that recommended a larger minimum lease size. With respect to the comment expressing concern that small tract leasing could thwart potential development and the comment recommending that small tract leasing should be allowed only in limited situations as stated above, it is the policy of the BLM, when delineating tracts to be offered through competitive lease sale, to make efforts to ensure that the configuration of any small acreage tracts would likely promote development of oil shale. The BLM believes that configuration of tracts in this manner would not impede development on any existing oil shale leases located in the vicinity of smaller tracts. As is the case in other BLM mineral leasing programs, the tract delineation process for a competitive lease sale includes the gathering of detailed information on tracts and conducting various analyses. Because the steps customarily included in the tract delineation process are designed to promote or encourage development of mineral resources, the BLM maintains that establishing a minimum lease size of 160 acres will not thwart potential development of oil shale resources. Likewise, the competitive leasing process and the required minimum bonus bids would discourage speculation.

One comment endorsing small tract leasing also recommended that a small tract lease should include a preference right for additional adjoining acreage. The BLM is not adopting this recommendation since it maintains that the concept of a preference right for the future leasing of additional acreage—a key component of the R, D and D leasing program—is not a necessary provision in a commercial leasing program in light of lease

modification provisions under proposed subpart 3932. In the event that a lessee of a small tract has interest in obtaining additional acreage adjacent to its lease, under the proposed rule the lessee could apply for a lease modification to include Federal lands adjacent to the lease, but not to exceed the maximum lease size (see section 3932.10).

Two comments received in response to the ANPR contained recommendations relating to consolidation of leases into larger development units. One of the comments suggested that oil shale commercial leasing regulations should include a provision to allow for consolidation of multiple contiguous leases for individual leaseholders as long as there remains one operator. The BLM interprets these comments as a recommendation to establish a mechanism similar to a logical mining unit that exists in BLM's coal leasing program. As defined in the coal leasing regulations at 43 CFR 3480(a)(19), "Logical mining unit (LMU) means an area of land in which the recoverable coal reserves can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of recoverable coal reserves and other resources." Due to the fact that the commercial oil shale leasing regulations proposed here today are aimed at establishing a new mineral leasing program; a program that does not have any history of oil shale development in the U.S., does not require any standardized extraction methods, and also adopts different diligence requirements than those of the coal leasing program, it is the BLM's position that establishing a mechanism similar to a LMU is not warranted at this time. After the promulgation of final regulations and after the oil shale industry is more well-established, if the BLM determines that the creation of a mechanism similar to an LMU is warranted, then the BLM would pursue rulemaking to adopt this

recommendation. Please specifically comment on whether or not the final rule should include provisions for the establishment of LMUs for oil shale leases.

Section 3927.30 would provide that an oil shale lease will be for a period of 20 years and so long thereafter as the condition of annual minimum production is met. Section 21 of the MLA (30 U.S.C. 241(a)(3)) authorizes issuance of oil shale leases for “indeterminate periods.” The BLM chose a 20-year period for the original lease term for ease of administration because Section 21 of the MLA (30 U.S.C. 241(a)(4)) specifies that leases should be subject to readjustment at the end of each 20-year period. Lease readjustment is common to other BLM mineral leasing programs, including coal and certain non-energy leasable minerals.

Section 3927.40 would identify the effective date of the lease and the process used to determine the effective date of the lease. This section is similar to regulations on the effective dating of leases under the BLM’s coal program.

Diligent development is a component of other mineral leasing programs such as coal and oil and gas and is required under Section 369(f) of the EP Act.

Section 3927.50 would require lessees to meet diligent development milestones and annual minimum production requirements. The BLM considers continued minimum annual production a necessary part of diligent development of the lease. This requires

that a company continue to produce the minimum annual requirement or make payments in lieu of production in order to hold the lease.

Part 3930 – Management of Oil Shale Exploration Licenses and Leases

Sections in this part would address the requirements for exploration and leases, including general performance standards, operations, diligent development milestones, plans of development and exploration plans, lease modifications and readjustments, assignments and subleases, relinquishments, cancellations and terminations, post-mining and development hazards, production and sale records, and inspection and enforcement.

Sections 3930.10 through 3930.13 would explain the performance standards for exploration, development, production, and the preparation and the handling of oil shale under Federal leases and licenses. Additional standards may be required at the time of lease issuance and as operations proceed. The BLM used the coal program as basis of many of the performance standards for these sections because of the similarity of the mining and exploration methods and the possible impacts associated with those methods. The performance standards for in situ operations were derived from aspects of the standards used for exploration and standards applicable to the BLM's oil and gas program.

Section 3930.20 would establish the various standard operating requirements associated with development of an oil shale lease, including requirements concerning the

maximum economic recovery (MER) of the resource, how to report new geologic information, and compliance with Federal laws. The section would also address disposal and treatment of solid wastes. This section provides operational requirements that are common to other BLM mineral leasing programs.

The BLM received 6 comments regarding diligent development in response to the ANPR. The comments received primarily expressed the view that diligent development requirements are necessary to prevent speculation, but that they should not be so onerous as to prevent investment in oil shale development. Most of the comments concerning the diligence provisions were related to either plan of development requirements or production requirements and requiring payment of a minimum royalty in lieu of production. The comments received suggested :

- (1) Making diligence a requirement of operations;
- (2) Not starting the diligence requirement until after the needed infrastructure is in place;
- (3) Requiring submittal of a plan of development;
- (4) Staging the permitting process to essentially define diligence as accomplishing necessary sequential steps in the development process;
- (5) Escalating minimum royalty;
- (6) Requiring minimum production levels; and
- (7) Requiring production of a percentage of the resource base.

The BLM incorporated the following commenter's suggestions into the proposed rule:

- (1) Diligent development and staged development requirements (section 3930.30 (a));
- (2) Requirements for a plan of development (section 3930.30(a)(1)); and
- (3) Requirements for minimum production (section 3930.30(d)).

The BLM's proposed diligent development requirements are based on fulfilling tasks necessary to reach production, such as applying for permits, submitting plans of development, and installing needed infrastructure within specified timeframes. Comments related to basing diligence on production of a percentage of the reserve base were considered, but rejected based on the difficulty of administering such a scheme with varying technologies, recovery rates, and shale characteristics. The comment regarding infrastructure was incorporated into the proposed rule as a diligence development step towards production.

Section 3930.30 would list the milestones for diligent development of an oil shale lease. The requirement for establishing milestones is in Section 369(f) of the EP Act. The BLM considered many options when determining how to establish milestones that would ensure diligent development of the lease. The BLM considered requiring production based on a percentage of the resource similar to coal and requirements for minimum dollar expenditures per year similar to the BLM's geothermal program. Because the oil shale mining technology that is being tested is new, and there is little experience to rely on, it would be difficult to base milestones on production or monetary expenditures. Ultimately, the BLM determined that the milestones should be the series of steps necessary for the development of the oil shale. Defining milestones this way is

logical because the steps are necessary to begin production and the BLM believes the requirement would encourage development. This section would require a lessee to meet the following five diligent development milestones:

- (1) Within 2 years of lease issuance, submit to the BLM a proposed plan of development which would meet the requirements of subpart 3931;
- (2) Within 3 years of lease issuance, submit a final plan of development;
- (3) Within 2 years after the BLM approves the plan of development, apply for all required permits and licenses;
- (4) Before the end of the 7th lease year, begin infrastructure installation, as described by the BLM approved plan of development; and
- (5) Begin production by the end of the 10th lease year.

Each of the milestones in this section would be an opportunity for the lessee or operator to fulfill the statutory requirements and would provide evidence of its commitment to diligent development of the resource.

The requirement to maintain production under an approved plan of development is also in this section. Although it is not a milestone, the BLM would require yearly production as part of the diligent development of the lease. This section also would allow payments in lieu of production to meet the requirement of yearly production. Minimum annual production is required starting the 10th year of the lease. Payment in lieu of production in year 10 of the lease satisfies the milestone requiring production by the end of the 10th year of the lease.

Section 3930.40 would identify the penalties for not achieving the required milestones. The BLM views these penalties as incentives for maintaining development of the resource and prevent speculation. Under this proposed rule, the BLM would assess a penalty of \$50 per acre for each missed diligence milestone for each year until the operator or lessee complies with the diligence milestone. The BLM believes that this penalty process would provide operators incentive for diligent development of the resource, and also that the dollar amount of the penalties is high enough to be a deterrent to speculation.

Subpart 3931 – Plans of Development and Exploration Plans

Sections in this subpart would provide requirements for submission of a plan of development (section 3931.10), required contents of a plan of development (section 3931.11), reclamation of all disturbed areas (section 3931.20), suspending operations and production on a lease (section 3931.30), exploration on a lease prior to plan of development approval (section 3931.40), information to be included in the exploration plan (section 3931.41), modification of exploration or development plans (section 3931.50), maps of underground and surface mining workings and in situ surface operations (3931.60), production reporting (section 3931.70), geologic information (section 3931.80), and boundary pillars (section 3931.100).

Section 3931.10 would require submission of a plan of development that details all aspects of development of the resource and protection of the environment, including reclamation. It would also identify the need for a similar plan for exploration activities. The plan of development is a key document that would detail the specifics of all activities associated with developing or exploring the lease.

Section 3931.11 would list and describe the contents of a plan of development. Some of the contents include a general description of geologic conditions and mineral resources, maps or aerial photography, proposed methods of operation and development, public protection, well completion reports, quantity and quality of the oil shale resources, environmental aspects, reclamation plan, and the method of abandonment of operations. The information in the plan of development is necessary so that the BLM can review the plan and ensure that operations, production, and reclamation will occur consistent with Federal law and regulation and to ensure the protection of the resource and the environment.

Section 3931.20 would describe the requirements for reclamation of all disturbed areas under a lease or exploration license. This section is similar to requirements in other BLM mineral program regulations requiring prompt reclamation of disturbed areas.

Section 3931.30 would detail the requirements for suspending operations and production on a lease. Under this section, if the BLM determined it was in the interest of conservation, it may order or agree to a suspension of operations and production. If the

BLM approved the suspension, the lessee or operator would be relieved of the obligation to pay rental, to meet upcoming diligent development milestones, or to meet minimum annual production, including payments in lieu of production. The term of the lease would be extended by the amount of time the lease is suspended. The need to suspend operations is well established and similar provisions are found in other BLM mineral leasing regulations.

Section 3931.40 would provide the requirements necessary for the BLM to authorize exploration on an exploration license or on a lease prior to plan of development approval. Often, exploration is necessary after lease issuance to acquire the geologic information necessary to prepare a plan of development.

Section 3931.41 would list the information required for an exploration plan. The information required is similar to that required in other BLM mineral regulations and is necessary to adequately evaluate the proposed exploration activities and the measures to protect or limit environmental impacts in accordance with applicable laws.

Section 3931.50 would explain how the operator or lessee may apply for a modification of exploration or development plans to address changing conditions and situations that might develop during the course of normal exploration activities or to correct an oversight. This section would also explain that the BLM may, on its own initiative, require modification of a plan. Finally, this section would explain that the BLM may approve a partial exploration plan or plan of development in circumstances

where operations are dependent on factors that would not be known until exploration or development progresses. These modification provisions are similar to those in other BLM minerals programs.

Section 3931.60 would contain information relating to the format and certification of required maps of underground and surface mining workings and in situ surface operations. These maps are necessary for the BLM to properly assess the potential impacts associated with exploration and mining.

Section 3931.70 would explain the requirements for production reporting, the associated maps and surveys for mining operations, and maps showing the measurement systems for in situ operations. This section would require accurate maps and production reports and would explain the requirements for production reporting. These are necessary requirements for the Federal government to track lease production accurately.

Section 3931.80 would address requirements for handling geologic information resulting from exploration activities. Additional requirements related to abandonment operations, well conversions, and blow-out prevention equipment would also be addressed in this section. This section contains requirements similar to those in the BLM's oil and gas operations regulations.

Section 3931.100 would detail the standards for boundary pillars and provisions to protect adjacent lands. This section would allow for the recovery of the pillars if the

operator provided evidence to the BLM that the recovery activities would not damage the Federal resource or those of the adjacent lands. These provisions are similar to those in the BLM's coal program.

Subpart 3932 – Lease Modifications and Readjustments

Sections in this subpart would provide requirements for lease size modification, (section 3932.10), availability of lands for a lease modification (section 3932.20), terms and conditions of a modified lease (section 3932.30), and the readjustment of lease terms (section 3932.40).

Section 3932.10 would provide the requirements for lease size modifications and is similar to sections in the other BLM mineral program regulations. This section would explain that the lands in the modified lease must not exceed the acreage limitation in section 3927.20. The section also would explain what items are necessary for a complete application, including the filing fee and qualifications statements.

Section 3932.20 would provide the land availability criteria for lease modifications. The language in this section is similar to language used in other BLM mineral program regulations and is necessary to facilitate effective development of the resource. This section would explain the conditions under which the BLM would grant a lease modification, and that the BLM may approve the modification (adding lands to the lease) if there is no competitive interest in the lands. This section would explain that

before the BLM will approve a modification application, the applicant must pay the FMV for the interest to be conveyed. This section would also make it clear that the BLM will not approve a lease modification prior to conducting the appropriate NEPA analysis and receipt of the processing costs.

Section 3932.30 would provide that the terms and conditions of any modified lease will be adjusted so that they are consistent with law, regulations, and land use plans applicable at the time the lands are added by the modification. Under this proposed section, the royalty rate of the modified lease would be the same as that in the original lease. Bonding and lessee acceptance requirements would also be addressed in this section. This section is similar to those in other BLM minerals program regulations.

Section 3932.40 would provide that all oil shale leases are subject to readjustment of lease terms, conditions, and stipulations, except royalty rates, at the end of the first 20-year period (the primary term of the lease) and at the end of each 10-year period thereafter. Royalty rates would be subject to readjustment at the end of the primary term and every 20 years thereafter. The procedures for the readjustment of the lease would be detailed in this section. Under this section, the BLM would provide the lessee with written notification of the readjustment. This section would also allow lessees to appeal the readjustment of lease terms.

Subpart 3933 – Assignments and Subleases

Sections in this subpart would address various requirements related to assignments or subleases of record title (section 3933.31) and overriding royalty interests (section 3933.32). This subpart would also address requirements for:

- (1) Assigning or subleasing leases in whole or part (section 3933.10);
- (2) Filing fees (section 3933.20);
- (3) Lease account status and assumption of liability (section 3933.40);
- (4) Bonding (sections 3933.51);
- (5) Continuing responsibility (section 3933.52);
- (6) Effective date (section 3933.60); and
- (7) Extensions (section 3933.70).

The sections in this subpart would be similar to the regulatory requirements of BLM's other mineral leasing programs.

Section 3933.10 would provide that all leases may be assigned or subleased in whole or in part to any person, association, or corporation as long as the qualification requirements are met. Section 30 of the MLA requires an assignee to obtain BLM approval for an assignment.

Section 3933.20 would require payment of a \$60 non-refundable filing fee for processing an assignment, sublease of record title, or overriding royalty. The filing fee would be the same fee required by the coal regulations for filing an assignment. The BLM anticipates that lease assignment, sublease of record title, or overriding royalty

activities associated with an oil shale lease would be similar to the same activities in the BLM's coal program, and therefore believes the same filing fee is justified.

Section 3933.31 would require that assignment applications be filed with the BLM within 90 days of the date of final execution of the assignment, and would list what must be included in the assignment application, including the filing fee. This section also explains that the assignment of all interests in a specific portion of a lease would create a separate lease.

Section 3933.32 would explain that overriding royalty interests do not have to be approved by the BLM, but would be required to be filed with the BLM. The filing of overriding royalty interests provides a more complete record of the financial transaction affecting the Federal lease. The BLM has found this information to be useful in other mineral leasing programs, especially in making rent and royalty reduction determinations.

Section 3933.40 would require that the lease account be in good standing before the BLM would process a lease assignment.

Section 3933.51 would require that assignees have sufficient bond coverage before the BLM will approve the assignment. This is a necessary component of the bonding program and is similar to requirements of other BLM solid mineral leasing programs.

Section 3933.52 would address the responsibilities, obligations, and liabilities of the assignor and assignee. In addition to stating expressly that an assignor is responsible after an assignment for accrued obligations, this section addresses joint and several liabilities of the lessee and operating rights owner. After the effective date of the sublease, the sublessor and sublessee are jointly and severally liable for the performance of all lease obligations, notwithstanding any term in the sublease to the contrary.

Section 3933.60 would explain that the effective date of an assignment and sublease would be the first day of the month following the BLM's final approval, or if the assignee requested it in advance, the first day of the month of the approval. This is the customary effective date for an assignment in other BLM leasing programs.

Consistent with other BLM mineral leasing programs, section 3933.70 would provide that the BLM's approval of an assignment or sublease does not extend the readjustment period of the lease.

Subpart 3934 – Relinquishments, Cancellations, and Terminations

Sections in this subpart would contain requirements for relinquishments (section 3934.10), termination of leases and cancellation and/or termination of exploration licenses (section 3934.30), written notice of cancellation (section 3934.21), cause and procedures for lease cancellations (section 3934.22), payments due (section

3934.40), and bona fide purchasers (section 3934.50). Sections in this subpart are similar to sections found in regulations for other BLM mineral leasing programs.

Section 3934.10 would provide that the record title holder of a lease may relinquish all or part of the lease if the requirements in this section are met. This section would also contain provisions for the relinquishment of an exploration license. Prior to relinquishment, the licensee must give any other parties participating in the exploration license an opportunity to take over operations under the exploration license.

Section 3934.21 would require the BLM to notify the lessee or licensee in writing of any default, breach, or cause of forfeiture, and the corrective actions that could be taken to avoid defaulting on the lease terms and lease cancellation.

Section 3934.22 would explain the procedure for the BLM to cancel a lease. Section 31 of the MLA requires that lease cancellation take place in the United States District court for the district in which all or part of the lands covered by the lease are located.

Section 3934.30 would provide the reasons that the BLM may cancel a license, including:

- (1) The BLM issued it in violation of law or regulation;
- (2) The licensee is in default of the terms and conditions of the license; and
- (3) The licensee has not complied with the exploration plan.

Unlike leases, the BLM may cancel an exploration license administratively.

Section 3934.40 would provide that if a lease is canceled or relinquished for any reason, all bonus, rentals, royalties, or minimum royalties paid would be forfeited and any amounts not paid would be immediately payable to the United States.

Section 3934.50 would address the rights of bona fide purchasers and provide that the BLM would not immediately cancel a lease or an interest in a lease if, at the time of purchase, the purchaser could not reasonably have been aware of a violation of the regulations, legislation, or lease terms.

Subpart 3935 – Production and Sale Records

Section 3935.10 would address books of account. Operators and lessees must maintain accurate records. This section would explain what records must be maintained, and that the records must be made available to the BLM during normal business hours.

Subpart 3936 – Inspection and Enforcement

Like other BLM minerals inspection and enforcement (I and E) programs, the objective of BLM's oil shale I and E program would be to:

- (1) Ensure the protection of the resource;

- (2) Ensure that Federal oil shale resources are properly developed in a manner that would maximize recovery while minimizing waste; and
- (3) Ensure the proper verification of production reported from Federal lands.

The BLM would also be responsible for lease inspections to determine compliance with applicable statutes, regulations, orders, notices to lessees, plans of development, and lease terms and conditions. These terms and conditions would include those related to drilling, production, and other requirements related to lease administration.

This subpart would address inspection of underground and surface operations and facilities (section 3936.10), issuance of notices of noncompliance and orders (section 3936.20), enforcement of notices of noncompliance and orders (section 3936.30), and appeals (section 3936.40).

Section 3936.10 would require operators or lessees to allow the BLM to inspect underground or surface mining and exploration operations at any time both to determine compliance with the plan of development and to verify oil shale production.

Section 3936.20 would advise the operator, licensee, or lessee of the procedures the BLM would follow when issuing orders and notices of noncompliance. The section would also address delivery of notices and verbal orders.

Section 3936.30 would explain the procedures the BLM would follow when enforcing notices of noncompliance. This section explains the action the BLM may take in cases of noncompliance, including orders to cease operations and the initiation of lease or license cancellation or termination procedures. An example of the type of non-compliance that might warrant the BLM issuing a cease operations order would be noncompliance with the BLM approved plan of development and refusal to comply with the notice of noncompliance.

Section 3936.40 would allow a lessee or operator to appeal BLM decisions under 43 CFR part 4. This section would also provide that the BLM decisions and orders remain in full force and effect pending appeal, unless the BLM or the Interior Board of Lands Appeals decides otherwise. Appeals language in this section mirrors regulatory provisions in other BLM minerals programs.

IV. Procedural Matters

Executive Order 12866, Regulatory Planning and Review

This document is a significant rule and the Office of Management and Budget has reviewed this rule under Executive Order 12866. We have made the assessments required by E.O. 12866 and the results are available by writing to the address in the “ADDRESSES” section.

- (1) This rule will have an effect of \$100 million or more on the economy. It will not adversely affect in a material way the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. Please see the discussion below.
- (2) This rule will not create a serious inconsistency or otherwise interfere with an action taken or planned by another agency. The rule addresses the issuance and administration of Federal oil shale leases, which by statute is under the jurisdiction of the Department of the Interior. The BLM worked closely with the MMS in drafting the royalty provisions of this rule, but the rule should have no effect on other agencies.
- (3) This rule does not alter the budgetary effects of entitlements, grants, user fees, or loan programs or the rights or obligations of their recipients. The rule would not impact any of these except that the rule institutes certain fees (discussed earlier in the preamble to this rule and in the economic and threshold analyses for the rule) in a manner that is consistent with BLM and Departmental policy.
- (4) This rule does not raise novel legal or policy issues. As stated earlier in this preamble, the legal and policy issues addressed by this rule are already dealt with in a similar manner in other BLM regulations currently in effect, therefore they are not novel.

Executive Order 12866 requires agencies to assess, where practical, the anticipated costs and benefits of proposed regulatory actions to determine if the regulation is significant. As has been noted above, there is no domestic oil shale industry to help substantiate or form the basis for the projections and assumptions concerning what the future might hold for the leasing and development of oil shale resources on

Federal lands. In addition, the assumption is that any significant production of shale oil is not likely to occur for a number of years. The potential events described, if they occur at all, may be in the distant future. As such, future costs and benefits must be discounted. The OMB's Circular A-94 states that a real discount rate of 7 percent should be used as a base-case for regulatory analysis. In addition to analyzing the potential future costs and benefits using a 7 percent discount rate, the BLM also used a discount rate of 20 percent to reflect these substantial risks and associated uncertainties in the opportunity costs that would not be reflected in the historic industry average of 7 percent. We also analyzed the future costs and benefits using a 3 percent discount rate.

The proposed regulations have the potential to generate net economic benefits to the Nation by allowing for the development of our vast domestic oil shale resources, though there is substantial uncertainty about the magnitude and timing of these benefits. The most significant direct benefit of this regulatory action is to provide a vehicle for the leasing and development of Federal oil shale resources. Operators will have the opportunity to obtain leases with the right to develop the oil shale and ultimately produce shale oil in an environmentally sound manner. Companies' willingness to take advantage of the leasing and development opportunities provided by this rule would determine the level of production of shale oil, exploration, development and production costs incurred, and conceivably the profits (or losses) to be enjoyed.

The lack of a domestic oil shale industry makes it speculative to project the demand for oil shale leases, the technical capability to develop the resource, and the

economics of producing shale oil. Projections that have been prepared vary significantly in not only the potential volume of shale oil that could be produced, but also the assumptions used to generate those projections. The recent report prepared by the Strategic Unconventional Fuels Task Force (Task Force) provided shale oil production projections under three scenarios. For our simulation-based analysis, we focused on the Task Forces' base case as a plausible scenario. This scenario presents a future without any subsidies in the form of tax credits or cost-sharing. The base case production of 0.5 million barrels per day is approximately 182.50 million barrels per year, all from true in-situ projects. The Task Force's base case scenario assumes production commencing in 2015, with full production reached by 2020. Please comment on the uncertainty surrounding the quantity and quality of recoverable oil shale, specifically as it relates to potential production of shale oil.

The Task Force estimates that resulting production could reduce the cost of oil imports by \$0.41 billion per year in 2015 to \$4.21 billion per year in 2035. This estimate is based on EIA's 2006 oil price projection. In their report, the Task Force also provides estimates of oil shale development's contribution to Gross Domestic Product (GDP). In the base case, annual direct contributions to GDP for the oil shale industry activity rises from \$0.65 billion per year in the early years, to \$5.72 billion per year in 2035.

We estimated the revenue, profit, and royalty implication of the Task Force's base case production scenario using three discount rates (7 percent, 3 percent, and 20 percent), three world crude oil price projections (EIA's 2007 reference, high, and low price

projections) and 6 different royalty rates (1 percent, 3 percent, 5 percent, 7 percent, 9 percent, and 12.5 percent). The following summarizes the findings based on the 7 percent discount rate and a 5 percent royalty rate. The full range of calculations is presented in the Economic Analysis.

We estimate the value of the forecasted production, using EIA's 2007 reference case assumptions, could be approximately \$9.5 billion for 2020, up to \$11 billion by 2035. The gross present value, using a 7 percent discount rate, of all shale oil produced for the period of analysis (2007 to 2035) is estimated at about \$50 billion. The gross present value of production for the year 2020 is estimated at about \$3.9 billion using a 7 percent discount rate. The gross present value of the shale oil produced in 2035 would be approximately \$1.7 billion with a 7 percent discount rate.

Oil shale development is characterized by high capital investment and long periods of time between expenditure of capital and the realization of production revenues and return on investment. The Task Force estimated the breakeven price for true in-situ operations at \$37.75 per barrel. Using the base case production projection, the cost to produce 182.50 million barrels annually would be almost \$6.9 billion. The present value of the production costs for 2020 would be about \$2.9 billion using a 7 percent discount rate. For production occurring in 2035, the present value of those production costs would be about \$1 billion. For the period of analysis (2007 to 2035), the present value of all production costs is estimated at about \$34 billion using a 7 percent discount rate. Please

specifically comment on the state of technology necessary to recover or produce oil from shale and the associated production costs.

With the opportunity to lease and ultimately develop Federal oil shale resources, companies would be expected to generate profits from their commercial activities. Using the base case production scenario, cost projection assumptions, and EIA's reference oil price, by the year 2020 lessees/operators could see profits from oil shale development of over \$2.6 billion per year, with a net present value of \$1 billion with a 7 percent discount rate. For 2035, we estimate the present value of the potential profit could be approximately \$670 million using a 7 percent discount rate. The net present value of shale oil produced in the period of analysis (2007 to 2035) is estimated at approximately \$16.2 billion.

Using EIA's high crude oil price scenario, calculated profits were substantially high. Total undiscounted profits for the period of analysis were \$187 billion, with a present value of \$50.6 billion using a 7 percent discount rate. For EIA's low oil price projection all operations are uneconomic regardless of the discount rate and/or royalty rate applied. In addition to these monetary costs and benefits associated with potential oil shale development, there could be significant environmental and socioeconomic costs and benefits. These potential costs and benefits could affect a wide range of resources, including groundwater quality and quantity, air quality, cultural resources, wildlife habitat, competing land uses, and local employment and infrastructure.

Impacts on livestock grazing activities are generally the result of activities that affect forage levels, of the ability to construct range improvements, and of human disturbance or harassment of livestock within grazing allotments. Using the Task Force's base case scenario of three in-situ operations, with total maximum lease acreage of 17,280, and some fairly significant simplifying assumptions, there could be a loss of approximately 5,700 animal unit months (AUMs).

Recreational use of BLM-administered lands within the three-state study area (Colorado, Utah, and Wyoming) is varied and dispersed. Impacts on recreation would be considered significant if potential oil shale development results in long-term elimination or reduction of recreation opportunities, activities, or experience, or they compromise public health and safety. As such, the significance of potential impacts from oil shale development could have on recreational opportunities will depend on the location of potential development.

In addition to oil shale, the study area contains a wide range of energy and mineral resources. Mineral resource development conflicts may occur with oil shale development. The issuance of oil shale exploration licenses and leases does not preclude the BLM from issuing licenses and leases for other minerals. However, the BLM generally attempts to avoid issuing conflicting authorizations on the same lands.

Many multiple use outputs from BLM land are not traded in markets and might not have measurable onsite expenditures associated with them. The absence of market

price does not, however, mean an absence of value to society. Please specifically comment on the uses that oil shale production may displace under the base case scenario and the associated value of the displaced uses.

In addition to land use conflicts, water consumption is a major concern in the arid intermountain region. Certain types of oil shale development are anticipated to consume significant quantities of water. Increasing the demand for water resources in the arid West must be considered a major opportunity cost to society associated with oil shale development and fully analyzed before commercial development is allowed to proceed. Demand for reliable, long-term water supplies to support oil shale development could lead to the conversion of water rights from current uses. While it is not presently known how much surface water will be needed to support future development of an oil shale industry, or the role that groundwater would play in future development, it is likely that additional agricultural water rights could be acquired. Depending on the locations and magnitude of such acquisitions, there could be a noticeable reduction in local agricultural production and use.

Prospective oil shale developers would need to employ appropriate control technologies to reduce potential air emissions which otherwise could result from construction and operation of surface facilities. In addition to the emissions associated with the operations themselves, extraction of oil from shale could consume immense quantities of electricity. This would necessitate the building of new power plants, which could further contribute air emissions. Impacts on air quality would be limited by

applicable local, state, Tribal, and Federal regulations, standards, and implementation plans established under the Clean Air Act and administered by the applicable air quality regulatory agency, with EPA oversight.

Using the assumption of 3 in-situ projects, solid waste generated would be the drill cuttings and those would be handled as they are for oil and gas, which is to bury them on-site, in compliance with the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act and the Hazardous Solid Waste Amendments of 1984 (42 U.S.C. 6901 et seq.).

Aquatic habitats include perennial and intermittent streams, springs, and flat-water (lakes and reservoirs) that support fish or other aquatic organisms through at least a portion of the year.

The wildlife species that may be associated with any particular project would depend on the specific location of the project and on the plant communities and habitats present at the site.

A total of 210 plant and animal species are either federally (U. S Fish and Wildlife Service (USFWS) and BLM) or state-listed (Colorado, Utah, and Wyoming) and occurs or could occur in counties within oil shale basins. In the study areas, 32 species are listed or candidates for listing by the USFWS under the Endangered Species Act (ESA); 78 species are listed as sensitive by the BLM; 24 are listed by the State of

Colorado; 33 are listed by the State of Utah; and 121 are listed by the State of Wyoming. Species listed by the USFWS under the ESA have the potential to occur in all oil shale basins. The likelihood of occurrence in study areas cannot be fully determined at this time because actual project locations and footprints will not be determined until some later date. A complete evaluation of listed species in the study areas will be made at that time, before project activities begin. Project-specific NEPA assessments, ESA consultations, and coordination with state natural resource agencies will address project specific impacts more thoroughly. These assessments and consultations will result in required actions to avoid or mitigate impacts on protected species.

Oil shale development, initially in the western states of Colorado, Wyoming, and Utah, requires infrastructure to support industry development and operation, including refining capacity, pipelines, and sources of natural gas and electricity.

The socioeconomic environment potentially affected by the development of oil shale resources includes a region of influence in each state (Colorado, Utah, and Wyoming), consisting of the counties and communities most likely impacted by development of oil shale resources. Construction and operation of oil shale facilities could have a major affect on the local communities, impacting the economy and the social and demographic make-up of the affected communities. For example, oil shale industry development could result in the addition of thousands of new, high-value, long-term jobs in the construction, manufacturing, mining, production, and refining sectors of the domestic economy. Construction and operations could result in a direct loss of

recreation employment in the recreation sectors and indirect effects such as declining recreation employee wage and salary spending and expenditures by the recreation section on materials equipment and services.

The Task Force provided employment projections for their production scenarios, including their base case. Direct employment could range from 120 to 9,700 personnel in the base case. The total number of petroleum sector jobs (including indirect employment), estimated by the Task Force, ranges from 2,930 employees in 2015 to 20,830 in 2035 for their base case.

A resource commitment is considered irreversible when direct and indirect impacts from its use limit future use options. Irreversible and irretrievable commitments of resources could occur as a result of future commercial oil shale projects that are authorized, constructed, and operated. The nature and magnitude of these commitments would depend on the specific location of the project development as well as its specific design and operational requirements. The construction of future commercial oil shale projects could result in the consumption of sands, gravels, and other geologic resources, as well as fuel, structural steel, and other materials. Water resources could also be consumed during construction, although water use would be temporary and largely limited to on-site concrete mixing and dust abatement activities. In general, the impact on biological resources from future project construction and operation would not constitute an irreversible and irretrievable commitment of resources. During project construction and operation, individual animals would be impacted.

The potential effects of developing the oil shale resources are likely to be quite significant; however, at this point, with the significant unknowns as to what may be developed and how it may be developed, plus where and when development may occur, there is no practical way to quantify the potential environmental and socioeconomic consequences, much less put a monetary value on them.

Before oil shale development could occur, additional project-specific NEPA analyses would be performed at two points in time: (1) Prior to leasing; and (2) Prior to plan of development approval. These analyses would address environmental impacts of oil shale production including impacts to livestock grazing, recreation uses, energy and mineral resources, water use, air, aquatic habitat, and wildlife and would be subject to public and agency review and comment.

The Act requires the Secretary to establish royalties, fees, rentals, bonus, or other payments for oil shale leases that encourage development of the resource, but also ensuring a fair return to the government. As a result of any leasing and development, the Federal and state governments will benefit from the revenue generated through the bonuses, rents, and eventually royalties. These bid, rental, and royalty payments are revenue to the public, but a cost to the lessee/operator of obtaining, holding, and producing from the Federal leases. Monetary payments, such as rents, royalties, and

bonus bids, from the lessee to the government, do not affect total resources available to society and in the context of a benefit-cost analysis are considered transfer payments.

The bonus is the amount paid by the successful high bidder when a parcel is offered for lease. By statute the parcel must be leased for fair market value. At this juncture there is no practical way to generate a meaningful estimate of the potential bonus bids or fair market values for potential lease parcels.

Until the operation starts paying a production royalty, the lessee is required to pay the government a rental. The proposed regulations include a rental rate of \$2 per acre. Maximum lease acreage is 5,760 acres for a maximum annual rental payment per lease of \$11,520 (constant-dollars) per year until an operation commences shale oil production. Based on the Task Force's base case of three in-situ operations, with total maximum lease acres of 17,280 acres, those three leases could generate a rental income of \$34,560 per year.

Producing leases will be required to pay a production royalty. One alternative in the proposed regulations calls for a production royalty of 5 percent on all products of oil shale that are sold from or transported off of the lease. Using the production projections and other assumptions presented in the economic analysis, royalty payments for the period of analysis (2007 to 2035) could be almost \$9.1 billion, with a net present value of \$2.5 billion (7 percent discount rate). We also analyzed the Federal revenue implications

of alternative royalty rates given constant production and production cost assumptions. These alternative royalty revenue calculations are presented in the economic analysis.

Beginning in the 10th lease year, for leases that have not commenced production, the lessee is subject to a payment in lieu of production of no less than \$4 per acre. For an operation with 5,760 acres under lease and no production by the end of the eleventh lease year, the payment in lieu of production would be \$23,040 (constant-dollars) per year. Based on the Task Force's base case of three in-situ operations, with total maximum lease acres of 17,280 acres, should operations on those three leases not commence production, the payment in lieu of production could generate payments to the Federal Government of \$69,120 per year.

The proposed regulations require license and lease bonds for exploration licenses and oil shale leases. These bonds are intended to guarantee payments (rents, royalties, and deferred bonuses) the lessee may owe the government. The bond amount will be determined on a case-by-case basis. The minimum lease bond is proposed at \$25,000. The operator is also obligated to provide the BLM with a reclamation bond. The amount of these bonds will be based on the estimated cost for the government to contract with a third party to reclaim the operation should the operator be unable or unwilling to fulfill their reclamation obligations. The amounts of these reclamation bonds are likely to be quite significant; however, at this point there is no practical way to estimate the amount of these reclamation bonds.

There will be increases in BLM administrative costs associated with the issuance of leases and licenses and review and approval of operational plans. Most of these costs are relatively minor and will be subject to cost recovery that will be paid for by the benefiting party. There will be some BLM actions that will not be subject to cost recovery, including increased costs associated with ongoing inspection and enforcement responsibilities.

Above are various costs and benefits associated with the proposed rule. Some effects are directly tied to the provisions found in the proposed regulations, such as royalty rates of 5 or 12.5% percent of the value of the amount or value of production removed or sold from the lease. Other costs and benefits are tied to companies' ability and willingness to take advantage of the opportunities provided by the leasing regulations. The most significant of these costs and benefits include the value of shale oil that may be produced, the cost to produce the shale oil, and the environmental and socioeconomic consequences of resource development. The present values of the quantified monetary effects are expected to be in excess of the \$100 million annual threshold.

We estimate the net present value of the potential monetary costs and benefits considered in this analysis to be approximately \$13.6 billion using a 7 percent discount rate, \$28.5 billion using a 3 percent discount rate, and \$1.8 billion using a 20 percent discount rate. This conclusion is based on the calculated present value of the profit from

shale oil produced from our analysis period (2007 to 2035) using EIA's reference oil price.

This conclusion includes one significant caveat. The socioeconomic and environmental costs and benefits associated with oil shale development are likely to be quite large. As has been noted above, we have no reasonable way to generate meaningful scenarios to quantify the potential impacts for an industry that does not exist or technologies that have not been deployed. As such, the net present value of the benefits of the proposed rule may be significantly larger or smaller than the estimates presented in this analysis.

Clarity of the Regulations

Executive Order 12866 requires each agency to write regulations that are simple and easy to understand. We invite your comments on how to make these proposed regulations easier to understand, including answers to questions such as the following:

- (1) Are the requirements in the proposed regulations clearly stated?
- (2) Do the proposed regulations contain technical language or jargon that interferes with their clarity?
- (3) Does the format of the proposed regulations (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce their clarity?

(4) Would the regulations be easier to understand if they were divided into more (but shorter) sections? (A "section" appears in bold type and is preceded by the symbol "\$" and a numbered heading, for example (§3902.24 Associations, including partnerships.)

(5) Is the description of the proposed regulations in the "SUPPLEMENTARY INFORMATION" section of this preamble helpful in understanding the proposed regulations? How could this description be more helpful in making the proposed regulations easier to understand?

Please send any comments you have on the clarity of the regulations to the address specified in the "ADDRESSES" section.

Small Business Regulatory Enforcement Fairness Act (SBREFA).

This rule is a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule:

(1) Has an annual effect on the economy of \$100 million or more. Please see the discussion of Executive Order 12866, above.

(2) Will not cause a major increase in costs or prices for consumers, individual industries, Federal, state, or local government agencies, or geographic regions. Should production from Federal oil shale resources occur, it is anticipated that if there is any impact to costs or prices as a result of additional production entering the market, it would be to decrease them.

(3) Does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. The issuance of Federal oil shale leases and production of oil shale resources from those Federal leases would not lead to adverse effect on any of the above because an increase in products from oil shale would tend to lead to a decrease in prices and potentially lead to increased in competition, employment, investment, productivity, and innovation and the ability of U.S.-based enterprises to compete with foreign-based enterprises.

National Environmental Policy Act

The BLM has prepared an environmental assessment (EA) and has found that the proposed rule would not constitute a major Federal action significantly affecting the quality of the human environment under Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4332(2)(C). A detailed statement under NEPA is not required. The BLM has placed the EA on file in the BLM Administrative Record at the address specified in the "ADDRESSES" section. The BLM invites the public to review these documents and suggests that anyone wishing to submit comments in response to the EA do so in accordance with the Public Comment Procedures section above.

Regulatory Flexibility Act

Congress enacted the Regulatory Flexibility Act of 1980 (RFA), as amended, 5 U.S.C. 601-612, to ensure that Government regulations do not unnecessarily or

disproportionately burden small entities. The RFA requires a regulatory flexibility analysis if a rule would have a significant economic impact, either detrimental or beneficial, on a substantial number of small entities. The RFA establishes an analytical process for determining how public policy goals can best be achieved without erecting barriers to competition, stifling innovation, or imposing undue burdens on small entities. Executive Order 13272 reinforces executive intent that agencies give serious attention to impacts on small entities and develop regulatory alternatives to reduce the regulatory burden on small entities. To meet these requirements, the agency must either conduct a regulatory flexibility analysis or certify that the final rule will not have “a significant economic impact on a substantial number of small entities.”

Section 369 of the EP Act requires the Department of the Interior to establish regulations for a commercial oil shale leasing program. Although this rule would only affect entities that choose to explore and develop oil shale resources from land administered by the BLM, there is no way to determine which firms would hold exploration licenses or leases or operate on Federal lands in the future. The extent to which the proposed rule would have an actual impact on any firm depends on whether the firm would hold exploration licenses or leases or would operate on Federal lands.

Currently, active oil shale research and development on Federal lands is limited to a few firms. Chevron, EGL Resources, Oil Shale Exploration Company, and Shell Oil Company hold R, D and D leases and are the only companies currently conducting

operations on Federal oil shale leases. Of the four companies holding R, D and D leases, two are major oil companies and two are small research and development firms.

With implementation of these regulations, technological advances, and favorable market conditions that would support oil shale development, the BLM anticipates an increase in the number of firms involved in oil shale development. However, the number of firms, large or small, involved in oil shale development on Federal lands would likely remain quite limited. Given the likely size of the industry that may eventually be involved in the leasing and development of Federal oil shale resources, it is reasonable to conclude that this rule would not significantly impact a “substantial number of small entities.”

This rule would provide for the leasing and management of oil shale resources on Federal lands. Provisions covered in this proposed rule include exploration license and competitive leasing procedures, requirements and terms, and plan of development and operational requirements.

To explore on Federal lands, the operator would have to have an exploration license or an oil shale lease. The proposed process to obtain an exploration license would be relatively straightforward and would not entail significant fees, e.g., \$295 nonrefundable filing fee. As proposed, commercial oil shale leases would primarily rely on a process of leasing parcels nominated by industry. The BLM may also choose to offer certain lands for lease. All leases would be offered competitively. The BLM would

not collect an application or nomination fee; however, the successful high bidder would be required to pay certain costs associated with the BLM offering the tract for lease, in addition to the bonus bid. At the time of lease sale, the high bidder would be required to submit a payment of one fifth of the amount of the bonus bid. Leases would also be subject to a \$2.00 per acre rental.

The proposed terms and conditions for operating under an exploration license or commercial lease are those needed to protect the environment and resource values of the area and to ensure reclamation of the lands disturbed by the activities. Exploration and development plans must be submitted to the BLM for approval. All operations, whether under an exploration license or a commercial oil shale lease, are required to provide the BLM with a license or lease bond. In addition, operators are required to provide the government with a bond to cover the cost of site reclamation and closure.

Production from commercial oil shale leases will be subject to a Federal royalty. A royalty on the amount or value of production removed or sold from the lease would apply to commercial production from these leases.

The ability to obtain an exploration license and/or to compete for a commercial oil shale lease is not affected by the size of the company. Exploration licenses require a nominal filing fee (\$295 per filing) and have no minimum acreage. Leases have minimum tract acreage of 160 acres; lease processing costs are paid by the successful bidder; and bonus bids may be deferred over a 5 year period. These aspects of the

proposed licensing and leasing procedures allow small entities to better compete for Federal oil shale licenses and leases with larger, well capitalized companies. As required by the EP Act, all royalties, rentals, bonus bids, and other payments proposed in this rule are to encourage development of the oil shale resources while ensuring a fair return to the government. The proposed regulatory provisions, including filing fees, rentals, and production royalties, will not have a significant economic impact on lessees or operators, regardless of the firm's size.

Therefore, the BLM has determined that under the RFA this proposed rule would not have a significant economic impact on a substantial number of small entities.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.) the proposed rule would not impose an unfunded mandate on state, local, or tribal governments or the private sector, in the aggregate, of \$100 million or more per year; nor would this rule have a significant or unique effect on state, local, or tribal governments. The rule would impose no requirements on any of those entities. Therefore, the BLM is not required to prepare a statement containing the information required by the Unfunded Mandates Reform Act.

Executive Order 12630, Governmental Actions and Interference With Constitutionally Protected Property Rights (Takings)

The proposed rule is a not a government action capable of interfering with constitutionally protected property rights. A takings implication assessment is not required. The proposed rule does not authorize any specific activities that would result in any effects on private property. Therefore, the Department of the Interior has determined that the rule would not cause a taking of private property or require further discussion of takings implications under this Executive Order.

Executive Order 13132, Federalism

The proposed rule will not have a substantial direct effect on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the levels of government. It would not apply to states or local governments or state or local governmental entities. The management of Federal oil shale leases is the responsibility of the Secretary of the Interior and the BLM. This rule does not alter any lease management or revenue sharing provisions with the states, nor does it impose any costs on the states. Therefore, in accordance with Executive Order 13132, the BLM has determined that this proposed rule does not have sufficient Federalism implications to warrant preparation of a Federalism Assessment.

Executive Order 12988, Civil Justice Reform

Under Executive Order 12988, the BLM determined that this proposed rule would not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

In accordance with Executive Order 13175, we have found that this rule may include policies that have Tribal implications. The proposed rule would make changes in the Federal oil shale leasing and management program, which does not apply on Indian Tribal lands. At present, there are no oil shale leases or agreements on Tribal or allotted Indian lands. If tribes or allottees should ever enter into any leases or agreements with the approval of the Bureau of Indian Affairs, the BLM would then likely be responsible for the approval of any proposed operations on Indian oil shale leases and agreements. In light of this possibility, and because Tribal interests could be implicated in oil shale leasing on Federal lands, the BLM has begun consultation with potentially affected Tribes on the proposed oil shale regulations, and will continue to consult with Tribes during the comment period on the proposed rule.

Information Quality Act

In developing this proposed rule, we did not conduct or use a study, experiment or survey requiring peer review under the Information Quality Act (Section 515 of Public Law 106-554).

Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

In accordance with Executive Order 13211, the BLM has determined that the proposed rule is not likely to have a substantial direct effect on the supply, distribution, or use of energy. Executive Order 13211 requires an agency to prepare a Statement of Energy Effects for a proposed rule that is:

A significant regulatory action under Executive Order 12866 or any successor order; and
Likely to have a significant adverse effect on the supply, distribution, or use of energy.

As discussed earlier in this preamble, the BLM believes that the rule will likely increase energy production and would not have an adverse effect on the supply, distribution, or use of energy, and therefore has determined that the preparation of a Statement of Energy Effects is not required.

Executive Order 13352, Facilitation of Cooperative Conservation

In accordance with Executive Order 13352, the BLM has determined that this proposed rule would not impede facilitating cooperative conservation; would take appropriate account of and consider the interests of persons with ownership or other legally recognized interest in the land or other natural resources; properly accommodates local participation in the Federal decision-making process; and provide that the programs, projects, and activities are consistent with protecting public health and safety. State and local governments were cooperating agencies in the preparation of the PEIS. The BLM, in coordination with the MMS, held three “listening sessions” with representatives of the governors of the states of Colorado, Utah, and Wyoming. The purpose of the “listening sessions” was to provide the governor’s representatives the opportunity to share their ideas, issues, and concerns relating to the proposed commercial oil shale leasing regulations. Section 369(e) of the EP Act requires that not later than 180 days after the publication of the final regulations, the Secretary (as delegated to the BLM), is to consult with the governors of the states with significant oil shale and tar sands resources on

public lands, representatives of local governments in such states, interested Indian tribes, and other interested persons to determine the level of support and interest in the states in the development of oil shale resources. In addition, the proposed regulations contain a section providing for comments from state governors, local governments, and interested Indian tribes prior to offering lands for lease for oil shale. The comment period would occur prior to the BLM's publication of a call for nominations.

Paperwork Reduction Act of 1995 (PRA)

This proposed rule would contain new information collection requirements. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the BLM has submitted a copy of the proposed regulations to the OMB for review. The BLM will not require collection of this information until OMB has given its approval.

As part of our continuing effort to reduce paperwork and respondent burden, we invite the public and other Federal agencies to comment on any aspect of the reporting burden through the information collection process. Submit written comments by either fax (202) 395-6566 or e-mail (OIRA_Docket@omb.eop.gov) directly to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for the Department of the Interior [OMB Control Number ICR 1004-New, as it relates to the proposed Oil Shale Management rule].

The title of the new information collection request (ICR) is “Parts 3900 - 3930—Oil Shale Management – General.” The intent of this proposed rulemaking is to establish regulations for a commercial leasing program. The BLM will collect information from individuals, corporations, and associations in order to:

- (1) Learn the extent and qualities of the public oil shale resource;
- (2) Evaluate the environmental impacts of oil shale leasing and development;
- (3) Determine the qualifications of prospective lessees to acquire and hold Federal oil shale leases;
- (4) Administer statutes applicable to oil shale mining, production, resource recovery and protection, operations under oil shale leases, and exploration under leases and licenses;
- (5) Ensure lessee compliance with applicable statutes, regulations, and lease terms and conditions; and
- (6) Ensure that accurate records are kept of all Federal oil shale produced.

Prospectively estimating the annual burden hours for the commercial oil shale program is difficult because the oil shale industry is at the research and development stage where there is a lack of available information and the future technology to be used is uncertain. The burden hour estimates in the following charts were derived from a previous ICR completed for the Federal coal program, as the information collection associated with that program is somewhat similar to the proposed oil shale leasing program. The coal burden hour estimates were adjusted to reflect differences in the two processes. It is also difficult to make a prospective estimate of the number of annual

responses; therefore, the BLM has used one response for each activity as a starting point, except for the number of applications received. We anticipate that we could receive several applications after these regulations are promulgated. The BLM estimates that this ICR for the oil shale management program will result in 22 responses totaling 1,784 burden hours at a total annual burden cost of \$86,492 (Table 1). This estimate is based on the number of actions multiplied by the estimated burden hours per action multiplied by a \$48.48 wage per hour (Table 2). Additionally, the BLM estimates that there will be processing/cost recovery fees in the amount of \$526,592 (Table 3). See the following tables for burden hours and processing/cost recovery fees by CFR citation:

BURDEN BREAKDOWN

Table 1

Parts 3900 - 3930 Burden Activity	Information Collected	Hour Burden	Average Number of Annual Responses	Average Annual Burden Hours	Total Annual Burden Cost
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Subpart 3904 – Bonds and Trust Funds

A lessee or licensee must furnish a bond before a lease or exploration license may be issued or transferred or a plan of development approved. The BLM will review the bond and, if adequate as to amount and execution, will accept it in order	<u>Section 3904.12</u> File one copy of the bond form with original signatures in the proper BLM state office. Bonds must be filed on an approved BLM form. The obligor of a personal bond must sign the form. Surety bonds must have the lessee's and the acceptable surety's signature.	1	1	1	\$48
	<u>Section 3904.14(c)(1)</u> Prior to the approval of a plan of development, in those instances where a state bond	1	1	1	\$48

to indemnify the United States against default on payments due or other performance obligations. The BLM may also adjust the bond amount to reflect changed conditions. The BLM will cancel the bond when all requirements are satisfied.	will be used to cover all of the BLM's reclamation requirements, evidence verifying that the existing state bond will satisfy all the BLM reclamation bonding requirements must be filed in the proper BLM office. The BLM will use no specific form to collect this information.				
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Part 3910 – Oil Shale Exploration Licenses

For those lands where no exploration data is available, the lease applicant may apply for an exploration license to conduct exploration on unleased public lands to determine the extent and specific characteristics of the Federal oil shale resource. The BLM will use the information in the application to: (1) Locate the proposed exploration site; (2) Determine if the lands are subject to entry for exploration; (3) Prepare a notice of invitation	<u>Section 3910.31</u> The BLM will use no specific form to collect the information. The applicant will be required to submit the following information: (1) Name and address of applicant(s); (2) A nonrefundable filing fee of \$295; (3) A general description of the area to be drilled described by legal land description; and (4) 3 copies of an exploration plan that includes the exact location of the affected lands, the name, address, and telephone number of the party conducting the exploration activities, a description of the proposed methods and extent of exploration, and reclamation.	24	1	24	\$1,164
	<u>Section 3910.44</u> Upon the BLM's request, the	8	1	8	\$388

<p>to other parties to participate in the exploration; and (4) Ensure the exploration plan is adequate to safeguard resource values, and public and worker health and safety.</p> <p>The BLM will use this information from a licensee to determine if it will offer the land area for lease.</p>	<p>licensee must provide copies of all data obtained under the exploration license in the format requested by the BLM. The BLM will consider the data confidential and proprietary until the BLM determines that public access to the data will not damage the competitive position of the licensee or the lands involved have been leased, whichever comes first. Submit all data obtained under the exploration license to the proper BLM office.</p>				
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Subpart 3921 Pre-Sale Activities

<p>Corporations, associations, and individuals may submit expressions of leasing interest for specific areas to assist the applicable BLM State Director in determining whether or not to lease oil shale. The information provided will be used in the consultation with the governor of the affected state and in setting a geographic area for which a call for applications will be requested.</p>	<p><u>Section 3921.30</u> The BLM will request this information through the publication of a notice in the <u>Federal Register</u> and will use no specific form to collect the information. The expression of leasing interest will contain specific information consisting of name and address and area of interest described by legal land description.</p>	4	1	4	\$ 194
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Subpart 3922 Application Processing

<p>Entities interested in leasing the Federal oil shale resource must file an application in a geographic area for which the BLM has issued a “Call for Applications.” The information provided by the applicant will be used to evaluate the impacts of issuing a proposed lease on the human environment. Failure to provide the requested additional information may result in suspension or termination of processing of the application or in a decision to deny the application.</p>	<p><u>Section 3922.20 and 3922.30</u> Lease applications must be filed in the proper BLM state office. No specific form of application is required, but the application must include information necessary to evaluate the impacts of issuing the proposed lease on the human environment, including, but not limited to, the following: (1) Name, address, telephone number of applicant, and a qualification statement, as required by subpart 3902; (2) A delineation of the proposed lease area or areas, the surface ownership (if other than the United States) of those areas, a description of the quality, thickness, and depth of the oil shale and of any other resources the applicant proposes to extract, and environmental data necessary to assess impacts from the proposed development; (3) A description of the proposed extraction method, including personnel requirements, production levels, and transportation methods including: (a) A description of the mining, retorting, or in situ mining or processing technology that the operator would use and whether the proposed development technology is substantially</p>	<p>308</p>	<p>3</p>	<p>924</p>	<p>\$ 44,796</p>
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	<p>identical to a technology or method currently in use to produce marketable commodities from oil shale deposits;</p> <p>(b) An estimate of the maximum surface area of the lease area that will be disturbed or undergoing reclamation at any one time;</p> <p>(c) A description of the source and quantities of water to be used and of the water treatment and disposal methods necessary to meet applicable water quality standards;</p> <p>(d) A description of the air quality emissions;</p> <p>(e) A description of the anticipated noise levels from the proposed development;</p> <p>(f) A description of how the proposed lease development would comply with all applicable statutes and regulations governing management of chemicals and disposal of solid waste. If the proposed lease development would include disposal of wastes on the lease site, include a description of measures to be used to prevent the contamination of soil and of surface and ground water;</p> <p>(g) A description of how the proposed lease development would avoid, or, to the extent practicable, mitigate impacts to species or habitats protected by applicable state or Federal law or regulations, and impacts to wildlife habitat management;</p> <p>(h) A description of</p>				
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	<p>reasonably foreseeable social, economic, and infrastructure impacts to the surrounding communities, and to state and local governments from the proposed development;</p> <p>(i) A description of the known historical, cultural, or archeological resources within the lease area;</p> <p>(j) A description of infrastructure that would likely be required for the proposed development and alternative locations of those facilities, if applicable;</p> <p>(k) A discussion of proposed measures to mitigate any adverse impacts to the environment and to nearby communities;</p> <p>(l) A brief description of the reclamation methods that will be used;</p> <p>(m) Any other information that shows that the application meets the requirements of this subpart or that the applicant believes would assist the BLM in analyzing the impacts of the proposed development; and</p> <p>(n) A map, or maps, showing:</p> <p>(i) The topography, physical features, and natural drainage patterns;</p> <p>(ii) Existing roads, vehicular trails, and utility systems;</p> <p>(iii) The location of any proposed exploration operations, including seismic lines and drill holes;</p> <p>(iv) To the extent known, the location of any proposed mining operations and facilities, trenches, access</p>				
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	<p>roads, or trails, and supporting facilities including the approximate location and extent of the areas to be used for pits, overburden, and tailings; and (v) The location of water sources or other resources that may be used in the proposed operations and facilities.</p> <p>At any time during processing of the application, or the environmental or similar assessments of the application, the BLM may request additional information from the applicant.</p>				
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Subpart 3924 Lease Sale Procedures

Prospective lessees will be required to submit a bid at a competitive sale in order to be issued a lease.	<p><u>Section 3924.10</u> The BLM will request the following bid information via the notice of oil shale lease sale: (1) A certified check, cashier's check, bank draft, money order, personal check, or cash for one-fifth of the amount of the bonus; and (2) A qualifications statement signed by the bidder as described in subpart 3902.</p>	8	1	8	\$ 388
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Subpart 3926 Conversion of Preference Right for Research, Demonstration, and Development (R, D and D) Leases

The lessee of an R, D and D lease may apply for conversion of the R, D and D lease	<p><u>Section 3926.10(c)</u> A lessee of an R, D and D lease identified in subpart 3926 must apply for the conversion of the R, D and D</p>	308	1	308	\$ 14,932
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<p>to a commercial lease.</p>	<p>lease to a commercial lease no later than 90 days after the commencement of production in commercial quantities. No specific form of application is required. The application for conversion must be filed in the BLM state office that issued the R, D and D lease. The conversion application must include:</p> <p>(1) Documentation that there has been commercial quantities of oil shale produced from the lease, including the narrative required by section 23 of R, D and D leases; and</p> <p>(2) Documentation that the lessee consulted with state and local officials to develop a plan for mitigating the socioeconomic impacts of commercial development on communities and infrastructure.</p> <p>(3) A bonus payment equal to the FMV of the lease; and</p> <p>(4) Bonding to cover all costs associated with reclamation.</p>				
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Subpart 3930 Management of Oil Shale Exploration and Leases

<p>The records, logs, and samples provide information necessary to determine the nature and extent of oil shale resources on Federal lands and to monitor and adjust the extent of</p>	<p><u>Section 3930.11(b)</u> The operator/lessee must retain for one year all drill and geophysical logs. The operator must also make such logs available for inspection or analysis by the BLM. The BLM may require the operator/lessee to retain representative samples of drill cores for 1 year. The BLM uses no specific</p>	<p>19</p>	<p>1</p>	<p>19</p>	<p>\$ 921</p>
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the oil shale reserve.	<p>form to collect the information.</p> <p><u>Section 3930.20 (b)</u></p> <p>The operator must record any new geologic information obtained during mining or in situ development operations regarding any mineral deposits on the lease. The operator must report this new information in a BLM-approved format to the proper BLM office within 90 days of obtaining the information.</p>	19	1	19	\$921
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Subpart 3931 Plans of Development and Exploration Plans

The plan of development must provide for reasonable protection and reclamation of the environment and the protection and diligent development of the oil shale resources in the lease.	<p>Section 3931.11</p> <p>The plan of development must contain, at a minimum, the following:</p> <p>(a) Names, addresses, and telephone numbers of those responsible for operations to be conducted under the approved plan and to whom notices and orders are to be delivered, names and addresses of Federal oil shale lessees and corresponding Federal lease serial numbers, and names and addresses of surface and mineral owners of record, if other than the United States;</p> <p>(b) A general description of geologic conditions and mineral resources within the area where mining is to be conducted, including appropriate maps;</p> <p>(c) A copy of a suitable map</p>	308	1	308	\$ 14,932
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	<p>or aerial photograph showing the topography, the area covered by each lease, the name and location of major topographic and cultural features;</p> <p>(d) A statement of proposed methods of operation and development, including the following items as appropriate:</p> <p>(1) A description detailing the extraction technology to be used;</p> <p>(2) The equipment to be used in development and extraction;</p> <p>(3) The proposed access roads;</p> <p>(4) The size, location, and schematics of all structures, facilities, and lined or unlined pits to be built;</p> <p>(5) The stripping ratios, development sequence, and schedule;</p> <p>(6) The number of acres in the Federal lease(s) or license(s) to be affected;</p> <p>(7) Comprehensive well design and procedure for drilling, casing, cementing, testing, stimulation, clean-up, completion, and production, for all drilled well types, including those used for heating, freezing, and disposal;</p> <p>(8) A description of the methods and means of protecting and monitoring all aquifers;</p> <p>(9) Surveyed well location plats or project-wide well location plats;</p> <p>(10) A description of the</p>				
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	<p>measurement and handling of produced fluids, including the anticipated production rates and estimated recovery factors; and</p> <p>(11) A description/discussion of the controls that the operator will use to protect the public, including identification of:</p> <ul style="list-style-type: none"> (i) Essential operations, personnel, and health and safety precautions; (ii) Programs and plans for noxious gas control (hydrogen sulfide, ammonia, etc.); (iii) Well control procedures; (iv) Temporary abandonment procedures; and (v) Plans to address spills, leaks, venting, and flaring; <p>(e) An estimate of the quantity and quality of the oil shale resources;</p> <p>(f) An explanation of how MER of the resource will be achieved for each Federal lease; and</p> <p>(g) Appropriate maps and cross sections showing:</p> <ul style="list-style-type: none"> (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, 				
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	<p>waste dumps, retort facilities, and surface facilities;</p> <p>(6) Typical mining or in situ development sequence, with appropriate time-frames;</p> <p>(h) A narrative addressing the environmental aspects of the proposed mine or in situ operation, including at a minimum, the following:</p> <p>(1) An estimate of the quantity of water to be used and pollutants that may enter any receiving waters;</p> <p>(2) A design for the necessary impoundment, treatment, control, or injection of all produced water, runoff water, and drainage from workings; and</p> <p>(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;</p> <p>(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;</p> <p>(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:</p> <p>(1) The method proposed to</p>				
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	<p>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 plan of development.</p>				
<p>The BLM may, in the interest of conservation order or agree to a suspension of operations and production.</p>	<p><u>Section 3931.30</u> An application by a lessee for suspension of operations and production must be filed in duplicate in the proper BLM office and must set forth why it is in the interest of conservation to suspend operations and production. The BLM will use no specific form to collect this information.</p>	<p>24</p>	<p>1</p>	<p>24</p>	<p>\$ 1,164</p>
<p>Except for casual use, before conducting any exploration operations on federally-leased or federally-licensed lands, the lessee must submit an exploration plan to the BLM for approval.</p>	<p><u>Section 3931.41</u> The BLM will use no specific form to collect this information. Exploration plans must contain the following information: (1) The name, address, and telephone number of the applicant, and, if applicable, that of the operator or lessee of record; (2) The name, address, and telephone number of the representative of the applicant who will be present during, and responsible for, conducting exploration; (3) A description of the</p>	<p>24</p>	<p>1</p>	<p>24</p>	<p>\$ 1,164</p>

	<p>proposed exploration area, cross-referenced to the map required under section 3931.41, including:</p> <ul style="list-style-type: none"> (a) Applicable Federal lease and exploration license serial numbers; (b) Surface topography; (c) Geologic, surface water, and other physical features; (d) Vegetative cover; (e) Endangered or threatened species listed under the Endangered Species Act of 1973 (16 U.S.C. 1531 <i>et seq.</i>) that may be affected by exploration operations; (f) Districts, sites, buildings, structures, or objects listed on, or eligible for listing on, the National Register of Historic Places that may be present in the lease area; and (g) Known cultural or archeological resources located within the proposed exploration area; <p>(4) A description of the methods to be used to conduct oil shale exploration, reclamation, and abandonment of operations, including, but not limited to:</p> <ul style="list-style-type: none"> (a) The types, sizes, numbers, capacity, and uses of equipment for drilling and blasting and road or other access route construction; (b) Excavated earth-disposal or debris-disposal activities; (c) The proposed method for plugging drill holes; and (d) The estimated size and depth of drill holes, trenches, and test pits; <p>(5) An estimated timetable</p>				
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	<p>for conducting and completing each phase of the exploration, drilling, and reclamation;</p> <p>(6) The estimated amounts of oil shale or oil shale products to be removed during exploration, a description of the method to be used to determine those amounts, and the proposed use of the oil shale removed;</p> <p>(7) A description of the measures to be used during exploration for Federal oil shale to comply with the performance standards for exploration (43 CFR 3930.10) and applicable requirements of an approved state program;</p> <p>(8) A map at a scale of 1:24,000 or larger showing the areas of land to be affected by the proposed exploration and reclamation. The map must show:</p> <ul style="list-style-type: none"> (a) Existing roads, occupied dwellings, and pipelines; (b) The proposed location of trenches, roads, and other access routes and structures to be constructed; (c) Applicable Federal lease and exploration license boundaries; (d) The location of land excavations to be conducted; (e) Oil shale exploratory holes to be drilled or altered; (f) Earth-disposal or debris-disposal areas; (g) Existing bodies of surface water; and (h) Topographic and drainage features; and <p>(9) The name and address of</p>				
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<p>Approved exploration, mining and in situ development plans may be modified by the operator or lessee to adjust to changed conditions or to correct an oversight.</p>	<p>the owner of record of the surface land, if other than the United States. If the surface is owned by a person other than the applicant or if the Federal oil shale is leased to a person other than the applicant, a description of the basis upon which the applicant claims the right to enter that land for the purpose of conducting exploration and reclamation.</p> <p><u>Section 3931.50</u> The BLM will use no specific form to collect this information. The operator or lessee may apply in writing to the BLM for modification of the approved exploration plan or plan of development to adjust to changed conditions or to correct an oversight. To obtain approval of an exploration plan or plan of development modification, the operator or lessee must submit to the proper BLM office a written statement of the proposed modification and the justification for such modification.</p>	24	1	24	\$ 1,164
<p>Production of all oil shale products or byproducts must be reported to the BLM on a monthly basis.</p>	<p><u>Section 3931.70</u> (1) Report production of all oil shale products or byproducts to the BLM on a monthly basis. (2) Report all production and royalty information to the MMS under 30 CFR parts</p>	16	1	16	\$ 776

	<p>210 and 216.</p> <p>(3) Submit production maps to the proper BLM office at the end of each royalty reporting period or on a schedule determined by the BLM. Show all excavations in each separate bed or deposit on the maps so that the production of minerals for any period can be accurately ascertained. Production maps must also show surface boundaries, lease boundaries, topography, and subsidence resulting from mining activities.</p> <p>(4) For in situ development operations, the lessee or operator must submit a map showing all surface installations including pipelines, meter locations, or other points of measurement necessary for production verification as part of the plan of development. All maps must be modified as necessary to adequately represent existing operations.</p> <p>(5) Within 30 days after well completion, the lessee or operator must submit to the proper BLM office 2 copies of a completed Form 3160-4, Well Completion or Recompletion Report and Log, limited to information that is applicable to oil shale operations. Well logs may be submitted electronically using a BLM approved electronic format. Describe surface and bottom-hole locations in latitude and longitude.</p>				
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<p>Within 30 days after drilling completion the operator or lessee must submit to the BLM a signed copy of records of all core or test holes made on the lands covered by the lease or exploration license.</p>	<p><u>Section 3931.80</u> Within 30 days after drilling completion, the operator or lessee must submit to the proper BLM office a signed copy of records of all core or test holes made on the lands covered by the lease or exploration license. The records must show the position and direction of the holes on a map. The records must include a log of all strata penetrated and conditions encountered, such as water, gas, or unusual conditions, and copies of analysis of all samples. Provide this information to the proper BLM office in either paper copy or in a BLM-approved electronic format. Within 30 days after creation, the operator or lessee must also submit to the proper the BLM office a detailed lithologic log of each test hole and all other in-hole surveys or other logs produced. Upon the BLM's request, the operator or lessee must provide to the BLM splits of core samples and drill cuttings.</p>	16	1	16	\$ 776
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Subpart 3932 Lease Modifications and Readjustments

<p>A lessee may apply for a modification of a lease to include additional Federal lands adjoining those in the lease.</p>	<p><u>Section 3932.10(b) and Section 3932.30(c)</u> The BLM will use no specific form to collect this information. An application for modification of the lease</p>	12	1	12	\$582
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	<p>size must:</p> <p>(1) Be filed with the proper BLM office;</p> <p>(2) Contain a legal description of the additional lands involved;</p> <p>(3) Contain a justification for the modification;</p> <p>(4) Explain why the modification would be in the best interest of the United States;</p> <p>(5) Include a nonrefundable processing fee that the BLM will determine under 43 CFR 3000.11; and</p> <p>(6) Include a signed qualifications statement consistent with subpart 3902. Before the BLM will approve a lease modification, the lessee must file a written acceptance of the conditions in the modified lease and a written consent of the surety under the bond covering the original lease as modified. The lessee must also submit evidence that the bond has been amended to cover the modified lease.</p>				
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Subpart 3933 Assignments and Subleases

<p>Any lease may be assigned or subleased in whole or in part to any person, association, or corporation that meets the qualification requirements at subpart 3902.</p>	<p><u>Section 3933.31</u></p> <p>(1) The BLM will use no specific form to collect this information. File in triplicate at the proper BLM office a separate instrument of assignment for each lease assignment. File the assignment application within 90 days of the date of final execution of the</p>	<p>10</p>	<p>1</p>	<p>10</p>	<p>\$ 485</p>
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	<p>assignment instrument and with it include:</p> <p>(a) Name and current address of assignee;</p> <p>(b) Interest held by assignor and interest to be assigned;</p> <p>(c) The serial number of the affected lease and a description of the lands to be assigned as described in the lease;</p> <p>(d) Percentage of overriding royalties retained; and</p> <p>(e) Date and signature of assignor.</p> <p>(2) The assignee must provide a single copy of the request for approval of assignment which must contain a:</p> <p>(a) Statement of qualifications and holdings as required by subpart 3902;</p> <p>(b) Date and signature of assignee; and</p> <p>(c) Nonrefundable filing fee of \$60.</p>				
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Subpart 3934 Relinquishments, Cancellations, and Terminations

A lease or exploration license may be surrendered in whole or in part.	<p><u>Section 3934.10</u></p> <p>The BLM will use no specific form to collect this information. The record title holder must file a written relinquishment, in triplicate, in the BLM state office having jurisdiction over the lands covered by the relinquishment</p>	18	1	18	\$ 873
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Subpart 3935 Production and Sale Records

Operators or lessees must	<p><u>Section 3935.10</u></p> <p>Operators or lessees must</p>	16	1	16	\$ 776
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maintain production and sale records which must be available for the BLM's examination during regular business hours.	maintain accurate records: (1) Oil shale mined; (2) Oil shale put through the processing plant and retort; (3) Mineral products produced and sold; (4) Shale oil products, shale gas, and shale oil by-products sold; (5) Relevant quality analyses of oil shale mined or processed and of synthetic petroleum, shale oil or shale oil by-products sold; and (6) Shale oil products and by-products that are consumed on lease for the beneficial use of the lease.				
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TOTALS		-----	22	1,784	\$ 86,492
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Table 2

Job Category	BLS Occupational Code	Mean Hourly Wage*	40% For Benefits	Hourly Rate	Weight (%)	Weighted Value per Hour
Attorney	23-1011	\$56.29	\$22.52	\$78.81	10%	\$7.88
Managerial	11-0000	\$45.53	\$18.21	\$63.74	20%	\$12.75
Technical/Professional	17-2151	\$38.44	\$15.38	\$53.82	40%	\$21.53
Clerical	43-0000	\$15.04	\$6.02	\$21.06	30%	\$6.32
Total Weighted Value per Hour					100%	\$48.48

*Derived from Bureau of Labor Statistics: May 2006 National Occupational Employment and Wage Estimates, (http://stats.bls.gov/oes/current/oes_nat.htm#b00-0000); and revised to reflect a 3.0 percent increase from the 2nd quarter of 2006 to the 2nd quarter of 2007 as reported in the Bureau of Labor Statistics Civilian Employer Costs for Employee Compensation (<http://data.bls.gov/cgi-bin/surveymost?cm>).

Based on an average number of actions, we estimate the processing and cost recovery fees as follows:

Table 3

Estimated Collections from Processing and Cost Recovery Case-by-Case Fees	Estimated Number of Actions	Processing Fee per Action	Estimated Case-by-Case Cost Recovery	Total Estimated Annual Collection
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			Fee per Action	
Part 3910 Oil Shale Exploration Licenses	1	\$295	Not Applicable	\$295
Subpart 3922 Application Processing The case-by-case processing fee does not include any required studies or analyses that are completed by third party contractors and funded by the applicant. The regulations at 43 CFR 3000.11 provide the regulatory framework for determining the cost recovery value.	3	Not Applicable	\$172,323	\$516,969
Subpart 3925 Award of Lease The successful bidder must submit the necessary lease bond (see subpart 3904), the first year's rental, and the bidder's proportionate share of the cost of publication of the sale notice.	1	\$60	Not Applicable	\$60
Subpart 3932 Lease Size Modification	1	Not Applicable	\$9,208	\$9,208
Subpart 3933 Assignments and Subleases	1	\$60	Not Applicable	\$60
TOTALS	7	-----	-----	\$526,592

The BLM will consider comments by the public on this proposed collection of information to:

- (1) Evaluate whether the proposed collection of information is necessary for the agency to perform its duties, including whether the information is useful;

- (2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information;
- (3) Enhance the quality, usefulness, and clarity of the information to be collected; and
- (4) Minimize the burden on the respondents, including the use of automated collection techniques or other forms of information technology.

The OMB is required to make a decision concerning the collection of information contained in these proposed regulations between 30 and 60 days after publication of this document in the Federal Register. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication. This does not affect the deadline for the public to comment to BLM on the proposed regulations.

Authors

The principal authors of this proposed rule are Charlie Beecham, II, and Mary Linda Ponticelli, Division of Solid Minerals (Washington Office); assisted by Mavis Love, BLM Wyoming State Office; James Kohler, Sr., BLM Utah State Office; Hank Szymanski, BLM Colorado State Office; Paul McNutt, Division of Solid Minerals (Washington Office); Kelly Odom, Division of Regulatory Affairs (Washington Office); and Richard McNeer, Department of the Interior, Office of the Solicitor.

List of Subjects

43 CFR part 3900

Administrative practice and procedure, Environmental protection, Intergovernmental relations, Mineral royalties, Oil shale reserves, Public lands-mineral resources, Reporting and record-keeping requirements, Surety bonds.

43 CFR part 3910

Environmental protection, Exploration licenses, Intergovernmental relations, Oil shale reserves, Public lands-mineral resources, Reporting and record-keeping requirements.

43 CFR part 3920

Administrative practice and procedure, Environmental protection, Intergovernmental relations, Oil shale reserves, public lands-mineral resources, Reporting and record-keeping requirements.

43 CFR part 3930

Administrative practice and procedure, Environmental protection, Mineral royalties, Oil shale reserves, Public lands-mineral resources, Reporting and record-keeping requirements, Surety bonds.

Accordingly, for the reasons stated in the preamble and under the authorities stated below, the BLM proposes to amend 43 CFR subtitle B Chapter II as follows:

C. Stephen Allred
Assistant Secretary
Land and Minerals Management

1. Add part 3900 to subchapter C to read as follows:

PART 3900 OIL SHALE MANAGEMENT -- GENERAL

Subpart 3900 -- Oil Shale Management-Introduction

Sec.

3900.2 Definitions.

3900.5 Information collection.

3900.10 Lands subject to leasing.

3900.20 Appealing the BLM's decision.

3900.30 Filing documents.

3900.40 Multiple use development of leased or licensed lands.

3900.50 Land use plans and environmental considerations.

3900.61 Federal minerals where the surface is owned or administered by other Federal agencies, by state agencies or charitable organizations, or by private entities.

3900.62 Special requirements to protect the lands and resources.

Subpart 3901 -- Land Descriptions and Acreage

- 3901.10 Land descriptions.
- 3901.20 Acreage limitations.
- 3901.30 Computing acreage holdings.

Subpart 3902 -- Qualification Requirements

- 3902.10 Who may hold leases.
- 3902.21 Filing of qualification evidence.
- 3902.22 Where to file.
- 3902.23 Individuals.
- 3902.24 Associations, including partnerships.
- 3902.25 Corporations.
- 3902.26 Guardians or trustees.
- 3902.27 Heirs and devisees.
- 3902.28 Attorneys-in-fact.
- 3902.29 Other parties in interest.

Subpart 3903 -- Fees, Rentals, and Royalties

- 3903.20 Forms of payment.
- 3903.30 Where to submit payments.
- 3903.40 Rentals.

3903.51 Minimum production and payments in lieu of production.

3903.52 Production royalties.

3903.53 Overriding royalties.

3903.54 Waiver, suspension, or reduction of rental or payments in lieu of production, or reduction of royalty, or waiver of royalty in the first 5 years of the lease.

3903.60 Late payment or underpayment charges.

Subpart 3904 -- Bonds and Trust Funds

3904.10 Bonding requirements.

3904.11 When to file bonds.

3904.12 Where to file bonds.

3904.13 Acceptable forms of bonds.

3904.14 Individual lease, exploration license, and reclamation bonds.

3904.15 Amount of bond.

3904.20 Default.

3904.21 Termination of the period of liability.

3904.40 Long-term water treatment trust funds.

Subpart 3905 -- Lease Exchanges

3905.10 Oil shale lease exchanges.

Authority: 30 U.S.C. 189, 359, and 241(a), 42 U.S.C. 15927, 43 U.S.C. 1732(b) and 1740.

Subpart 3900 -- Oil Shale Management-Introduction

§ 3900.2 Definitions.

As used in this part and parts 3910 through 3930 of this chapter, the term:

Acquired lands means lands which the United States obtained through purchase, gift, or condemnation, and mineral estates that are not public domain lands, including mineral estates associated with lands previously disposed of under the public land laws, including the mining laws.

Act means the Mineral Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.).

BLM means the Bureau of Land Management and includes the individual employed by the Bureau of Land Management authorized to perform the duties set forth in this part and parts 3910 through 3930.

Commercial quantities means production of shale oil quantities in accordance with the approved Plan of Development for the proposed project through the research, development, and demonstration activities conducted on the lease, based on, and at the conclusion of which, there is a reasonable expectation that the expanded operation would provide a positive return after all costs of production have been met, including the amortized costs of the capital investment.

Department means the Department of the Interior.

Diligent development means achieving or completing the prescribed milestones listed in § 3930.30 of this chapter.

Director means the Director, Bureau of Land Management.

Entity means a person, association, or corporation, or any subsidiary, affiliate, corporation, or association controlled by or under common control with such person, association, or corporation.

Exploration means drilling, excavating, and geological, geophysical or geochemical surveying operations designed to obtain detailed data on the physical and chemical characteristics of Federal oil shale and its environment including:

- (1) The strata below the Federal oil shale;
- (2) The overburden;
- (3) The strata immediately above the Federal oil shale; and
- (4) The hydrologic conditions associated with the Federal oil shale.

Exploration license means a license issued by the BLM that allows the licensee to explore unleased oil shale deposits to obtain geologic, environmental, and other pertinent data concerning the deposits.

Exploration plan means a plan prepared in sufficient detail to show the:

- (1) Location and type of exploration to be conducted;
- (2) Environmental protection procedures to be taken;
- (3) Present and proposed roads, if any; and
- (4) Reclamation and abandonment procedures to be followed upon completion of operations.

Fair market value (FMV) means the monetary amount for which the oil shale deposit would be leased by a knowledgeable owner willing, but not obligated, to lease to a knowledgeable purchaser who desires, but is not obligated, to lease the oil shale deposit.

Federal lands means any lands or interests in lands, including oil shale interests underlying non-Federal surface, owned by the United States, without reference to how the lands were acquired or what Federal agency administers the lands.

Infrastructure means all support structures necessary for the production or development of shale oil, including, but not limited to:

- (1) Offices;
- (2) Shops;
- (3) Maintenance facilities;
- (4) Pipelines;
- (5) Roads;
- (6) Electrical transmission lines;
- (7) Well bores;
- (8) Storage tanks;
- (9) Ponds;
- (10) Monitoring stations;
- (11) Processing facilities – retorts; and
- (12) Production facilities.

In situ operation means the processing of oil shale in place.

Interest in a lease, application, or bid means any:

- (1) Record title interest;

- (2) Overriding royalty interest;
- (3) Working interest;
- (4) Operating rights or option or any agreement covering such an interest; or
- (5) Participation or any defined or undefined share in any increments, issues, or profits that may be derived from or that may accrue in any manner from a lease based on or under any agreement or understanding existing when an application was filed or entered into while the lease application or bid is pending.

Kerogen means the solid, organic substance in sedimentary rock that yields oil when it undergoes destructive distillation.

Lease means a Federal lease issued under the mineral leasing laws, which grants the exclusive right to explore for and extract a designated mineral.

Lease bond means the bond or equivalent security given to the Department to assure performance of all obligations associated with all lease terms and conditions.

Maximum economic recovery means that, based on standard industry operating practices, all profitable portions of a leased Federal oil shale deposit must be mined. This requirement does not restrict the authority of the BLM to ensure the conservation of the oil shale reserves and other resources and to prevent the wasting of oil shale.

MMS means the Minerals Management Service.

Oil shale means a fine-grained sedimentary rock containing:

- (1) Organic matter which was derived chiefly from aquatic organisms or waxy spores or pollen grains, which is only slightly soluble in ordinary petroleum solvents, and of which a large proportion is distillable into synthetic petroleum; and

(2) Inorganic matter, which may contain other minerals. This term is applicable to any argillaceous, carbonate, or siliceous sedimentary rock which, through destructive distillation, will yield synthetic petroleum.

Permit means any of the required approvals that are issued by Federal, state, or local agencies.

Plan of development means the plan created for oil shale operations that complies with the requirements of the Act and that details the plans, equipment, methods, and schedules to be used in oil shale development.

Production means:

(1) The extraction of shale oil, shale gas, or shale oil by-products through surface retorting or in situ recovery methods; or

(2) The severing of oil shale rock through surface or underground mining methods.

Proper BLM office means the Bureau of Land Management office having jurisdiction over the lands under application or covered by a lease or exploration license and subject to the regulations in this part and in parts 3910 through 3930 of this chapter (see subpart 1821 of part 1820 of this chapter for a list of BLM state offices).

Public domain lands means lands, including mineral estates, which:

(1) Never left the ownership of the United States;

(2) Were obtained by the United States in exchange for public domain lands;

(3) Have reverted to the ownership of the United States; or

(4) Were specifically identified by Congress as part of the public domain.

Reclamation means the measures undertaken to bring about the necessary reconditioning or restoration of lands or waters affected by exploration, mining, in situ operations, onsite

processing operations or waste disposal in a manner which will meet the requirements imposed by the BLM under applicable law.

Reclamation bond means the bond or equivalent security given to the BLM to assure performance of all obligations relating to reclamation of disturbed areas under an exploration license or lease.

Secretary means the Secretary of the Interior.

Shale gas means the gaseous hydrocarbon-bearing products of surface retorting of oil shale or of in situ extraction that is not liquefied into shale oil. In addition to hydrocarbons, shale gas might include other gases such as carbon dioxide, nitrogen, helium, sulfur, other residual or specialty gases, and entrained hydrocarbon liquids.

Shale oil means synthetic petroleum derived from the destructive distillation of oil shale.

Sole party in interest means a party who alone is or will be vested with all legal and equitable rights and responsibilities under a lease, bid, or application for a lease.

Surface management agency means the Federal agency with jurisdiction over the surface of federally-owned lands containing oil shale deposits.

State Director means an employee of the Bureau of Land Management designated as the chief administrative officer of one of the BLM's 12 administrative areas designated as states.

Surface retort means the above-ground facility used for the extraction of kerogen by heating mined shale.

Surface retort operation means the extraction of kerogen by heating mined shale in an above-ground facility.

Synthetic petroleum means synthetic crude oil manufactured from shale oil and suitable for use as a refinery feedstock and for petrochemical production.

§ 3900.5 Information collection.

(a) OMB has approved the information collection requirements in parts 3900 through 3930 of this chapter under 44 U.S.C. 3501 et. seq. The table in paragraph (d) of this section lists the subpart in the rule requiring the information and its title, provides the OMB control number, and summarizes the reasons for collecting the information and how the BLM uses the information.

(b) Respondents are oil shale lessees and operators. The requirement to respond to the information collections in these parts are mandated under the EP Act, 42 U.S.C. 15927), the Mineral Leasing Act for Acquired Lands of 1947 (30 U.S.C. 351-359), and the Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq., including 43 U.S.C. 1732).

(c) The Paperwork Reduction Act of 1995 requires us to inform the public that an agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

(d) The BLM is collecting this information for the reasons given in the following table:

43 CFR Parts 3900-3930, General (1004-XXXX)	Reasons for collecting information and how used
Sections 3904.12, 3904.14(c)(1)	A lessee or licensee must furnish a bond before a lease or exploration license may be issued or transferred or a plan of development approved. The BLM will review the bond and, if adequate as to amount and execution, will accept it in order to indemnify the United States against default on payments due or other performance obligations. The BLM may also adjust the bond amount to reflect changed conditions. The BLM will cancel the bond when all requirements are satisfied.
Sections 3910.31, 3910.44	For those lands where no exploration data is available, the lease applicant may apply for an exploration license to conduct exploration on unleased public lands to determine the extent and specific characteristics of the Federal oil shale resource. The BLM will use the information in the application to: (1) Locate the proposed exploration site; (2) Determine if the lands are subject to entry for exploration; (3) Prepare a notice of invitation to other parties to participate in the exploration; and (4) Ensure the exploration plan is adequate to safeguard resource values, and public and worker health and safety. The BLM will use this information from a licensee to determine if it will offer the land area for lease.
Section 3921.30	Corporations, associations, and individuals may submit expressions of leasing interest for specific areas to assist the applicable BLM State Director in determining whether or not to lease oil shale. The information provided will be used in the consultation with the governor of the affected state and in setting a geographic area for which a call for applications will

	be requested.
Sections 3922.20 and 3922.30	Entities interested in leasing the Federal oil shale resource must file an application in a geographic area for which the BLM has issued a "Call for Applications." The information provided by the applicant will be used to evaluate the impacts of issuing a proposed lease on the human environment. Failure to provide the requested additional information may result in suspension or termination of processing of the application or in a decision to deny the application.
Section 3924.10	Prospective lessees will be required to submit a bid at a competitive sale in order to be issued a lease.
Section 3926.10(c)	The lessee of an R, D and D lease may apply for conversion of the R, D and D lease to a commercial lease.
Section 3930.11(b), 3930.20(b)	The records, logs, and samples provide information necessary to determine the nature and extent of oil shale resources on Federal lands and to monitor and adjust the extent of the oil shale reserve.
Section 3931.11	The plan of development must provide for reasonable protection and reclamation of the environment and the protection and diligent development of the oil shale resources in the lease.
Section 3931.30	The BLM may, in the interest of conservation order or agree to a suspension of operations and production.
Section 3931.41	Except for casual use, before conducting any exploration operations on federally-leased or federally-licensed lands, the lessee must submit an exploration plan to the BLM for approval.
Section 3931.50	Approved exploration, mining and in situ development plans may be modified by the operator or lessee to adjust to changed conditions or to correct an oversight.
Section 3931.70	Production of all oil shale products or byproducts must be reported to the BLM on a monthly basis.
Section 3931.80	Within 30 days after drilling completion the operator or lessee must submit to the BLM a signed copy of records of all core

	or test holes made on the lands covered by the lease or exploration license.
Sections 3932.10(b) and 3932.30(c)	A lessee may apply for a modification of a lease to include additional Federal lands adjoining those in the lease.
Section 3933.31	Any lease may be assigned or subleased in whole or in part to any person, association, or corporation that meets the qualification requirements at subpart 3902.
Section 3934.10	A lease or exploration license may be surrendered in whole or in part.
Section 3935.10	Operators or lessees must maintain production and sale records which must be available for the BLM's examination during regular business hours.

§ 3900.10 Lands subject to leasing.

The BLM may issue oil shale leases under this part on all Federal lands except:

- (a) Those lands specifically excluded from leasing by the Act; and
- (b) Any other lands withdrawn from leasing.

§ 3900.20 Appealing the BLM's decision.

Any party adversely affected by a BLM decision made under this part or parts 3910 through 3930 of this chapter may appeal the decision under part 4 of this title. All decisions and orders by the BLM under these parts remain effective pending appeal unless the BLM decides otherwise. A petition for the stay of a decision may be filed with the Interior Board of Land Appeals.

§ 3900.30 Filing documents.

(a) All necessary documents must be filed in the proper BLM office. A document is considered filed when the proper BLM office receives it with any required fee.

(b) All information submitted to the BLM under the regulations in this part or parts 3910 through 3930 will be available to the public unless exempt from disclosure under the Freedom of Information Act (5 U.S.C. 552), under part 2 of this title, or unless otherwise provided for by law.

§ 3900.40 Multiple use development of leased or licensed lands.

(a) The granting of an exploration license or lease for the exploration, development, or production of deposits of oil shale does not preclude the BLM from issuing other exploration licenses or leases for the same lands for deposits of other minerals. Each exploration license or lease reserves the right to allow any other uses or to allow disposal of the leased lands if it does not unreasonably interfere with the exploration and mining operations of the lessee. The lessee or the licensee must make all reasonable efforts to avoid interference with other such authorized uses.

(b) Subsequent lessee or licensee will be required to conduct operations in a manner that will not interfere with the established rights of existing lessees or licensees.

(c) When the BLM issues an oil shale lease, it will cancel all oil shale exploration licenses for the leased lands.

§ 3900.50 Land use plans and environmental considerations.

(a) Any lease or exploration license issued under this part or parts 3910 through 3930 of this chapter will be issued in conformance with the decisions, terms, and conditions of a comprehensive land use plan developed under part 1600 of this chapter.

(b) Before a lease or exploration license is issued, the BLM, or the appropriate surface management agency, must comply with the requirements of the National Environmental Policy Act of 1969 (NEPA).

(c) Before the BLM approves a plan of development, the BLM must comply with NEPA, in cooperation with the surface management agency when possible, if the surface is managed by another Federal agency.

§ 3900.61 Federal minerals where the surface is owned or administered by other Federal agencies, by state agencies or charitable organizations, or by private entities.

(a) Public domain lands. Unless consent is required by law, the BLM will issue a lease or exploration license only after the BLM has consulted with the surface management agency on public domain lands where the surface is administered by an agency outside of the Department. The BLM will not issue a lease or an exploration license on lands to which the surface managing agency withholds consent required by statute.

(b) Acquired lands. The BLM will issue a lease on acquired lands only after receiving written consent from an appropriate official of the surface management agency.

(c) Lands covered by lease or license. If a Federal surface management agency outside of the Department has required special stipulations in the lease or license or has refused consent to issue the lease or license, an applicant may pursue the administrative remedies

to challenge that decision offered by that particular surface management agency, if any. If the applicant notifies the BLM within 30 calendar days after receiving the BLM's decision that the applicant has requested the surface management agency to review or reconsider its decision, the time for filing an appeal to the Interior Board of Land Appeals under part 4 of this title is suspended until a decision is reached by such agency.

(d) The BLM will not issue a lease or exploration license on National Forest System Lands without the consent of the Forest Service.

(e) State's, charitable organization's, or private entity's ownership of surface overlying Federal Minerals. Where the United States has conveyed title to, or otherwise transferred the control of the surface of lands to any state or political subdivision, agency, or instrumentality thereof, other than another Federal agency, but including a college or any other educational corporation or association, to a charitable or religious corporation or association, or to a private entity, the BLM will send such parties written notification by certified mail of the application for exploration license or lease. In the written notification, the BLM will give the parties a reasonable time, not to exceed 90 calendar days, within which to suggest any lease stipulations necessary for the protection of existing surface improvements or uses and to set forth the facts supporting the necessity of the stipulations or file any objections it may have to the issuance of the lease or license. The BLM makes the final decision as to whether to issue the lease or license and on what terms based on a determination as to whether the interests of the United States would best be served by issuing the lease or license with the particular stipulations. This is true even in cases where the party controlling the surface opposes the issuance of a lease or license or wishes to place restrictive stipulations on the lease.

§ 3900.62 Special requirements to protect the lands and resources.

The BLM will specify stipulations in a lease or exploration license to protect the lands and their resources. This may include stipulations required by the surface management agency or recommended by the surface management agency or non-Federal surface owner and accepted by the BLM.

Subpart 3901 -- Land Descriptions and Acreage

§ 3901.10 Land descriptions.

(a) All lands in an oil shale lease must be described by the legal subdivisions of the public land survey system or if the lands are unsurveyed, the legal description by metes and bounds.

(b) Unsurveyed lands will be surveyed, at the cost of the lease applicant, by a surveyor approved or employed by the BLM.

§ 3901.20 Acreage limitations.

No entity may hold more than 50,000 acres of Federal oil shale leases in any one state. Oil shale lease acreage does not count toward acreage limitations associated with leases for other minerals.

§ 3901.30 Computing acreage holdings.

The maximum acreage in any one state refers to the acres an entity may hold under a Federal lease on either public domain lands or acquired lands. Acquired lands and public domain lands are counted separately, so an entity may hold up to the maximum acreage of each at the same time.

Subpart 3902 -- Qualification Requirements

§ 3902.10 Who may hold leases.

(a) The following entities may hold leases or interests therein:

(1) Citizens of the United States;

(2) Associations (including partnerships and trusts) of such citizens; and

(3) Corporations organized under the laws of the United States or of any state or territory thereof.

(b) Citizens of a foreign country may only hold interest in leases through stock ownership, stock holding, or stock control in such domestic corporations. Foreign citizens may hold stock in United States corporations that hold leases if the Secretary has not determined that laws, customs, or regulations of their country deny similar privileges to citizens or corporations of the United States.

(c) A minor may not hold a lease. A legal guardian or trustee of a minor may hold a lease.

(d) An entity must be in compliance with Section 2(a)(2)(A) of the Act in order to hold a lease. If the BLM erroneously issues a lease to an entity that is in violation of Section 2(a)(2)(A) of the Act, the BLM will void the lease.

§ 3902.21 Filing of qualification evidence.

Applicants must file with the BLM a statement and evidence that the qualification requirements in this subpart are met. These may be filed separately from the lease application, but must be filed in the same office as the application. After the BLM accepts the applicant's qualifications, any additional information may be provided to the same BLM office by referring to the serial number of the record in which the evidence is filed. All changes to the qualifications statement must be in writing. The evidence provided must be current, accurate, and complete.

§ 3902.22 Where to file.

The lease application and qualification evidence must be filed in the proper BLM office (see subpart 1821 of part 1820 of this chapter).

§ 3902.23 Individuals.

Individuals who are applicants must provide to the BLM a signed statement showing:

- (a) U.S. citizenship; and
- (b) That acreage holdings do not exceed the limits in § 3901.20 of this chapter. This includes holdings through a corporation, association, or partnership in which the individual is the beneficial owner of more than 10 percent of the stock or other instruments of control.

§ 3902.24 Associations, including partnerships.

Associations that are applicants must provide to the BLM:

(a) A signed statement that:

(1) Lists the names, addresses, and citizenship of all members of the association who own or control 10 percent or more of the association or partnership, and certifies that the statement is true;

(2) Lists the names of the members authorized to act on behalf of the association; and

(3) Certifies that the association or partnership's acreage holdings and those of any member under paragraph (a)(1) of this section do not exceed the acreage limits in § 3901.20 of this chapter; and

(b) A copy of the articles of association or the partnership agreement.

§ 3902.25 Corporations.

Corporate officers or authorized attorneys-in-fact who represent applicants must provide to the BLM a signed statement that:

(a) Names the state or territory of incorporation;

(b) Lists the name and citizenship of, and percentage of stock owned, held, or controlled by, any stockholder owning, holding, or controlling more than 10 percent of the stock of the corporation, and certifies that the statement is true;

(c) Lists the names of the officers authorized to act on behalf of the corporation; and

(d) Certifies that the corporation's acreage holdings, and those of any stockholder identified under paragraph (b) of this section, do not exceed the acreage limits in § 3901.20 of this chapter.

§ 3902.26 Guardians or trustees.

Guardians or trustees for a trust, holding on behalf of a beneficiary, who are applicants must provide to the BLM:

(a) A signed statement that:

(1) Provides the beneficiary's citizenship;

(2) Provides the guardian's or trustee's citizenship;

(3) Provides the grantor's citizenship, if the trust is revocable; and

(4) Certifies the acreage holdings of the beneficiary, the guardian, trustee, or grantor, if the trust is revocable, do not exceed the aggregate acreage limitations in § 3901.20 of this chapter; and

(b) A copy of the court order or other document authorizing or creating the trust or guardianship.

§ 3902.27 Heirs and devisees.

If an applicant or successful bidder for a lease dies before the lease is issued:

(a) The BLM will issue the lease to the heirs or devisees, or their guardian, if probate of the estate has been completed or is not required. Before the BLM will recognize the heirs or devisees or their guardian as the record title holders of the lease, they must provide to the proper BLM office:

(1) A certified copy of the will or decree of distribution, or if no will or decree exists, a statement signed by the heirs that they are the only heirs and citing the provisions of the law of the deceased's last domicile showing that no probate is required; and

(2) A statement signed by each of the heirs or devisees with reference to citizenship and holdings as required by § 3902.23 of this chapter. If the heir or devisee is a minor, the guardian or trustee must sign the statement; and

(b) The BLM will issue the lease to the executor or administrator of the estate, if probate is required, but is not completed. In this case, the BLM considers the executor or administrator to be the record title holder of the lease. Before the BLM will issue the lease to the executor or administrator, the executor or administrator must provide to the proper BLM office:

(1) Evidence that the person who, as executor or administrator, submits lease and bond forms has authority to act in that capacity and to sign those forms;

(2) A certified list of the heirs or devisees of the deceased; and

(3) A statement signed by each heir or devisee concerning citizenship and holdings, as required by § 3902.23 of this chapter.

§ 3902.28 Attorneys-in-fact.

Attorneys-in-fact must provide to the proper BLM office evidence of the authority to act on behalf of the applicant and a statement of the applicant's qualifications and acreage holdings if it is also empowered to make this statement. Otherwise, the applicant must provide the BLM this information separately.

§ 3902.29 Other parties in interest.

If there is more than one party in interest in an application for a lease, include with the application the names of all other parties who hold or will hold any interest in the

application or in the lease. All interested parties who wish to hold an interest in a lease must provide to the BLM the information required by this subpart to qualify to hold a lease interest.

Subpart 3903 -- Fees, Rentals, and Royalties

§ 3903.20 Forms of payment.

All payments must be by U.S. postal money order or negotiable instrument payable in U.S. currency. In the case of payments made to the MMS, such payments may also be made by electronic funds transfer (see 30 CFR part 218 for the MMS's payment procedures).

§ 3903.30 Where to submit payments.

(a) All filing and processing fees, all first-year rentals, and all bonuses for leases issued under this part or parts 3910 through 3930 of this chapter must be paid to the BLM state office that manages the lands covered by the application, lease, or exploration license, unless the BLM designates a different state office. The first one-fifth bonus installment is paid to the appropriate BLM state office. All remaining bonus installment payments are paid to the MMS.

(b) All second-year and subsequent rentals and all other payments for leases are paid to the MMS.

(c) All royalties on producing leases and all payments under leases in their minimum production period are paid to the MMS.

§ 3903.40 Rentals.

(a) The rental rate for oil shale leases is \$2.00 per acre, or fraction thereof, payable in advance of the lease year. Rentals paid for any 1 year are credited against any production royalties accruing for that year.

(b) The BLM will send a notice demanding payment of late rentals within 30 calendar days after receipt of the notification. Failure to provide payment within 30 calendar days after notification will result in the BLM taking action to cancel the lease (see § 3934.30 of this chapter).

§ 3903.51 Minimum production and payments in lieu of production.

(a) Each lease must have a minimum annual production amount of shale oil or make a payment in lieu of production for any particular lease year, beginning with the 10th lease year.

(b) The payment in lieu of annual production is established in the lease and will not be less than \$4 per acre or fraction thereof per year, payable in advance. Production royalty payments will be credited to payments in lieu of annual production for that year only.

Option 1

§ 3903.52 Production royalties.

(a) The lessee must pay royalties on all products of oil shale that are sold from or transported off of the lease.

(b) The royalty rate for the products of oil shale is 5 percent of the amount or value of production.

Option 2.

§ 3903.52 Production royalties.

(a) The lessee must pay royalties on the amount or value of all products of oil shale that are sold from or transported off of the lease.

(b) The standard royalty rate for the products of oil shale is 12.5 percent of the amount or value of production.

(c) For any lease that begins production of oil shale within 12 years of issuance of the first commercial oil shale lease issued under subpart 3925 or subpart 3926, the royalty rate is 5 percent of the amount or value of production on the first 30 million barrels of oil equivalent produced from that oil shale lease.

§ 3903.53 Overriding royalties.

The lessee must file documentation of all overriding royalties associated with the lease in the proper BLM office within 90 calendar days after execution of the assignment of the overriding royalties.

§ 3903.54 Waiver, suspension, or reduction of rental or payments in lieu of production, or reduction of royalty, or waiver of royalty in the first 5 years of the lease.

(a) In order to encourage the maximum economic recovery (MER) of the leased mineral(s), and in the interest of conservation, whenever the BLM determines it is

necessary to promote development or finds that leases cannot be successfully operated under the lease terms, the BLM may waive, suspend, or reduce the rental or payment in lieu of production, reduce the rate of royalty, or in the first 5 years of the lease, waive the royalty.

(b) Applications for waivers, suspension or reduction of rentals or payment in lieu of production, reduction in royalty, or waiver of royalty for the first 5 years of the lease must contain the serial number of the lease, the name of the record title holder, the operator or sub-lessee, a description of the lands by legal subdivision, and the following information:

(1) The location of each oil shale mine or operation, and include:

(i) A map showing the extent of the mining or development operations;

(ii) A tabulated statement of the minerals mined and subject to royalty for each month covering a period of not less than 12 months immediately preceding the date of filing of the application; and

(iii) The average production per day mined for each month, and complete information as to why the minimum production was not attained;

(2) Each application must contain:

(i) A detailed statement of expenses and costs of operating the entire lease;

(ii) The income from the sale of any leased products;

(iii) All facts showing whether the mines can be successfully operated under the royalty or rental fixed in the lease; and

(iv) Where the application is for a reduction in royalty, information as to whether royalties or payments out of production are paid to anyone other than the United States, the amounts so paid, and efforts made to reduce those payments;

(3) Any overriding royalties cannot be greater in aggregate than one-half the royalties paid to the United States.

(c) Contact the proper BLM office for detailed information on submitting copies of these applications electronically.

§ 3903.60 Late payment or underpayment charges.

Late payment or underpayment charges will be assessed under MMS regulations at 30 CFR 218.202.

Subpart 3904 -- Bonds and Trust Funds

§ 3904.10 Bonding requirements.

(a) Prior to issuing a lease or exploration license, the BLM requires exploration license or lease bonds for each lease or exploration license that covers all liabilities, other than reclamation, that may arise under the lease or license. The bond must cover all record title owners, operating rights owners, operators, and any person who conducts operations or is responsible for payments under a lease or license.

(b) Before the BLM will approve a plan of development, the lessee must provide to the proper BLM office a reclamation bond to cover all costs the BLM estimates will be necessary to cover reclamation.

§ 3904.11 When to file bonds.

File the lease bond prior to lease issuance, file the reclamation bond prior to the plan of development approval, and file the exploration bond prior to exploration license issuance.

§ 3904.12 Where to file bonds.

File one copy of the bond form with original signatures in the proper BLM state office.

Bonds must be filed on an approved BLM form. The obligor of a personal bond must sign the form. Surety bonds must have the lessee's and the acceptable surety's signature.

§ 3904.13 Acceptable forms of bonds.

(a) The BLM will accept either a personal bond or a surety bond. Personal bonds are pledges of any of the following:

(1) Cash;

(2) Cashier's check;

(3) Certified check; or

(4) Negotiable U.S. Treasury bonds equal in value to the bond amount. Treasury bonds must give the Secretary authority to sell the securities in the case of failure to comply with the conditions and obligations of the exploration license or lease.

(b) Surety bonds must be issued by qualified surety companies approved by the Department of the Treasury. A list of qualified sureties is available at any BLM state office.

§ 3904.14 Individual lease, exploration license, and reclamation bonds.

(a) The BLM will determine individual lease bond amounts on a case-by-case basis. The minimum lease bond amount is \$25,000.

(b) The BLM will determine reclamation bond and exploration license bond amounts on a case-by-case basis when it approves a plan of development or exploration plan. The reclamation or exploration license bond must be sufficient to cover the estimated cost of site reclamation.

(c) The BLM may enter into agreements with states to accept a state reclamation bond to cover the BLM's reclamation bonding requirements. The BLM may request additional information from the lessee or operator to determine whether the state bond will cover all of the BLM's reclamation requirements.

(1) If a state bond is to be used to satisfy the BLM bonding requirements, evidence verifying that the existing state bond will satisfy all the BLM reclamation bonding requirements must be filed in the proper BLM office.

(2) The BLM will require an additional bond if the BLM determines that the state bond does not cover all of the BLM bonding requirements.

§ 3904.15 Amount of bond.

(a) The BLM may increase or decrease the required bond amount if it determines that a change in amount is appropriate to cover the costs and obligations of complying with the requirements of the lease or license and these regulations. The BLM will not decrease the bond amount below the minimum (see § 3904.14(a) of this chapter).

(b) The lessee or operator must submit to the BLM every three years after reclamation bond approval a revised cost estimate of the reclamation costs. If the current bond does not cover the revised estimate of reclamation costs, the lessee or operator must increase the reclamation bond amount to meet or exceed the revised cost estimate.

§ 3904.20 Default.

(a) The BLM will demand payment from the lease bond to cover nonpayment of any rental or royalty owed or the reclamation or exploration license bond for any reclamation obligations that are not met. The BLM will reduce the bond amount by the amount of the payment made to cover the default.

(b) After any default, the BLM will provide notification of the amount required to restore the bond to the required level. A new bond or an increase in the existing bond to its pre-default level must be provided to the proper BLM office within 6 months of the BLM's written notification that the bond is below its required level. The BLM may accept separate or substitute bonds for each exploration license or lease. The BLM may take action to cancel the lease or exploration license covered by the bond if a replacement bond is not provided within the time period stated in the notification.

§ 3904.21 Termination of the period of liability.

(a) The BLM will not consent to termination of the period of liability under a bond unless an acceptable replacement bond has been filed or until all of the terms and conditions of the license or lease have been fulfilled.

(b) Terminating the period of liability of a bond ends the period during which obligations continue to accrue, but does not relieve the surety of the responsibility for obligations that accrued during the period of liability.

§ 3904.40 Long-term water treatment trust funds.

(a) The BLM may require the operator or lessee to establish a trust fund or other funding mechanism to ensure the continuation of long-term treatment to achieve water quality standards and for other long-term, post-mining maintenance requirements. The funding must be adequate to provide for the construction, long-term operation, maintenance, or replacement of any treatment facilities and infrastructure, for as long as the treatment and facilities are needed after mine closure. The BLM may identify the need for a trust fund or other funding mechanism during plan review or later.

(b) In determining whether a trust fund will be required, the BLM will consider the following factors:

- (1) The anticipated post-mining obligations (PMO) that are identified in the environmental document or approved plan of development;
- (2) Whether there is a reasonable degree of certainty that the treatment will be required based on accepted scientific evidence or models;
- (3) The determination that the financial responsibility for those obligations rests with the operator; and
- (4) Whether it is feasible, practical, or desirable to require separate or expanded reclamation bonds for those anticipated long-term PMOs.

Subpart 3905 -- Lease Exchanges

§ 3905.10 Oil shale lease exchanges.

To facilitate the recovery of oil shale, the BLM may consider land exchanges where appropriate and feasible to consolidate land ownership and mineral interest into manageable areas. Exchanges are covered under part 2200 of this chapter.

2. Add part 3910 to subchapter C to read as follows:

PART 3910 -- OIL SHALE EXPLORATION LICENSES

Subpart 3910 -- Exploration Licenses

Sec.

3910.21 Lands subject to exploration.

3910.22 Lands managed by agencies other than the BLM.

3910.23 Requirements for conducting exploration activities.

3910.31 Filing of an application for an exploration license.

3910.32 Environmental analysis.

3910.40 Exploration license requirements.

3910.41 Issuance, modification, relinquishment, and cancellation.

3910.42 Limitations on exploration licenses.

3910.44 Collection and submission of data.

3910.50 Surface use.

Authority: 25 U.S.C. 396(d) and 2107, 30 U.S.C. 241(a), 42 U.S.C. 15927, 43 U.S.C. 1732(b) and 1740.

Subpart 3910 -- Exploration Licenses

§ 3910.21 Lands subject to exploration.

The BLM may issue oil shale exploration licenses for all Federal lands subject to leasing under § 3900.10 of this chapter, except lands that are in an existing oil shale lease or in preference right leasing areas under the research, development, and demonstration (R, D and D) program. The BLM may issue exploration licenses for lands in preference right lease areas only to the R, D and D lessee.

§ 3910.22 Lands managed by agencies other than the BLM.

(a) The consent and consultation procedures required by § 3900.61 of this chapter also apply to exploration license applications.

(b) If exploration activities could affect the adjacent lands under the surface management of a Federal agency other than the BLM, the BLM will consult with that agency before issuing an exploration license.

§ 3910.23 Requirements for conducting exploration activities.

Exploration activities on Federal lands must be conducted under an exploration license or oil shale lease and an approved exploration plan under § 3904.41 of this chapter. The licensee may not remove any oil shale for sale, but may remove a reasonable amount of oil shale for analysis and study.

§ 3910.31 Filing of an application for an exploration license.

(a) Applications for exploration licenses must be submitted to the proper BLM office.

(b) No specific form is required. Applications must include:

(1) The name and address of the applicant(s);

(2) A nonrefundable filing fee of \$295;

(3) A description of the lands covered by the application according to section, township and range in accordance with the public lands survey system or, if the lands are unsurveyed lands, the legal description by metes and bounds; and

(4) An acceptable electronic format or 3 paper copies of an exploration plan that complies with the requirements of § 3931.41 of this chapter. Contact the proper BLM office for detailed information on submitting copies electronically.

(c) An exploration license application may cover no more than 25,000 acres in a reasonably compact area and entirely within one state. An application for an exploration license covering more than 25,000 acres must include justification for an exception to the normal acreage limitation.

(d) Applicants for exploration licenses are required to invite other parties to participate in exploration under the license on a pro rata cost share basis.

(e) Using information supplied by the applicant, the BLM will prepare a notice of invitation and post the notice in the proper BLM office for 30 calendar days. The applicant will publish the BLM-approved notice once a week for 2 consecutive weeks in at least 1 newspaper of general circulation in the area where the lands covered by the exploration license application are situated. The notification must invite the public to participate in the exploration under the license and contain the name and location of the BLM office in which the application is available for inspection.

(f) If any person wants to participate in the exploration program, the applicant and the BLM must receive written notice from that person within 30 calendar days after the end of the 30-day posting period. A person who wants to participate in the exploration program must:

(1) State in their notification that they are willing to share in the cost of the exploration on a pro-rata share basis; and

(2) Describe any modifications to the exploration program that the BLM should consider.

(g) To avoid duplication of exploration activities in an area, the BLM may:

(1) Require modification of the original exploration plan to accommodate the exploration needs of those seeking to participate; or

(2) Notify those seeking to participate that they should file a separate application for an exploration license.

§ 3910.32 Environmental analysis.

(a) Before the BLM will issue an exploration license, the BLM, in consultation with any affected surface management agency, will perform the appropriate NEPA analysis of the application.

(b) For each exploration license, the BLM will include terms and conditions needed to protect the environment and resource values of the area and to ensure reclamation of the lands disturbed by the exploration activities.

§ 3910.40 Exploration license requirements.

The licensee must comply with all applicable Federal, state, and local laws and regulations, the terms and conditions of the license, and the approved exploration plan.

§ 3910.41 Issuance, modification, relinquishment, and cancellation.

(a) The BLM may:

(1) Issue an exploration license, or

(2) Reject an application for an exploration license based on, but not limited to:

(i) The need for resource information;

(ii) The environmental analysis;

(iii) The completeness of the application; or

(iv) Any combination of these factors.

(b) An exploration license is effective on the date the BLM specifies, which is also the date when exploration activities may begin. An exploration license is valid for a period of up to 2 years as specified in the lease after the effective date of the license.

- (c) The BLM-approved exploration plan will be attached and made a part of each exploration license (see subpart 3931 of part 3930 of this chapter).
- (d) After consultation with the surface management agency, the BLM may approve modification of the exploration license proposed by the licensee in writing if geologic or other conditions warrant. The BLM will not add lands to the license once it has been issued.
- (e) Subject to the continued obligation of the licensee and the surety to comply with the terms and conditions of the exploration license, the exploration plan, and these regulations, a licensee may relinquish an exploration license for any or all of the lands covered by it. A relinquishment must be filed in the BLM state office in which the original application was filed.
- (f) The BLM may cancel an exploration license for noncompliance with its terms and conditions and parts 3900 through 3930 of this chapter after the BLM provides the licensee with reasonable notice and an opportunity to correct the noncompliance.

§ 3910.42 Limitations on exploration licenses.

- (a) The issuance of an exploration license for an area will not preclude the BLM's approval of an exploration license or issuance of a Federal oil shale lease for the same lands.
- (b) If an oil shale lease is issued for an area covered by an exploration license, the BLM will cancel the exploration license effective the date of the lease for those lands that are common to both.

§ 3910.44 Collection and submission of data.

Upon the BLM's request, the licensee must provide copies of all data obtained under the exploration license in the format requested by the BLM. As authorized by the Freedom of Information Act, the BLM will consider the data confidential and proprietary until the BLM determines that public access to the data will not damage the competitive position of the licensee or the lands involved have been leased, whichever comes first. Submit all data obtained under the exploration license to the proper BLM office.

§ 3910.50 Surface use.

Operations conducted under an exploration license must:

- (a) Not unreasonably interfere with or endanger any other lawful activity on the same lands;
- (b) Not damage any improvements on the lands; and
- (c) Comply with all applicable Federal, state, and local laws and regulations.

3. Add part 3920 to subchapter C to read as follows:

PART 3920 – OIL SHALE LEASING

Subpart 3921 -- Pre-Sale Activities

Sec.

3921.10 Special requirements related to land use planning.

3921.20 Compliance with the National Environmental Policy Act.

3921.30 Call for expression of leasing interest.

3921.40 Comments from governors, local governments, and interested Indian tribes.

3921.50 Determining the geographic area for receiving applications to lease.

3921.60 Call for applications.

Subpart 3922 -- Application Processing

3922.10 Application processing fee.

3922.20 Application contents.

3922.30 Application - Additional information.

3922.40 Tract delineation.

Subpart 3923 -- Minimum Bid

3923.10 Minimum bid.

Subpart 3924 -- Lease Sale Procedures

3924.5 Notice of sale.

3924.10 Lease sale procedures and receipt of bids.

Subpart 3925 -- Award of Lease

3925.10 Award of lease.

Subpart 3926 -- Conversion of Preference Right for Research, Demonstration, and Development (R, D and D) Leases

3926.10 Conversion of an R, D and D lease to a commercial lease.

Subpart 3927 -- Lease Terms

3927.10 Lease form.

3927.20 Lease size.

3927.30 Lease duration.

3927.40 Effective date of leases.

3927.50 Diligent development.

Authority: 30 U.S.C. 241(a), 42 U.S.C. 15927, 43 U.S.C. 1732(b) and 1740.

Subpart 3921 --- Pre-Sale Activities

§ 3921.10 Special requirements related to land use planning.

The BLM State Director may announce a call for expressions of leasing interest as described in § 3921.30 of this chapter after areas available for leasing have been identified in a land use plan completed under part 1600 of this chapter.

§ 3921.20 Compliance with the National Environmental Policy Act.

Before the BLM will offer a tract for competitive lease sale under subpart 3924 of this chapter, the BLM must prepare a NEPA analysis of the proposed lease area under 40 CFR parts 1500 through 1508 either separately or in conjunction with a land use planning action.

§ 3921.30 Call for expression of leasing interest.

The BLM State Director may implement the provisions of §§3921.40 through 3921.60 of this subpart after review of any responses received as a result of a call for expression of leasing interest. The BLM notice announcing a call for expressions of leasing interest will:

- (a) Be published in the Federal Register and in at least 1 newspaper of general circulation in each affected state for 2 consecutive weeks;
- (b) Allow no less than 30 calendar days to submit expressions of interest;
- (c) Request specific information including the name and address of the respondent and the legal land description of the area of interest;
- (d) State that all information submitted under this subpart must be available for public inspection; and
- (e) Include a statement indicating that data which is considered proprietary must not be submitted as part of an expression of leasing interest.

§ 3921.40 Comments from governors, local governments, and interested Indian tribes.

After the BLM receives responses to the call for expression of leasing interest, the BLM will notify the appropriate state governor's office, local governments, and interested Indian tribes and allow them an opportunity to provide comments regarding the responses and other issues related to oil shale leasing. The BLM will only consider those comments it receives within 60 calendar days after the notification requesting comments.

§ 3921.50 Determining the geographic area for receiving applications to lease.

After analyzing expressions of leasing interest received under § 3921.30 of this chapter and complying with the procedures at § 3921.40 of this chapter, the BLM State Director may determine a geographic area for receiving applications to lease. The BLM may also include additional geographic areas available for lease in addition to lands identified in expressions of interest to lease.

§ 3921.60 Call for applications.

If as a result of the analysis of the expression of leasing interest the BLM State Director determines that there is interest in having a competitive sale, the BLM State Director may publish a notice in the Federal Register announcing a call for applications to lease. The notice will:

- (a) Describe the geographic area the BLM determined is available for application under § 3921.50 of this chapter;
- (b) Allow no less than 90 calendar days for interested parties to submit applications to the proper BLM office; and

(c) Provide that applications submitted to the BLM must meet the requirements at subpart 3922 of this part.

Subpart 3922 -- Application Processing

§ 3922.10 Application processing fee.

(a) An applicant nominating or applying for a tract for competitive leasing must pay a cost recovery or processing fee that the BLM will determine on a case-by-case basis as described in § 3000.11 of this chapter and as modified by the following provisions.

(b) The cost recovery process for a competitive oil shale lease is as follows:

(1) The applicant nominating the tract for competitive leasing must pay the fee before the BLM will process the application and publish a notice of competitive lease sale;

(2) The BLM will publish a sale notice no later than 30 days before the proposed sale.

The BLM will include in the sale notice a statement of the total cost recovery fee paid to the BLM by the applicant, up to 30 calendar days before the sale;

(3) Before the lease is issued:

(i) The successful bidder, if someone other than the applicant, must pay to the BLM the cost recovery amount specified in the sale notice, including the cost of the NEPA analysis; and

(ii) The successful bidder must pay all processing costs the BLM incurs after the date of the sale notice;

(4) If the successful bidder is someone other than the applicant, the BLM will refund to the applicant the amount paid under paragraph (b)(1) of this section;

(5) If there is no successful bidder, the applicant is responsible for all processing fees;
and

(6) If the successful bidder is someone other than the applicant, within 30 calendar days after the lease sale, the successful bidder must file an application in accordance with § 3922.20 of this chapter.

§ 3922.20 Application contents.

A lease application must be filed by any party seeking to obtain a lease. Lease applications must be filed in the proper BLM state office. No specific form of application is required, but the application must include information necessary to evaluate the impacts of issuing the proposed lease or leases on the human environment. Except as otherwise requested by the BLM, the application must include, but is not limited to, the following:

- (a) Name, address, and telephone number of applicant, and a qualification statement, as required by subpart 3902 of part 3900 of this chapter;
- (b) A delineation of the proposed lease area or areas, the surface ownership (if other than the United States) of those areas, a description of the quality, thickness, and depth of the oil shale and of any other resources the applicant proposes to extract, and environmental data necessary to assess impacts from the proposed development; and
- (c) A description of the proposed extraction method, including personnel requirements, production levels, and transportation methods, including:
 - (1) A description of the mining, retorting, or in situ mining or processing technology that the operator would use and whether the proposed development technology is

substantially identical to a technology or method currently in use to produce marketable commodities from oil shale deposits;

(2) An estimate of the maximum surface area of the lease area that will be disturbed or be undergoing reclamation at any one time;

(3) A description of the source and quantities of water to be used and of the water treatment and disposal methods necessary to meet applicable water quality standards;

(4) A description of the regulated air emissions;

(5) A description of the anticipated noise levels from the proposed development;

(6) A description of how the proposed lease development would comply with all applicable statutes and regulations governing management of chemicals and disposal of solid waste. If the proposed lease development would include disposal of wastes on the lease site, include a description of measures to be used to prevent the contamination of soil and of surface and ground water;

(7) A description of how the proposed lease development would avoid, or, to the extent practicable, mitigate impacts on species or habitats protected by applicable state or Federal law or regulations, and impacts on wildlife habitat management;

(8) A description of reasonably foreseeable social, economic, and infrastructure impacts on the surrounding communities, and on state and local governments from the proposed development;

(9) A description of the known historical, cultural, or archaeological resources within the lease area;

(10) A description of infrastructure that would likely be required for the proposed development and alternative locations of those facilities, if applicable;

- (11) A discussion of proposed measures to mitigate any adverse impacts to the environment and to nearby communities;
- (12) A brief description of the reclamation methods that will be used;
- (13) Any other information that shows that the application meets the requirements of this subpart or that the applicant believes would assist the BLM in analyzing the impacts of the proposed development; and
- (14) A map, or maps, showing:
 - (i) The topography, physical features, and natural drainage patterns;
 - (ii) Existing roads, vehicular trails, and utility systems;
 - (iii) The location of any proposed exploration operations, including seismic lines and drill holes;
 - (iv) To the extent known, the location of any proposed mining operations and facilities, trenches, access roads, or trails, and supporting facilities including the approximate location and extent of the areas to be used for pits, overburden, and tailings; and
 - (v) The location of water sources or other resources that may be used in the proposed operations and facilities.

§ 3922.30 Application -- Additional information.

At any time during processing of the application, or the environmental or similar assessments of the application, the BLM may request additional information from the applicant. Failure to provide the best available and most accurate information may result in suspension or termination of processing of the application, or in a decision to deny the application.

§ 3922.40 Tract delineation.

- (a) The BLM will delineate tracts for competitive sale so to provide for the orderly development of the oil shale resource.
- (b) The BLM may delineate more or less lands than were covered by an application for any reason the BLM determines to be in the public interest.
- (c) The BLM may delineate tracts in any area acceptable for further consideration for leasing, whether or not expression of leasing interest or applications have been received for those areas.
- (d) Where the BLM receives more than 1 application covering the same lands, the BLM may delineate the lands that overlap as a separate tract.

Subpart 3923 -- Minimum Bid

§ 3923.10 Minimum bid.

The BLM will not accept any bid that is less than the FMV. In no case may the minimum bid be less than \$1,000 per acre.

Subpart 3924 Lease Sale Procedures

§ 3924.5 Notice of sale.

- (a) After the BLM complies with § 3921.20 of this chapter, the BLM may publish a notice of the lease sale in the Federal Register containing all information required by paragraph (b) of this section. The BLM will also publish a similar notice of lease sale that complies with this section once a week for 3 consecutive weeks, or such other time

deemed appropriate by the BLM, in 1 or more newspapers of general circulation in the county or counties in which the oil shale lands are situated.

(b) The notice of the sale will:

(1) List the time and place of sale, the bidding method, and the legal land descriptions of the tracts being offered;

(2) Specify where a detailed statement of lease terms, conditions, and stipulations may be obtained;

(3) Specify the royalty rate and the amount of the annual rental;

(4) Specify that, prior to lease issuance, the successful bidder for a particular lease must pay the identified cost recovery amount, including the bidder's proportionate share of the total cost of the NEPA analysis and of publication of the notice; and

(5) Contain such other information as the BLM deems appropriate.

(c) The detailed statement of lease terms, conditions, and stipulations will, at a minimum, contain:

(1) A complete copy of each lease and all lease stipulations to the lease; and

(2) Resource information relevant to the tracts being offered for lease and the minimum production requirement.

§ 3924.10 Lease sale procedures and receipt of bids.

(a) The BLM will accept sealed bids only as specified in the notice of sale and will return to the bidder any sealed bid submitted after the time and date specified in the sale notice. Each sealed bid must include:

(1) A certified check, cashier's check, bank draft, money order, personal check, or cash for one-fifth of the amount of the bonus; and

(2) A qualifications statement signed by the bidder as described in subpart 3902 of part 3900 of this chapter.

(b) At the time specified in the sale notice, the BLM will open and read all bids and announce the highest bid. The BLM will make a record of all bids.

(c) No decision to accept or reject the high bid will be made at the time of sale.

(d) After the sale, the BLM will convene a sale panel to determine:

(1) If the high bid was submitted in compliance with the terms of the notice of sale and these regulations;

(2) If the high bid reflects the FMV of the tract; and

(3) Whether the high bidder is qualified to hold the lease.

(e) The BLM may reject any or all bids regardless of the amount offered, and will not accept any bid that is less than the FMV. The BLM will notify in writing the high bidder whose bid has been rejected and include a statement of reasons for the rejection.

(f) The BLM may offer the lease to the next highest qualified bidder if the successful bidder fails to execute the lease or for any reason is disqualified from receiving the lease.

(g) The balance of the bonus bid is due and payable to the MMS in 4 equal annual installments on each of the first 4 anniversary dates of the lease, unless otherwise specified in the lease.

Subpart 3925 -- Award of Lease

§ 3925.10 Award of lease.

(a) The lease will be awarded to the highest qualified bidder whose bid exceeds the minimum bid, except as provided in § 3924.10 of this chapter. The BLM will provide the successful bidder 3 copies of the oil shale lease form for execution.

(b) Within 60 calendar days after receipt of the lease forms, the successful bidder must sign all copies and return them to the proper BLM office. The successful bidder must also submit the necessary lease bond (see subpart 3904 of this chapter), the first year's rental, any unpaid cost recovery fees, including costs associated with the NEPA analysis, and the bidder's proportionate share of the cost of publication of the sale notice. The BLM may, upon written request, grant an extension of time to submit the items under this paragraph.

(c) If the successful bidder does not comply with this section, the BLM will not issue the lease and the bidder forfeits the one-fifth bonus payment submitted with the bid.

(d) If the lease cannot be awarded for reasons determined by the BLM to be beyond the control of the successful bidder, the BLM will refund the deposit submitted with the bid.

(e) If the successful bidder was not an applicant under § 3922.20 of this chapter, the successful bidder must submit an application and the BLM may require additional NEPA analysis of the successful bidder's proposed operations.

Subpart 3926 Conversion of Preference Right for Research, Demonstration, and Development (R, D and D) Leases

§ 3926.10 Conversion of an R, D and D lease to a commercial lease.

(a) Applications to convert R, D and D leases, including preference right areas, into commercial leases, are subject to the regulations at parts 3900 and 3910, this part, and part 3930, except for lease sale procedures at subparts 3921 and 3924 and § 3922.40.

(b) A lessee of an R, D and D lease must apply for the conversion of the R, D and D lease to a commercial lease no later than 90 calendar days after the commencement of production in commercial quantities. No specific form of application is required. The application for conversion must be filed in the BLM state office that issued the R, D and D lease. The conversion application must include:

(1) Documentation that there has been commercial quantities of oil shale produced from the lease, including the narrative required by the R, D and D leases;

(2) Documentation that the lessee consulted with state and local officials to develop a plan for mitigating the socioeconomic impacts of commercial development on communities and infrastructure;

(3) A bid payment no less than specified in §3923.10 of this chapter and equal to the FMV of the lease; and

(4) Bonding as required by §3904.14 of this chapter.

(c) The lessee of an R, D and D lease has the exclusive right to acquire any and all portions of the preference right area designated in the R, D and D lease up to a total of 5,120 acres in the lease. The BLM will approve the conversion application, in whole or in part, if it determines that:

(1) There have been commercial quantities of shale oil produced from the lease;

(2) The bid payment for the lease met or exceeded FMV;

(3) The lessee consulted with state and local officials to develop a plan for mitigating the socioeconomic impacts of commercial development on communities and infrastructure;

(4) The bond is consistent with § 3904.14 of this chapter; and

(5) Commercial scale operations can be conducted, subject to mitigation measures to be specified in stipulations or regulations, without unacceptable environmental consequences.

(d) The commercial lease must contain terms consistent with the regulations in parts 3900 and 3910, this part, and part 3930 and stipulations developed through appropriate NEPA analysis.

Subpart 3927 -- Lease Terms

§ 3927.10 Lease form.

Leases are issued on a BLM approved standard form. The BLM may modify those provisions of the standard form that are not required by statute or regulations and may add such additional stipulations and conditions, as appropriate, with notice to bidders in the notice of sale.

§ 3927.20 Lease size.

The maximum size of an oil shale lease is 5,760 acres and the minimum size of an oil shale lease is 160 acres.

§ 3927.30 Lease duration.

Leases issue for a period of 20 years and continue as long as there is annual minimum production or as long as there are payments in lieu of production (see § 3903.51 of this chapter). The BLM may initiate procedures to cancel a lease under subpart 3934 of part 3930 of this chapter for not maintaining annual minimum production, for not making the payment in lieu of production, or for not complying with the lease terms, including the diligent development milestones (see § 3930.30 of this chapter).

§ 3927.40 Effective date of leases.

Leases are dated and effective the first day of the month following the date the BLM signs it. However, upon receiving a prior written request, the BLM may make the effective date of the lease the first day of the month in which the BLM signs it.

§ 3927.50 Diligent development.

Oil shale lessees must meet:

- (a) Diligent development milestones;
- (b) Annual minimum production requirements or payments in lieu of production starting the 10th lease year, except when the BLM determines that operations under the lease are interrupted by strikes, the elements, or causes not attributable to the lessee. Market conditions are not considered a valid reason to waive or suspend the requirements for annual minimum production. The BLM will determine the annual production requirements based on the extraction technology to be used and on the BLM's estimate of the recoverable resources on the lease, expected life of the operation, and other factors.

4. Add part 3930 to subchapter C to read as follows:

PART 3930 -- MANAGEMENT OF OIL SHALE EXPLORATION AND LEASES

Subpart 3930 -- Management of Oil Shale Exploration Licenses and Leases

Sec.

3930.10 General performance standards.

3930.11 Performance standards for exploration and in situ operations.

3930.12 Performance standards for underground mining.

3930.13 Performance standards for surface mines.

3930.20 Operations.

3930.30 Diligent development milestones.

3930.40 Penalties for missing diligence milestones.

Subpart 3931 -- Plans of Development and Exploration Plans

3931.10 Exploration plans and plans of development for mining and in situ operations.

3931.11 Content of plan of development.

3931.20 Reclamation.

3931.30 Suspension of operations and production.

3931.40 Exploration.

3931.41 Content of exploration plan.

3931.50 Exploration plan and plan of development modifications.

3931.60 Maps of underground and surface mine workings and in situ surface operations.

3931.70 Production maps and production reports.

3931.80 Core or test hole samples and cuttings.

3931.100 Boundary pillars.

Subpart 3932 -- Lease Modifications and Readjustments

3932.10 Lease size modification.

3932.20 Lease modification land availability criteria.

3932.30 Terms and conditions of a modified lease.

3932.40 Readjustment of lease terms.

Subpart 3933 -- Assignments and Subleases

3933.10 Leases subject to assignment or sublease.

3933.20 Filing fees.

3933.31 Record title assignments.

3933.32 Overriding royalty interests.

3933.40 Lease account status.

3933.51 Bond coverage.

3933.52 Continuing responsibility under assignment and sublease.

3933.60 Effective date.

3933.70 Extensions.

Subpart 3934 -- Relinquishment, Cancellations, and Terminations

3934.10 Relinquishments.

3934.21 Written notice of cancellation.

3934.22 Causes and procedures for lease cancellation.

3934.30 License terminations.

3934.40 Payments due.

3934.50 Bona fide purchasers.

Subpart 3935 -- Production and Sale Records

3935.10 Accounting records.

Subpart 3936 -- Inspection and Enforcement

3936.10 Inspection of underground and surface operations and facilities.

3936.20 Issuance of notices of noncompliance and orders.

3936.30 Enforcement of notices of noncompliance and orders.

3936.40 Appeals.

Authority: 25 U.S.C. 396d and 2107, 30 U.S.C. 241(a), 42 U.S.C. 15927, 43 U.S.C. 1732(b), 1733, and 1740.

Subpart 3930 -- Management of Oil Shale Exploration Licenses and Leases

§ 3930.10 General performance standards.

The operator/lessee must comply with the following performance standards concerning exploration, development, and production:

- (a) All operations must be conducted to achieve Maximum Economic Recovery;
- (b) Operations must be conducted under an approved plan of development or exploration plan;
- (c) The operator/lessee must diligently develop the lease and must comply with the diligence development milestones and production requirements at § 3930.30 of this chapter;
- (d) The operator/lessee must notify the BLM promptly if operations encounter unexpected wells or drill holes that could adversely affect the recovery of shale oil or other minerals producible under an oil shale lease during mining operations, and must not take any action that would disturb such wells or drill holes without the BLM's prior approval;
- (e) The operator/lessee must conduct operations to:
 - (1) Prevent waste and conserve the recoverable oil shale reserves and other resources;
 - (2) Prevent damage to or degradation of oil shale formations;

- (3) Ensure that other resources are protected upon abandonment of operations; and
- (f) The operator must save topsoil for use in final reclamation after the reshaping of disturbed areas has been completed.

§ 3930.11 Performance standards for exploration and in situ operations.

The operator/lessee must adhere to the following standards for all exploration and in situ drilling operations:

- (a) At the end of exploration operations, all drill holes must be capped with at least 5 feet of cement and plugged with a permanent plugging material that is unaffected by water and hydrocarbon gases and will prevent the migration of gases and water in the drill hole under normal hole pressures. For holes drilled deeper than stripping limits, the operator/lessee, using cement or other suitable plugging material the BLM approves in advance, must plug the hole through the thickness of the oil shale bed(s) or mineral deposit(s) and through aquifers for a distance of at least 50 feet above and below the oil shale bed(s) or mineral deposit(s) and aquifers, or to the bottom of the drill hole. The BLM may approve a lesser cap or plug. Capping and plugging must be managed to prevent water pollution and the mixing of ground and surface waters and to ensure the safety of people, livestock, and wildlife;
- (b) The operator/lessee must retain for 1 year all drill and geophysical logs. The operator must also make such logs available for inspection or analysis by the BLM. The BLM may require the operator/lessee to retain representative samples of drill cores for 1 year;

- (c) The operator/lessee may, after the BLM's written approval, use drill holes as surveillance wells for the purpose of monitoring the effects of subsequent operations on the quantity, quality, or pressure of ground water or mine gases; and
- (d) The operator/lessee may, after written approval from the BLM and the surface owner, convert drill holes to water wells. When granting such approvals, the BLM will include a transfer to the surface owner of responsibility for any liability, including eventual plugging, reclamation, and abandonment.

§ 3930.12 Performance standards for underground mining.

- (a) Underground mining operations must be conducted in a manner to prevent the waste of oil shale, to conserve recoverable oil shale reserves, and to protect other resources. The BLM must approve in writing permanent abandonment and operations that render oil shale inaccessible.
- (b) The operator/lessee must adopt mining methods that ensure the proper recovery of recoverable oil shale reserves.
- (c) Operators/lessees must adopt measures consistent with known technology to prevent or, where the mining method used requires subsidence, control subsidence, maximize mine stability, and maintain the value and use of surface lands. If the plan of development indicates that pillars will not be removed and controlled subsidence is not part of the plan of development, the POD must show that pillars of adequate dimensions will be left for surface stability, considering the thickness and strength of the oil shale beds and the strata above and immediately below the mined interval.

(d) The lessee/operator must have the BLM's approval to temporarily abandon a mine or portions thereof.

(e) The operator/lessee must have the BLM's prior approval to mine any recoverable oil shale reserves or drive any underground workings within 50 feet of any of the outer boundary lines of the federally-leased or federally-licensed land. The BLM may approve operations closer to the boundary after taking into consideration state and Federal environmental laws and regulations.

(f) The lessee/operator must have the BLM's prior approval before drilling any lateral holes within 50 feet of any outside boundary.

(g) Either the operator/lessee or the BLM may initiate the proposal to mine oil shale in a barrier pillar if the oil shale in adjoining lands has been mined out. The lessee/operator of the Federal oil shale must enter into an agreement with the owner of the oil shale in those adjacent lands prior to mining the oil shale remaining in the Federal barrier pillars (which otherwise may be lost).

(h) The BLM must approve final abandonment of a mining area.

§ 3930.13 Performance standards for surface mines.

(a) Pit widths for each oil shale seam must be engineered and designed to eliminate or minimize the amount of oil shale fender to be left as a permanent pillar on the spoil side of the pit.

(b) Considering mine economics and oil shale quality, the amount of oil shale wasted in each pit must be minimal.

(c) The BLM must approve the final abandonment of a mining area.

- (d) The BLM must approve the conditions under which surface mines, or portions thereof, will be temporarily abandoned, under the regulations in this part.
- (e) The operator/lessee may, in the interest of conservation, mine oil shale up to the Federal lease or license boundary line, provided that the mining:
- (1) Complies with existing state and Federal mining, environmental, reclamation, and safety laws and rules; and
 - (2) Does not conflict with the rights of adjacent surface owners.
- (f) The operator must save topsoil for final application after the reshaping of disturbed areas has been completed.

§ 3930.20 Operations.

- (a) Maximum Economic Recovery (MER). All mining and in situ development and production operations must be conducted in a manner to yield the MER of the oil shale deposits, consistent with the protection and use of other natural resources, the protection and preservation of the environment, including, land, water, and air, and with due regard for the safety of miners and the public. All shafts, main exits, and passageways, and overlying beds or mineral deposits that at a future date may be of economic importance must be protected by adequate pillars in the deposit being worked or by such other means as the BLM approves.
- (b) New geologic information. The operator must record any new geologic information obtained during mining or in situ development operations regarding any mineral deposits on the lease. The operator must report this new information in a BLM-approved format to the proper BLM office within 90 calendar days after obtaining the information.

(c) Statutory compliance. Operators must comply with applicable Federal and state law, including, but not limited to the following:

- (1) Clean Air Act (42 U.S.C. 1857 et seq.);
- (2) Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 et seq.);
- (3) Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.);
- (4) National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.);
- (5) Archaeological and Historical Preservation Act, as amended (16 U.S.C. 469 et seq.);
- (6) Archaeological Resources Protection Act, as amended (16 U.S.C. 470aa et seq.); and
- (7) Native American Graves Protection and Repatriation Act, as amended (25 U.S.C. 3001 et seq.).

(d) Resource protection. The following additional resource protection provisions apply to oil shale operations:

- (1) Operators must comply with applicable Federal and state standards for the disposal and treatment of solid wastes. All garbage, refuse, or waste must either be removed from the affected lands or disposed of or treated to minimize, so far as is practicable, their impact on the lands water, air, and biological resources;
- (2) Operators must conduct operations in a manner to prevent adverse impacts to threatened or endangered species and any of their habitat that may be affected by operations.
- (3) If the operator encounters any scientifically important paleontological remains or any historical or archaeological site, structure, building, or object on Federal lands, it must immediately notify the BLM. Operators must not, without prior BLM approval,

knowingly disturb, alter, damage, or destroy any scientifically important paleontological remains or any historical or archaeological site, structure, building, or object on Federal lands.

§ 3930.30 Diligent development milestones.

(a) Operators must diligently develop the oil shale resources consistent with the terms and conditions of the lease, plan of development, and these regulations. If the operator does not maintain or comply with diligent development milestones, the BLM may initiate lease cancellation. In order to be considered diligently developing the lease, the lessee/operator must comply with the following diligence milestones:

(1) Milestone 1. Within 2 years of the lease issuance date, submit to the proper BLM office an initial plan of development that meets the requirements of subpart 3931. The operator must revise the plan of development following subpart 3931 of this part, if the BLM determines that the initial plan of development is unacceptable;

(2) Milestone 2. Within 3 years of the lease issuance date, submit a final plan of development. The BLM may, based on circumstances beyond the control of the lessee or operator, or on the complexity of the plan of development, grant a 1 year extension to the lessee or operator to submit a complete plan of development;

(3) Milestone 3. Within 2 years after the BLM approves the final plan of development, apply for all required Federal and state permits and licenses;

(4) Milestone 4. Before the end of the 7th year after lease issuance, begin infrastructure installation, as required by the BLM approved plan of development; and

(5) Milestone 5. Before the end of the 10th year after lease issuance, begin oil shale production.

(b) Operators may apply for additional time to complete a milestone. The BLM may grant additional time for completing a milestone if the operator provides documentation that shows to the BLM's satisfaction that achieving the milestone by the deadline is not possible for reasons that are beyond the control of the operator.

(c) Operators must maintain minimum annual production every year after the 10th lease year or pay in lieu of production according to the lease terms.

(d) Each lease will provide for minimum production. The minimum production requirement stated in the lease must be met by the end of the 10th lease year and will be based on the BLM's estimate of the extraction technology to be used, the recoverable resources on the lease, expected life of the operation, and other factors the BLM considers.

(e) Each lease will provide for payment in lieu of the minimum production for any particular year starting the 10th lease year. Payments in lieu of production in year 10 of the lease satisfies Milestone 5 in paragraph (a)(5) of this section.

§ 3930.40 Penalties for missing diligence milestones.

The BLM will assess a penalty of \$50 for each acre in the lease for each missed diligence milestone each year until the operator or lessee complies with § 3930.30(a) of this chapter. For example: If the operator does not submit the required plan of development within 2 years of lease issuance (the first milestone), the BLM will assess the operator an additional \$50 per acre penalty each year until the milestone is met. If the operator does

not meet the second milestone (apply for all required permits and licenses by 2 years after the BLM approves the plan of development), the BLM will assess the operator \$50 per acre penalty per year resulting in a total penalty of \$100 per acre, per year. If the operator does not begin production by the end of the initial lease term, or make payments in lieu thereof, the BLM may initiate lease cancellation procedures (see §§ 3934.21 and 3934.22 of this part).

Subpart 3931 -- Plans of Development and Exploration Plans

§ 3931.10 Exploration plans and plans of development for mining and in situ operations.

(a) The plan of development must provide for reasonable protection and reclamation of the environment and the protection and diligent development of the oil shale resources in the lease.

(b) The operator must submit to the proper BLM office an exploration plan or plan of development describing in detail the proposed exploration, testing, development, or mining operations to be conducted. Exploration plans or plans of development must be consistent with the requirements of the lease or exploration license and protect nonmineral resources and provide for the reclamation of the lands affected by the operations on Federal lease(s) or exploration license(s). All plans of development and exploration plans must be submitted to the proper BLM office.

(c) The lessee or operator must submit 3 copies of the plan of development to the proper BLM office or submit it in an acceptable electronic format. Contact the proper BLM

office for detailed information on submitting copies electronically (see § 3931.40 for submission of exploration plans).

(d) The BLM will consult with any other Federal, state, or local agencies involved and review the plan. If the BLM denies the plan, it will indicate what additional information is necessary to complete the application.

(e) All development and exploration activities must comply with the BLM-approved plan of development or exploration plan.

(f) Activities under § 3931.40 of this subpart, other than casual use, may not begin until the BLM approves an exploration plan or plan of development.

§ 3931.11 Content of plan of development.

The plan of development must contain, at a minimum, the following:

(a) Names, addresses, and telephone numbers of those responsible for operations to be conducted under the approved plan and to whom notices and orders are to be delivered, names and addresses of Federal oil shale lessees and corresponding Federal lease serial numbers, and names and addresses of surface and mineral owners of record, if other than the United States;

(b) A general description of geologic conditions and mineral resources within the area where mining is to be conducted, including appropriate maps;

(c) A copy of a suitable map or aerial photograph showing the topography, the area covered by each lease, the name and location of major topographic and cultural features;

(d) A statement of proposed methods of operation and development, including the following items as appropriate:

- (1) A description detailing the extraction technology to be used;
- (2) The equipment to be used in development and extraction;
- (3) The proposed access roads;
- (4) The size, location, and schematics of all structures, facilities, and lined or unlined pits to be built;
- (5) The stripping ratios, development sequence, and schedule;
- (6) The number of acres in the Federal lease(s) or license(s) to be affected;
- (7) Comprehensive well design and procedure for drilling, casing, cementing, testing, stimulation, clean-up, completion, and production, for all drilled well types, including those used for heating, freezing, and disposal;
- (8) A description of the methods and means to protect and monitor all aquifers;
- (9) Surveyed well location plats or project-wide well location plats;
- (10) A description of the measurement and handling of produced fluids, including the anticipated production rates and estimated recovery factors; and
- (11) A description/discussion of the controls that the operator will use to protect the public, including identification of:
 - (i) Essential operations, personnel, and health and safety precautions;
 - (ii) Programs and plans for noxious gas control (hydrogen sulfide, ammonia, etc.);
 - (iii) Well control procedures;
 - (iv) Temporary abandonment procedures; and
 - (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 plan of development.

§ 3931.20 Reclamation.

(a) The operator or lessee must restore the disturbed lands to their pre-mining or pre-exploration use or to a BLM-determined higher use.

(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 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 plan of development, 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 submit to the proper BLM office for approval 5 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 Historic Places that may be present in the lease area; and
- (7) Known cultural or archaeological resources located within the proposed exploration area;
- (d) A description of the methods to be used to conduct oil shale exploration, reclamation, and abandonment of operations including, but not limited to:
- (1) The types, sizes, numbers, capacity, and uses of equipment for drilling and blasting, and road or other access route construction;
 - (2) Excavated earth-disposal or debris-disposal activities;
 - (3) The proposed method for plugging drill holes; and
 - (4) The estimated size and depth of drill holes, trenches, and test pits;
- (e) An estimated timetable for conducting and completing each phase of the exploration, drilling, and reclamation;
- (f) The estimated amounts of oil shale or oil shale products to be removed during exploration, a description of the method to be used to determine those amounts, and the proposed use of the oil shale or oil shale products removed;
- (g) A description of the measures to be used during exploration for Federal oil shale to comply with the performance standards for exploration (§ 3930.10);

(h) A map at a scale of 1:24,000 or larger showing the areas of land to be affected by the proposed exploration and reclamation. The map must show:

- (1) Existing roads, occupied dwellings, and pipelines;
 - (2) The proposed location of trenches, roads, and other access routes and structures to be constructed;
 - (3) Applicable Federal lease and exploration license boundaries;
 - (4) The location of land excavations to be conducted;
 - (5) Oil shale exploratory holes to be drilled or altered;
 - (6) Earth-disposal or debris-disposal areas;
 - (7) Existing bodies of surface water; and
 - (8) Topographic and drainage features; and
- (i) The name and address of the owner of record of the surface land, if other than the United States. If the surface is owned by a person other than the applicant or if the Federal oil shale is leased to a person other than the applicant, include evidence of authority to enter that land for the purpose of conducting exploration and reclamation.

§ 3931.50 Exploration plan and plan of development modifications.

(a) The operator or lessee may apply in writing to the BLM for modification of the approved exploration plan or plan of development to adjust to changed conditions or to correct an oversight. To obtain approval of an exploration plan or plan of development

modification, the operator or lessee must submit to the proper BLM office a written statement of the proposed modification and the justification for such modification.

(b) The BLM may require a modification of the approved exploration plan or plan of development.

(c) The BLM may approve a partial exploration plan or plan of development, if circumstances warrant, or if development of an exploration or plan of development for the entire operation is dependent upon unknown factors that cannot or will not be determined until operations progress. The operator or lessee must not, however, perform any operation not covered in a BLM-approved plan.

§ 3931.60 Maps of underground and surface mine workings and in situ surface operations.

Maps of underground workings and surface operations must be to a scale of 1:24,000 or larger if the BLM requests it. All maps must be appropriately marked with reference to government land marks or lines and elevations with reference to sea level. When required by the BLM, include vertical projections and cross sections in plan views. Maps must be based on accurate surveys and certified by a professional engineer, professional land surveyor, or other professionally qualified person. Accurate copies of such maps must be furnished by the operator to the BLM when and as required. All maps submitted must be in a format acceptable to the BLM. Contact the proper BLM office for information on what is the acceptable format to submit maps.

§ 3931.70 Production maps and production reports.

- (a) Report production of all oil shale products or by-products to the BLM on a monthly basis.
- (b) Report all production and royalty information to the MMS under 30 CFR parts 210 and 216.
- (c) Submit production maps to the proper BLM office at the end of each royalty reporting period or on a schedule determined by the BLM. Show all excavations in each separate bed or deposit on the maps so that the production of minerals for any period can be accurately ascertained. Production maps must also show surface boundaries, lease boundaries, topography, and subsidence resulting from mining activities.
- (d) If the lessee or operator does not provide the BLM the maps required by this section, the BLM will employ a licensed mine surveyor to make a survey and maps of the mine, and the cost will be charged to the operator or lessee.
- (e) If the BLM believes any map submitted by an operator or lessee is incorrect, the BLM may have a survey performed, and if the survey shows the map submitted by the operator or lessee to be substantially incorrect in whole or in part, the cost of performing the survey and preparing the map will be charged to the operator or lessee.
- (f) For in situ development operations, the lessee or operator must submit a map showing all surface installations, including pipelines, meter locations, or other points of measurement necessary for production verification as part of your plan of development. All maps must be modified as necessary for adequate representation of existing operations.
- (g) Within 30 calendar days after well completion, the lessee or operator must submit to the proper BLM office 2 copies of a completed Form 3160-4, Well Completion or

Recompletion Report and Log, limited to information that is applicable to oil shale operations. Well logs may be submitted electronically using a BLM approved electronic format. Describe surface and bottom-hole locations in latitude and longitude.

§ 3931.80 Core or test hole samples and cuttings.

(a) Within 30 calendar days after drilling completion, the operator or lessee must submit to the proper BLM office a signed copy of records of all core or test holes made on the lands covered by the lease or exploration license. The records must show the position and direction of the holes on a map. The records must include a log of all strata penetrated and conditions encountered, such as water, gas, or unusual conditions, and copies of analysis of all samples. Provide this information to the proper BLM office in either paper copy or in a BLM-approved electronic format. Contact the proper BLM office for information on submitting copies electronically. Within 30 calendar days after creation, the operator or lessee must also submit to the proper the BLM office a detailed lithologic log of each test hole and all other in-hole surveys or other logs produced. Upon the BLM's request, the operator or lessee must provide to the BLM splits of core samples and drill cuttings.

(b) The lessee or operator must abandon surface exploration drill holes for development or holes for exploration to the BLM's satisfaction by cementing or casing or by other methods approved in advance by the BLM. Abandonment must be conducted in a manner to protect the surface and not endanger any present or future underground or surface operation or any deposit of oil, gas, other mineral substances, or ground water.

(c) Operators may convert drill holes to surveillance wells for the purpose of determining the effect of subsequent operations upon the quantity, quality, or pressure of ground water or mine gases. The BLM may require such conversion or the operator may request that the BLM approve such conversion. Prior to lease or exploration license termination, all surveillance wells must be plugged and abandoned and reclaimed, unless the surface owner assumes responsibility for reclamation of such surveillance wells. The transfer of liability for reclamation will not be considered complete until the BLM approves it in writing.

(d) Drilling equipment must be equipped with blowout control devices suitable for the pressures encountered and acceptable to the BLM.

§ 3931.100 Boundary pillars.

(a) All boundary pillars must be at least 50 feet thick, unless otherwise specified in writing by the BLM. Boundary and other main pillars may be mined only with the BLM's prior written consent or on the BLM's order.

(b) If the oil shale on adjacent Federal lands has been worked out beyond any boundary pillar and no hazards exist, the operator or lessee must, on the BLM's written order, mine out and remove all available oil shale in such boundary pillar, both in the lands covered by the lease and in the adjacent Federal lands, when the BLM determines that such oil shale can be mined safely without undue hardship to the operator or lessee.

(c) If the mining rights in adjacent lands are privately owned or controlled, the lessee must have an agreement with the owners of such interests for the extraction of the oil shale in the boundary pillars.

Subpart 3932 -- Lease Modifications and Readjustments

§ 3932.10 Lease size modification.

(a) A lessee may apply for a modification of a lease to include Federal lands adjacent to those in the lease. The total area of the lease, including the acreage in the modification application and any previously authorized modification, must not exceed the maximum lease size (see §3927.20 of this chapter).

(b) An application for modification of the lease size must:

- (1) Be filed with the proper BLM office;
- (2) Contain a legal land description of the additional lands involved;
- (3) Contain an explanation of how the modification would meet the criteria in §3932.20(a) which qualifies the lease for modification;
- (4) Explain why the modification would be in the best interest of the United States;
- (5) Include a nonrefundable processing fee that the BLM will determine under § 3000.11 of this chapter; and
- (6) Include a signed qualifications statement consistent with subpart 3902 of part 3900 of this chapter.

§ 3932.20 Lease modification land availability criteria.

(a) The BLM may grant a lease modification if:

- (1) There is no competitive interest in the lands covered by the modification application;

(2) The lands covered by the modification application cannot be reasonably developed as part of another independent federally-approved operation;

(3) The modification would be in the public interest; and

(4) The modification does not cause a violation of lease size limitations under §3927.20 of this chapter or acreage limitations under § 3901.20 of this chapter.

(b) The BLM may approve adding lands covered by the modification application to the existing lease without competitive bidding, but before the BLM will approve adding lands to the lease, the applicant must pay in advance the FMV for the interests to be conveyed.

(c) Before modifying a lease, the BLM will prepare any necessary NEPA analysis covering the proposed lease area under 40 CFR parts 1500 through 1508 and recover the cost of such analysis from the applicant.

§ 3932.30 Terms and conditions of a modified lease.

(a) The terms and conditions of a lease modified under this subpart will be made consistent with the laws, regulations, and land use plans applicable at the time the lands are added by the modification.

(b) The royalty rate for the lands in the modification is the same as for the original lease.

(c) Before the BLM will approve a lease modification, the lessee must file a written acceptance of the conditions in the modified lease and a written consent of the surety under the bond covering the original lease as modified. The lessee must also submit evidence that the bond has been amended to cover the modified lease and pay BLM processing costs.

§ 3932.40 Readjustment of lease terms.

(a) All leases are subject to readjustment of lease terms, conditions, and stipulations at the end of the first 20-year period (the primary term of the lease) and at the end of each 10-year period thereafter.

(b) Royalty rates will be subject to readjustment at the end of the primary term and every 20 years thereafter.

(c) At least 30 days prior to the expiration of the readjustment period, the BLM will notify the lessee by written decision if any readjustment is to be made and of the proposed readjusted lease terms, including any revised royalty rate.

(d) Readjustments may be appealed. In the case of an appeal, unless the readjustment is stayed by the Interior Board of Land Appeals or the courts, the lessee must comply with the revised lease terms, including any revised royalty rate, pending the outcome of the appeal.

Subpart 3933 -- Assignments and Subleases

§ 3933.10 Leases subject to assignment or sublease.

Any lease may be assigned or subleased in whole or in part to any person, association, or corporation that meets the qualification requirements in subpart 3902 of part 3900 of this chapter to hold such lease. The BLM may approve or disapprove assignments and subleases.

§ 3933.20 Filing fees.

Each application for assignment or sublease of record title or overriding royalty must include a nonrefundable filing fee of \$60. The BLM will not accept any assignment that does not include the filing fee.

§ 3933.31 Record title assignments.

(a) File in triplicate at the proper BLM office a separate instrument of assignment for each lease assignment. File the assignment application within 90 calendar days after the date of final execution of the assignment instrument and with it include the:

- (1) Name and current address of assignee;
- (2) Interest held by assignor and interest to be assigned;
- (3) Serial number of the affected lease and a description of the lands to be assigned as described in the lease;
- (4) Percentage of overriding royalties retained; and
- (5) Dated signature of assignor.

(b) The assignee must provide a single copy of the request for approval of assignment which must contain a:

- (1) Statement of qualifications and holdings as required by subpart 3902 of part 3900 of this chapter;
- (2) Date and the signature of the assignee; and
- (3) Nonrefundable filing fee of \$60.

(c) The approval of an assignment of all interests in a specific portion of the lands in a lease will create a separate lease, which will be given a new serial number.

§ 3933.32 Overriding royalty interests.

File at the proper BLM office, for record purposes only, all overriding royalty interest assignments within 90 calendar days after the date of execution of the assignment.

§ 3933.40 Lease account status.

The BLM will not approve an assignment of a lease unless the lease account is in good standing.

§ 3933.51 Bond coverage.

Before the BLM will approve an assignment, the assignee must submit to the proper BLM office a new bond in an amount to be determined by the BLM, or, in lieu thereof, documentation of consent of the surety on the present bond to the substitution of the assignee as principal (see subpart 3904 of part 3900 of this chapter).

§ 3933.52 Continuing responsibility under assignment and sublease.

(a) The assignor and its surety are responsible for the performance of any obligation under the lease that accrues prior to the effective date of the BLM's approval of the assignment. After the effective date of the BLM's approval of the assignment, the assignee and its surety are responsible for the performance of all lease obligations that accrue after the effective date of the BLM's approval of the assignment of the lease, notwithstanding any terms in the assignment to the contrary. If the BLM does not approve the assignment, the assignor's obligation to the United States continues as though no assignment had been filed.

(b) After the effective date of approval of a sublease, the sublessor and sublessee are jointly and severally liable for the performance of all lease obligations, notwithstanding any terms in the sublease to the contrary.

§ 3933.60 Effective date.

An assignment or sublease takes effect, so far as the United States as lessor is concerned, on the first day of the month following the BLM's final approval, or if the assignee requests it in advance, the first day of the month of the approval.

§ 3933.70 Extensions.

The BLM's approval of an assignment or sublease does not extend the readjustment period of the lease.

Subpart 3934 -- Relinquishments, Cancellations, and Terminations

§ 3934.10 Relinquishments.

(a) A lease or exploration license or any legal subdivision thereof may be surrendered by the record title holder by filing a written relinquishment, in triplicate, in the BLM state office having jurisdiction of the lands covered by the relinquishment.

(b) To be relinquished, the lease account must be in good standing and the relinquishment must be considered to be in the public interest.

(c) A relinquishment will take effect on the date the BLM approves it, subject to the:

- (1) Continued obligation of the lessee or licensee and surety to make payments of all accrued rentals and royalties;
 - (2) The proper rehabilitation of the lands to be relinquished to a condition acceptable to the BLM under these regulations;
 - (3) Terms of the lease or license; and
 - (4) Approved exploration plan or development plan.
- (d) Prior to relinquishment of an exploration license, the licensee must give any other parties participating in activities under the exploration license the opportunity to take over operations under the exploration license. The licensee must provide to the BLM written evidence that the offer was made to all other parties participating in the exploration license.

§ 3934.21 Written notice of cancellation.

The BLM will provide the lessee or licensee written notice of any default, breach, or cause of forfeiture, and provide a time period of 30 calendar days to correct the default, to request an extension of time in which to correct the default, or to submit evidence showing why the BLM is in error and why the lease or exploration license should not be canceled.

§ 3934.22 Causes and procedures for lease cancellation.

(a) The BLM will take appropriate steps in a United States District Court of competent jurisdiction to institute proceedings for the cancellation of the lease if the lessee:

- (1) Does not comply with the provisions of the Act as amended and other relevant statutes;
 - (2) Does not comply with any applicable regulations; or
 - (3) Defaults in the performance of any of the terms, covenants, and stipulations of the lease, and the BLM does not formally waive the default, breach, or cause of forfeiture.
- (b) A waiver of any particular default, breach, or cause of forfeiture will not prevent the cancellation and forfeiture of the lease for any other default, breach, or cause of forfeiture, or for the same cause occurring at any other time.

§ 3934.30 License terminations.

The BLM may terminate an exploration license if:

- (a) The BLM issued it in violation of any law or regulation, or if there are substantive factual errors, such as a lack of title;
- (b) The licensee does not comply with the terms and conditions of the exploration license; or
- (c) The licensee does not comply with the approved exploration plan.

§ 3934.40 Payments due.

If a lease is canceled or relinquished for any reason, all bonus, rentals, royalties, and minimum royalties paid will be forfeited, and any amounts not paid will be immediately payable to the United States.

§ 3934.50 Bona fide purchasers.

The BLM will not cancel a lease or an interest in a lease of a purchaser if at the time of purchase the purchaser was not aware and could not have reasonably determined from the BLM records the existence of a violation of any of the following:

- (a) Federal regulatory requirements;
- (b) The Act, as amended; or
- (c) Lease terms and conditions.

Subpart 3935 -- Production and Sale Records

§ 3935.10 Accounting records.

(a) Operators or lessees must maintain records that provide an accurate account of, or include all:

- (1) Oil shale mined;
- (2) Oil shale put through the processing plant and retort;
- (3) Mineral products produced and sold;
- (4) Shale oil products, shale gas, and shale oil by-products sold; and
- (5) Shale oil products and by-products that are consumed on-lease for the beneficial use of the lease.

(b) The records must include relevant quality analyses of oil shale mined or processed and of all products including synthetic petroleum, shale oil, shale gas, and shale oil by-products sold.

(c) Production and sale records must be made available for the BLM's examination during regular business hours.

Subpart 3936 -- Inspection and Enforcement

§ 3936.10 Inspection of underground and surface operations and facilities.

Operators, licensees, or lessees must allow the BLM, at any time, either day or night, to inspect or investigate underground and surface mining or exploration operations to determine compliance with lease or license terms and conditions, compliance with the approved exploration or development plan, and to verify production.

§ 3936.20 Issuance of notices of noncompliance and orders.

(a) If the BLM determines that an operator, licensee, or lessee has not complied with established requirements, the BLM will issue to the operator, licensee, or lessee a notice of noncompliance.

(b) If operations threaten immediate, serious, or irreparable damage to the environment, the mine or deposit being mined, or other valuable mineral deposits or other resources, the BLM will order the cessation of operations and will require the operator, licensee, or lessee to revise the plan of development or exploration plan.

(c) The operator, licensee, or lessee will be considered to have received all orders or notices of noncompliance and orders that the operator, licensee, or lessee receives by personal delivery or certified mail. The BLM will consider service of any notice of noncompliance or order to have occurred 7 business days after the date the notice or order is mailed. Verbal orders and notices may be given to officials at the mine or exploration site, but the BLM will confirm them in writing within 10 business days. The

operator or lessee must notify the BLM of any change of address or operator or lessee name.

§ 3936.30 Enforcement of notices of noncompliance and orders.

(a) If the operator, licensee, or lessee does not take action in accordance with the notice of noncompliance, the BLM may issue an order to cease operations or initiate legal proceedings to cancel or terminate the lease or license under subpart 3934 of this chapter.

(1) A notice of noncompliance will state how the operator, licensee, or lessee has not complied with established requirements, and will specify the action which must be taken to correct the noncompliance and the time limits within which such action must be taken. The operator, licensee, or lessee must notify the BLM when noncompliance items have been corrected.

(2) If the operator, licensee, or lessee does not comply with the notice of noncompliance or order within the specified time frame, the operator, licensee, or lessee must pay a fine of \$500 per day until the noncompliance is corrected to the BLM's satisfaction.

(3) Noncompliance with the approved exploration or development plan that results in wasted resource may result in the lessee or licensee being assessed royalty at the market value, in addition to the noncompliance fine.

(b) If the BLM determines that the failure to comply with the exploration or development plan threatens health or human safety or immediate, serious, or irreparable damage to the environment, the mine or the deposit being mined or explored, or other valuable mineral deposits or other resources, the BLM may, either in writing or verbally

followed with written confirmation within 5 business days, order the cessation of operations or exploration without prior notice.

§ 3936.40 Appeals.

Notices of noncompliance and orders or decisions issued under the regulations in this part may be appealed as provided in part 4 of this title. All decisions and orders by the BLM under this part remain effective pending appeal unless the BLM decides otherwise. A petition for the stay of a decision may be filed with the Interior Board of Land Appeals.

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