

APPENDIX F

Luman Rim Natural Gas Development Project

BLM STANDARD STIPULATIONS, BEST MANAGEMENT PRACTICES, AND MITIGATION REQUIREMENTS

1.0 INTRODUCTION

These guidelines will provide for consistency in determining requirements for avoiding and mitigating environmental impacts and resource and land use conflicts. Consistency does not mean that identical requirements would be applied to all similar types of activities that may cause similar types of impacts. Nor does it mean that the requirements or guidelines for a single land use activity would be identical in all areas.

The following elements are included in this Appendix:

1. BLM Standard Stipulations, as required in leases and the Green River RMP (BLM 1997).
2. Best Management Practices (BMPs), as applied to resources.
3. Mitigation requirements, as applied to resources.

2.0 PURPOSE

The purposes of the "Wyoming BLM Mitigation Guidelines" are to (1) reserve for the BLM the right to modify the operations of all surface and other human presence disturbance activities as part of the statutory requirements for environmental protection, and (2) inform a potential lessee, permittee, or operator of the requirements that must be met when using BLM-administered public lands. These guidelines have been written in a format that will allow for (1) their direct use as stipulations, and (2) the addition of specific or specialized mitigation following the submission of a detailed plan of development or other project proposal and an environmental analysis. Those resource activities or programs currently lacking a standardized set of permit or operation stipulations can use the mitigation guidelines as stipulations or as conditions of approval, or as a baseline for developing specific stipulations for a given activity or program.

3.0 STANDARD STIPULATIONS

The "Wyoming BLM Standard Oil and Gas Lease Stipulations" were developed in 1986. During their implementation, it was recognized that various land uses, other than those related to oil and gas exploration and development, should be subject to similar kinds of environmental protection requirements. Using the Wyoming BLM standard oil and gas lease stipulations as a basis, development of the "Wyoming BLM Standard Mitigation Measures for Surface-Disturbing Activities" began.

The term "guidelines" better describes the intent and use of these mitigation standards than the terms "stipulations" or "measures." These guidelines are primarily for the purpose of attaining consistency in how requirements are determined for avoiding and mitigating environmental impacts and resource and land use conflicts. Consistency in this sense does not mean that identical requirements would be applied for all similar activities that may cause similar types of impacts. Nor does it mean that the requirements or guidelines for a single activity would be identical in all areas.

Some of the seasonal restrictions in the standard oil and gas lease stipulations contain the statement,

"This limitation does not apply to maintenance and operation of producing wells." This statement was included because the stipulations were developed specifically for application to oil and gas leases at the

time of issuance, not for activities associated with producing wells. At lease issuance, the only action that can be generally contemplated is the possibility that exploratory drilling may occur somewhere on the lease area. Unfortunately, the provision has been interpreted by some people to mean that the seasonal restriction disappears at the operational stage (i.e., if a producing well is attained). It must be understood that at both the oil and gas exploration stage and the operation or development stages, additional site-specific environmental analyses are conducted and any needed restrictions or mitigations identified become part of the operational or development plan. For example, wells may continue to produce, but related activity may be limited. Thus, it is possible for such seasonal restrictions to continue in effect and be applicable to maintenance and operation of producing wells, if supported by the environmental analyses.

3.1 Big Game Winter Range

Crucial big game winter ranges will be closed from November 15 through April 30. Exceptions may be granted if field inspections reveal a lack of actual or potential wildlife use.

3.2 Raptor Nests

No activity or surface disturbance will be allowed for up to a 0.5 mile radius from active raptor nest sites other than Ferruginous Hawk for which the avoidance is 1.0 miles, from February 1 through July 31. A nest site will be considered active if it has been used within the past three years. Actual distances and dates will vary based on topography, species, season of use, and other pertinent factors.

3.3 Greater Sage-Grouse

No activity or surface disturbance will be allowed within 0.25 mile of a sage grouse lek center from March 1 through July 15 to protect breeding, nesting and brood rearing habitat or as stated in lease specific COAs. The authorized officer may grant exceptions which may include:

- Activities which do not disturb the surface may be allowed any time from June 1 through March 14.
- Activities which do not disturb the surface may be allowed from March 15 through May 31 from five hours after sunrise until two hours before sunset.

3.4 Riparian and Wetland Areas

No surface disturbance will be allowed within 500 feet of perennial streams or live water or 1000 feet of ephemeral drainages. Crossings of perennial streams will be minimized. When rehabilitation of a riparian area is required, the primary objective will be soil stabilization. The reestablishment of riparian vegetation will always be a key objective. The desired plant species composition after rehabilitation will depend on site-specific objectives.

3.5 Historic Trails

Generally, visual intrusion and surface disturbance will be restricted or prohibited within 1,320 feet from either side of a historic trail, or within the visual horizon of the trail, whichever is closer.

3.6 Threatened, Endangered, and Sensitive Species

Appropriate measures to protect all threatened, endangered, and sensitive plant and animal species will be applied to all actions and use authorizations. These measures could include avoidance, "no surface occupancy," "no surface disturbance," and seasonal restrictions.

Actual distances and dates will vary based on topography, species, season of use, and other pertinent factors.

4.0 BEST MANAGEMENT PRACTICES

The Operator would adhere to all conditions included with their leases and to all federal and state laws and regulations. The Operator would also commit to performing the following BMPs, per the requirements in BLM IM No. 2007-021:

- Interim reclamation of well locations and access roads soon after the well is put into production.

The goal of this BMP is to minimize long-term loss of habitat, forage, visual resources, soils, and to prevent the introduction of invasive species. Portions of well pads and roads that would not be used during production operations would be re-contoured, leaving only areas necessary for workovers and operations un-contoured. Salvaged top soils would be spread across all disturbed areas except those that are needed to accommodate year-round traffic and operations. Well locations, reclaimed roads, and gathering pipeline rights-of-way would be re-vegetated with a BLM-approved seed mixture. Where practical, road surfaces and turnarounds would also be re-vegetated. With low traffic roads, this would result in a hardpan, two-track road that is stable and requires less maintenance. To ensure continued energy production operations, the operator would be allowed to drive, park, and set up future workover and maintenance operations on newly re-vegetated areas. Where there is a moderate to high risk of wildfire, a small buffer area would be left around production facilities or grass would be mowed prior to workover setup. Where future wells are anticipated to be drilled from the same well location within a year or two, approval to delay interim reclamation may be granted.

- Painting of all new facilities a color that best allows the facility to blend with the background, typically a vegetated background.

The goal of this BMP is to minimize visual contrast by making production facilities less noticeable. Above-ground production facilities would be painted with colors that allow the facilities to blend into the background. The BLM and the Operator would identify the best colors to match the surrounding vegetation and soil types. The Operator may need to paint drill rig anchors and minor working tips and edges of production facilities that are subject to OSHA safety requirements a red, yellow, or orange color. The Operator would not be required to paint wooden structures, including distribution power poles. To minimize contrast, Operator would avoid lighter colors, white doors or roofs, galvanized silver electrical boxes and guardrails, and signs with white backgrounds.

- Design and construction of all new roads to a safe and appropriate standard "no higher than necessary" to accommodate their intended use.

The goal of this BMP is to minimize long-term loss of habitat, vegetation, soil, and visual resources. All roads would be designed and constructed to an appropriate standard that is no higher than necessary to adequately accommodate their intended function. Design, construction, and maintenance activities would be consistent with national policies for safety and resource protection.

- Final reclamation and re-contouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.

The goal of this BMP is to restore the landform, vegetation, habitat, soil, and visual resources to the same conditions that occurred prior to well development. Topsoil will be stripped from areas that have not already been re-contoured and redistributed uniformly over all disturbed areas. BLM-approved fertilizers will be used when available to encourage rapid re-growth of BLM-approved seed mixtures. Revegetation could result in color contrast initially that will decrease as native plants and shrubs re-colonize. Nearly all roads would be re-contoured to ensure that they blend into the surrounding landscape.

- Burying of gas gathering pipelines in or adjacent to access roads and use of common rights-of-way and utility corridors.

Burying gas gathering lines in or adjacent to the road or in common rights-of-way with existing surface disturbance decreases surface disturbance and visual resource impacts.

- Use of field automation.

Monitoring automated wells from a central office location would decrease the frequency of well visits. The decreased activity within the field would reduce traffic collisions and noise impacts to wildlife, including pronghorn, raptors, and sage-grouse.

In addition, the following BMPs may be applied to reduce resource impacts:

- Installation of raptor perch avoidance.

The goal of this BMP is to discourage raptor perching on tank batteries using proven anti-perching devices. This BMP would reduce potential predation of BLM sensitive species, including sage grouse and prairie dogs.

- Installation of bird caps on process stacks and tight netting/closed tops on tankage.

The goal of this BMP is to discourage migratory birds from becoming trapped in processing equipment. This BMP would reduce potential migratory bird mortality.

Table F.1: Consolidated Table of Application of BMPs and Mitigation Measures for Resources.

Resource	BMPs/Mitigation
Surface Geology	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) No surface disturbance within 500 feet of perennial streams, live water, or riparian areas or 1000 feet of ephemeral drainages. 2) No surface disturbance on slopes exceeding 25% 3) Final reclamation recountouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.
Geohazards	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) No surface disturbance on slopes exceeding 25%.
Paleontology	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Authorizations for surface-disturbing activities will be conditioned to minimize adverse impacts to paleontological resources. 2) Operations that cause disturbance to the Green River Formation will require a survey by a BLM-approved paleontologist, and mitigation measures may be required, as appropriate. 3) Operations that cause disturbance to the Bridger Formation will require a survey by a BLM-approved paleontologist, and mitigation measures may be required, as appropriate. 4) In the event of discovery of fossil resources during project activities, operations must cease and the BLM must be notified. The BLM will then take appropriate actions, which may include a requirement for surveys and development of additional mitigation measures. 5) In addition to required mitigations, a worker education program relating to the importance of fossil resources and the illegality of unauthorized collecting, combined with strict enforcement provisions by the Operator, would reduce the potential for loss of important paleontological information.
Soils	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Avoidance of badland and steep slope (<25%) sensitive soils. 2) Where avoidance is not feasible, incorporate special soil stabilization and erosion control measures. 3) Avoidance of all areas within 500 feet of surface water and riparian areas. 4) Interim reclamation of well locations and access roads in the first available period within 1 year after the well is put into production.

Resource	BMPs/Mitigation
Water	<p>BMPs/ Mitigation</p> <ol style="list-style-type: none"> 1) Avoidance of all areas within 500 feet of surface water and riparian areas or 1000 feet of ephemeral drainages. 2) Continuation of the cementing policy. 3) Collocating gathering lines with roads to reduce the project footprint and minimize disturbance to visual resources.
Noise	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Equip sources of noise with effective mufflers or noise suppression systems. 2) Monitor automated wells remotely to decrease traffic noise. 3) Reduce noise levels to 49 dBA or less, particularly during the bird nesting season (1 April through 30 June) to minimize the effects of continuous noise on bird populations. Constant noise generators should be located far enough away from sensitive habitats or muffled such that noise reaching those habitats is less than 49 dBA. 4) From 1 March through 15 May, anthropogenic sources of continuous or frequently intermittent noise should not exceed 10 dBA above natural, ambient noise measured at the perimeter of any occupied sage-grouse lek.
Vegetation/Wetlands	<p>BMPs</p> <ol style="list-style-type: none"> 1) Interim reclamation of well locations and access roads in the first available period within 1 year after the well is put into production. 2) Use only native species for interim and final reclamation unless authorized by the BLM. 3) Avoidance of all areas within 500 feet of surface water and riparian areas or 1000 feet of ephemeral drainages. 4) Follow the Wyoming BLM Standards for Healthy Rangelands. <p>Mitigation</p> <ol style="list-style-type: none"> 1) Treat halogeton infestations prior to surface disturbance or before reclamation to optimize the effectiveness of weed removal. General herbicides may be appropriate for removal of dense stands of halogeton. If weeds are not controlled in the first year of growth prior to weed seed production, a long-term source of weed seed will be present in reclaimed areas. 2) Any unavoidable impacts to wetlands would require mitigation (enhancement, restoration, or creation), as per the requirements of the Clean Water Act. Any mitigation would be developed on a site-specific basis.

Resource	BMPs/Mitigation
Fisheries and Wildlife	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Installing raptor perch avoidance structures 2) Installation of bird caps on process stacks and tight netting/closed tops on tankage. 3) Burying gathering pipelines 4) Implement noise reduction/mitigation techniques (details in Noise section) 5) Monitor automated wells remotely to decrease traffic collisions and noise. 6) Collocate gathering pipelines in roads in sensitive wildlife habitats 7) Interim reclamation of well locations and access roads in the first available period within 1 year after the well is put into production. 8) Design and construction of all new roads to a safe and appropriate standard “no higher than necessary” to accommodate their intended use.
Livestock Grazing and Rangeland Health	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Interim reclamation of well locations and access roads in the first available period within 1 year after the well is put into production. 2) Follow rangeland health standards.
Cultural Resources	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Avoidance of ground disturbance at significant cultural/historical resource sites and highly sensitive archaeological locales 2) Archaeological excavation or HABS/HAER documentation of significant cultural/historical resource sites or site portions. 3) Native American sensitive/TCP and discovered site consultation 4) Cultural/historical resource treatment planning and/or Programmatic Agreements. 5) No surface disturbance within 0.25 mile of historic trails or the visual horizon, whichever is closer. 6) Paint all facilities a color that best allows the facility to blend with the background.
Visual	<p>BMPs/Mitigation</p> <ol style="list-style-type: none"> 1) Restrict visual intrusion within 0.25 mile of historic trails. 2) Screening facilities from view and avoiding placement of production facilities on hilltops and ridgelines.

Resource	BMPs/Mitigation
	3) Paint all facilities a color that best allows the facility to blend with the background. 4) Gravel of road color shall be similar to adjacent dominant soil colors.
Recreation	Same as wildlife and visual resources.
Human Health and Safety	BMPs/Mitigation The Operator should coordinate emergency response planning with the Uinta and Sweetwater Counties Emergency Management Agency and provide documentation regarding compliance with Federal Hazardous Material Regulations and the Uniform Fire Code.