

**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641**

DECISION RECORD

PROJECT NAME: Colorado Oil Shale Research, Development, and Demonstration (RD&D) Lease Tracts Project

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-110-2011-0177-EA

DECISION

It is my decision to recommend the authorized issuance of Oil Shale Research, Development, and Demonstration (RD&D) lease (COC74300), as described in the Proposed Action with specified mitigation of Environmental Assessment (EA), DOI-BLM-CO-110-2012-0177-EA to ExxonMobil Exploration Company with the mitigation measures listed below. The terms and conditions of the RD&D lease form requires the Lessee to conduct all operations under the lease in compliance with all applicable Federal, State and local statutes, regulations, and standards, including future statutory and regulatory provisions applicable to oil shale. The following terms, conditions, stipulations, and other specified mitigation measures are incorporated in the Proposed Action as outlined in the EA, and are comprised of the Bureau of Land Management (BLM) specifications and guidelines, industry standard measures, and environmental commitments put forth by ExxonMobil Exploration Company. These measures were designed for site-specific and regional mitigation so as to lessen the potential for adverse effects to public lands administered by the BLM White River Field Office.

Mitigation Measures

Air Quality and Climate

- Employ dust suppression techniques (i.e., freshwater use) whenever there is a visible dust trail behind service vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.
- Maintaining appropriate speed limits to help reduce dust emissions.
- Onsite incineration will be performed to mitigate generation of CO and NO_x.

Geology and Minerals

- To limit interference with the use of Williams' existing well pad RGU 31-34-198, EM shall contact Williams prior to commencement of construction activities associated with the RD&D lease tract.
- All sodium minerals recovered during operations remain the property of the federal government and shall not be disposed of without prior approval from the Authorized Officer.

Soils

- All new infrastructure and well pads on the lease tract will be located on old disturbance to the maximum extent possible to avoid additional disturbances in the project area.
- Salvaged topsoil will be re-spread during interim reclamation on stable cut and fill slopes and other areas. Topsoil will not be stored in piles during the interim reclamation.
- Excess salvaged topsoil will be placed in shallow stockpiles adjacent to construction zones and operational facilities to support and maintain those characteristics of topsoil that will aid in future reclamation and revegetation efforts.
- All new roads and existing access roads will be constructed and maintained according to BLM Manual 9113 standards including the following:
 - locate culverts or drainage dips in such a manner to avoid discharge onto unstable terrain such as headwalls or slumps;
 - provide adequate spacing to avoid the accumulation of water in ditches or road surfaces;
 - install culverts with adequate armoring of inlet and outlet;
 - patrol areas susceptible to road or watershed damage during periods of high runoff; and
 - keep road inlet and outlet ditches, catch basins, and culverts free of obstructions, particularly before and during spring run-off.
 - Culverts and waterbars will be sized for the 10-year storm event with no static head, and to pass a 25-year event without failing. BMPs associated with stormwater management/erosion control will be applied to the site during construction and drilling/ completion operations. Wattles may be used for perimeter runoff control around the location and stockpiles
- Gully crossings within both lease tracts will conform to BLM Manual 9113 standards and be stable without erosion for 10 year storm events and not fail with 25-year storm events.
- An impervious liner with a thickness of at least 24 mils will be required for any pits that contain liquids used for drilling.
- Should erosion features (i.e., riling, gulying, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance) occur as a result of RD&D activity, they will be addressed immediately upon observation, by first contacting the Authorized Officer and then submitting a plan to assure successful soil stabilization with best management practices (BMPs) to address erosion problems.

Surface and Ground Water

- A site-specific SPCC Plan will be created for surface facilities and a copy provided to BLM. Substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers.
- Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, hydraulic fracturing flowback, and all liquid chemicals and chemical solutions shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems shall be lined with a minimum 24-mil impermeable liner. Alternatively, produced water and hydraulic fracturing flowback may be stored in pits with a minimum 24-mil impermeable liner. All fluids may be used, re-used, treated, injected or discharged only in compliance with all applicable statutes and regulations.

- A comprehensive Groundwater and Surface Water Monitoring Plan will be developed prior to the start of operations.
- Any spill, overflow, leak or accidental discharge outside of a secondary containment system shall be reported immediately to the WRFO and promptly remediated.
- Prior to conducting any hydraulic fracturing operation, the operator will obtain approval of the Authorized Officer. That approval will require, at minimum, evidence acceptable to the Authorized Officer that the wellbore casing and cement will withstand the hydraulic fracturing pressures and will not allow any fluids or gases to contact useable water aquifers.
- Develop a remediation plan in conjunction with BLM and other regulatory agencies, as appropriate to remediate any groundwater contamination resulting from RD&D activities.

Vegetation

- Develop a reclamation plan as part of the plan of development in accordance with the RD&D lease form.
- Cut trees with a chain saw and/or mechanical shears and cutting brush with a hydro-axe or similar equipment as close to the ground as possible (six inches or less).
- Leave stumps and root balls in place except in areas requiring topsoiling, or as necessary to create a safe and level workspace.
- Shred or chip brush and salvage with topsoil.
- Salvage and replace topsoil to preserve and replace existing seed banks and return organic matter needed for seed establishment to the soil.
- Restore pre-construction contours, drainage patterns, and topsoil.
- Prepare a seedbed (scarifying, tilling, harrowing, or roughening) prior to seeding where needed to improve revegetation potential.
- Install and maintain erosion control measures until vegetation becomes established sufficiently to stabilize disturbed soils. All materials will be certified weed-free.
- Seeding methods should be drill seeding to ensure proper seed placement (broadcast seeding will be used only in areas where steep slopes make drill seeding impossible, and seeding rates will be doubled). Recommend seeding between September 1 and March 15.
- Complete drill and/or broadcast seeding prior to redistribution of woody material.

Invasive, Non-Native Species

- Provide BLM WRFO with weed management plans to address treatment from pre-disturbance, the life of the project, and through final abandonment including a summary of methods used to monitor, treat, and report the presence of noxious or undesirable invasive weeds within the project area and surrounding area (i.e., within 200 feet of areas of direct use).
- Revegetate disturbed areas with approved, weed free seed mixes. To reduce the need for repeated bare ground herbicide treatments around facilities, apply alternative methods such as gravel, weed barrier fabric, or low-growing, disturbance-tolerant herbaceous vegetation as approved by the BLM.
- Conduct pre-construction field surveys prior to construction to identify existing noxious weed infestations within the lease tracts.

- Require vehicles and equipment to arrive at the work site clean, power-washed, and free of soil and vegetative debris capable of transporting weed seeds or other propagules.

Special Status Animal Species

- For raptor species, construction or forest clearing activity is prohibited between February 1 and August 15, inclusive, unless a survey indicates that no functional raptor nest sites would be impacted by these activities. No surface occupancy will be allowed within ¼ mile of a goshawk nest (NSO-02 exception and modification criteria apply) or within ⅛ mile of other raptor species nests (NSO-03 exception and modification criteria apply).
- No Surface Occupancy (NSO-02 and NSO-03 exception and modification criteria apply) is allowed in the following area:
Township 1 South, Range 98 West
Section 34: Lot 8.
- Raptor surveys consistent with the most-current WRFO raptor nest survey protocols will be conducted prior to construction periods during the nesting season. If an active nest is located appropriate WRFO timing stipulations will be applied. A ½-mile timing limitation buffer will be applied to active goshawk nests [TL-01 exception and modification criteria apply] and a ¼-mile timing limitation buffer will be applied to other active raptor nests [TL-04 exception and modification criteria apply].
- Construction or forest clearing activity is prohibited between February 1 and August 15, inclusive, (TL-01 and TL-04 exception and modification criteria apply) in the following area:
Township 1 South, Range 98 West
Section 34: S1/2 Lot 1, E1/2 Lot 7, Lot 8

Migratory Birds

- For all non-raptor migratory birds, ground or vegetation disturbing activity will be avoided to the extent possible during the nesting season (May 15 – July 15).
- To prevent raptor electrocutions when constructing powerlines, provide adequate clearances to accommodate a large bird between energized and/or grounded parts. It is recommended to use 60 inches of horizontal separation and 48 inches of vertical separation. If adequate clearances cannot be accomplished, covering or insulating phases or grounds is recommended. In addition, perch inhibitors may be used where clearances or cover cannot be used.

Terrestrial Wildlife

- Seed disturbed areas with native seed mixes as discussed in the Vegetation section. Detected weeds or invasive species would be controlled using herbicides and methods approved by WRFO and the RMP. BLM would identify particular seed mixes for seeding portions of the pipeline ROWs where big game forage is to be optimized. Strategic use of reclamation fencing would be required when and where necessary to achieve desired reclamation response (e.g., establishment of desired reclamation components).
- Provide all drivers with information and possible training describing the types of wildlife species in the area that are susceptible to vehicular collisions to reduce the potential for vehicle/big-game or vehicle/raptor collisions. Identify seasonal periods where reduced

vehicle speeds would be implemented as a means to reduce potential for vehicle/wildlife collisions.

- Prevent accidental entries or inability of exit of temporary open excavations by wildlife, stock, and public by covering, fencing, or sloping or flagging these areas.
- The operator shall prevent migratory bird access to facilities that store or are expected to store fluids which may pose a risk to such birds (e.g., drowning, toxicity, compromised insulation). Features that prevent access to such fluids must be in place and functional at all times until such facilities are removed or incapable of storing fluids. All lethal and non-lethal events that involve migratory birds inadvertently gaining access to fluids will be reported to the USFWS Special Agent in Grand Junction, Colorado (970-257-0795).
- Vegetation clearing and high intensity construction operations are not allowed on big game severe winter ranges from January 1 to April 30, inclusive, on the lease tract. Exceptions and modifications may be granted by the WRFO Field Office Manager consistent with those provisions provided for in the 1997 White River RMP (TL-08 exception and modification criteria).

Cultural Resources

- The operator/holder is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
- If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. The operator/holder will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The operator/holder, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
- Pursuant to 43 CFR 10.4(g), the operator/holder must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator/holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

Paleontological Resources

- A paleontological monitor will be present prior to and during any excavation into bedrock of the Uinta Formation, at the direction of the BLM.
- The lessee and the operator are jointly responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.

- If any paleontological resources are discovered as a result of operations under this authorization, the lessee, operator, or any of their agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 working days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

Visual Resources

- In consultation with the BLM WRFO Visual Resource Specialist, all above ground facilities will be painted a color selected from the BLM Standard Environmental Color Chart CC-001: June 2008 to blend with the surrounding landscape.

Fire Management

- Notify Craig Interagency Dispatch (970-826-5037) in the event of any wildland fire within or in the vicinity of the lease. The reporting party will inform the dispatch center of the location of the fire, size, status, smoke color, aspect, fuel type and contact information. The reporting party or a representative will remain nearby, unless otherwise directed, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
- The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not compromised and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used, the applicant will notify incoming fire resources of the extinguisher type and the location of use.
- Natural ignitions caused by lightning will be managed by federal fire personnel. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not compromised. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager. Moreover, removal of slash and woody debris associated with the proposed action shall follow mitigations as authorized.

Forest Management

- All trees removed in the process of construction shall be purchased from the BLM. Prior to any surface disturbing activities, the operator must purchase and obtain a commercial vegetative materials removal permit from the WRFO-BLM. Once it is known where the infrastructure will be constructed, the amount of cords per acre to be removed must be determined and WRFO must be notified. This volume will be used to charge the applicant for the vegetative materials removed. Trees should first be used in reclamation efforts and then any excess material made available for firewood or other uses.

- Woody material smaller than 4 inches in diameter will be chipped and stockpiled for later use in reclamation. Woods chips can be incorporated into the topsoil layer to add an organic component to the soil to aid in reclamation success.
- Woody materials, not used for woods chips, required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20-30 percent ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.
- Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

Rangeland Management

- Project proponents must repair or replace to BLM specifications any livestock control facilities and/or rangeland improvements (e.g., fences, waterlines ponds, water tanks, etc.) impacted during this operation. Measures will be taken to maintain the function of these projects throughout construction and the life of these projects (i.e., temporary fences during specific construction activities to prevent livestock drift between pastures until permanent fences can be reconstructed).

Realty Authorizations

- If installation of linear facilities results in crossing existing federal rights-of-way (ROWs), the applicant will coordinate activities with the ROW holder(s).
- ROW application(s) will be submitted for any off-lease facilities and/or access roads.

Noise Abatement

- Process facility compressors and pumps will be electric motor-driven to mitigate noise. Portable generators, if needed, will have noise control equipment installed to meet noise requirements at the lease boundary.
- Drill rigs, that will be used to drill appraisal wells, monitor wells, production wells, and observation holes will meet current noise abatement regulations.

Best Management Practice

- Minimize vegetation removal to the extent necessary to allow for safe and efficient construction activities.
- Employ, maintain, and periodically update to the best available technology(s) prescribed by regulations aimed at reducing emissions, fresh water use and hazardous material utilization, production and releases through all phases of development and production.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the Endangered Species Act, and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan.

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the referenced environmental assessment (EA), and considering the significance criteria in 40 CFR 1508.27, a Finding of No Significant Impact (FONSI) was prepared. The Proposed Action with mitigation will not have a significant effect on the human environment. Therefore, preparation of an environmental impact statement is not necessary. This finding is based on the context and intensity of the alternatives as detailed in the FONSI.

PUBLIC INVOLVEMENT

The proponents' plans of operations were available and posted on the on the White River Field Office website on April 18 starting a 30 day scoping period that ended May 17, 2011. During the scoping period two informational public open houses provided the opportunity for questions and answer on specific project proposals were conducted on April 27 and 28, 2011, in Rifle and Meeker, Colorado, respectively. The preliminary Environmental Assessment was posted for 30 day comment period beginning May18, 2012 and ended June 16, 2012. A total of six comment letters were received from the following: Colorado Parks and Wildlife (CPW), Colorado Department of Public Health and Environment (CPDHE), Garfield County, Western Resources Advocates (WRA) (also represented Colorado Environmental Coalition, EcoFlight, National Wildlife Foundation, Natural Defense Council, Sierra Club, The Wilderness Society, Western Colorado Congress, and Wilderness Workshop), one individual and the National Oil Shale Association. These were summarized into approximately 50 comments concerned with air, water, greenhouse gasses, fracking, wildlife, need for second round RDD, and commercial development. Appendix F contains BLM's response to comments.

RATIONALE

The EA evaluated a Proposed Action, a Proposed Action with Mitigation (specified), and a No Action Alternatives for the proposed lease tract. The Proposed Action with specified mitigation is the preferred alternative and is recommended to ensure that impacts to health and human environment are reduced or minimized to insignificant levels. The Proposed Action with specified mitigation incorporates all practicable means to avoid or minimize impacts to health and the human environment.

The No Action Alternative was not selected because it would not fulfill the purpose, need and requirements of the RD&D program, or Congressional intent declared in the Energy Policy Act of 2005.

The decision to grant an Oil Shale Research, Development, and Demonstration lease to ExxonMobil Exploration Company has been made in consideration of the factors described above. The Proposed Action with specified mitigation represents an opportunity to develop domestic energy sources and to inform and advance knowledge of commercially viable production, development and recovery technologies consistent with sound environmental

management. It also will provide a basis for informed future decisions about whether and when to move forward with commercial scale development and allow for the assessments of its impacts on the environment.

Analysis of the Proposed Action with specified mitigation has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health.

ADMINISTRATIVE REMEDIES

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 Code of Federal Regulation (CFR), Part 4.400 and Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from date of publication this decision. The appellant has the burden of showing that the Decision appealed from is in error. If you wish to file a petition for a stay of the effectiveness of this Decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. A copy of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals (IBLA) and to the appropriate Office of the Solicitor (see 43 CFR4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for obtaining a stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success of the merits;
3. The likelihood of immediate and irreparable harm if the stay is not granted, and;
4. Whether the public interest favors granting the stay.

SIGNATURE OF AUTHORIZED OFFICIAL:


Acting Field Manager

DATE SIGNED:

8/30/12