Attachment C

JIDP Administrative Requirements, Conditions of Approval, and Mitigation

APPENDIX A

JONAH INFILL DRILLING PROJECT ADMINISTRATIVE REQUIREMENTS, CONDITIONS OF APPROVAL, AND MITIGATION

All approved actions within the Jonah Infill Drilling Project Area (JIDPA) may include all or some of the following Conditions of Approval (COAs), administrative requirements, mitigation requirements, and/or Best Management Practices (BMPs).

Authorizing Actions

JIDPA Operators are responsible for adhering to all applicable federal, state, and local laws and/or regulations and for obtaining all necessary federal, state, and county permits. Absent specific revisions in this ROD, Operators will comply with the management objectives, COAs, and mitigation measures identified in the BLM Pinedale RMP ROD (BLM 1988b) and BLM Green River RMP ROD (BLM 1997b) to the extent feasible and practicable.

Land Use/Surface Disturbance

1. Surface disturbance is limited to 46% of the JIDPA at any given time, or a maximum of 14,030 acres. Disturbance will be tracked on an operated-acreage basis. Within six (6) months of the approval of the ROD, all JIDPA Operators shall provide the Authorized Officer the lease number and legal description for all acres they operate, including those acreages they individually operate and those co-operated with others.

2. Credit will be applied to the surface disturbance ceiling for operated acreages on an acre-for-acre basis for areas the BLM considers to have met reclamation objectives (see FEIS Appendix B, Reclamation Plan).

3. Total cumulative field-wide surface disturbance is limited to a maximum of 20,334 acres over the life of the project (LOP).

4. Operators will track surface disturbance acreage and provide BLM and the JIO with Federal Geographic Data Committee (FGDC)-compliant metadata and geographic information system (GIS)/global positioning system (GPS) location data for all newly developed facilities and reclaimed areas within 30 days of completion of disturbance and/or reclamation activities.

5. By January 31 each year, the Operators will provide the JIO and Authorized Officer annual operating plans that include the following information:

   a. all previous year activity to include number of wells drilled, total new surface disturbance by well pads, roads and pipelines, and current status of all reclamation activity; and

   b. plan of development for the upcoming year to include planned number of wells to be drilled and an estimate of new surface disturbance and reclamation activity.

6. Operators will inventory all roads/trails in the JIDPA not already inventoried by BLM within 1 year of the ROD for this project; GIS data will be provided to BLM and the JIO with

FGDC-compliant metadata. Operators will initiate coordination with the JIO prior to implementing this action.

7. Well pad surface disturbance will not exceed 7.0 acres for parent and multi-well pads, 4.0 acres for single-well pads, and 2.0 acres for satellite well pads, unless the Operator can demonstrate to the satisfaction of the Authorized Officer on a case-by-case basis that the size limitation for a given pad would create a significant safety concern for the workers, the public at large, or the environment. These acreages include cut-and-fill slopes, but do not include access roads and pipelines.

8. All new development and production facilities in the JIDPA will be placed at centralized locations to accommodate multiple wells, unless proven to the satisfaction of the Authorized Officer on a case-by-case basis that centralization of development and production facilities would not be technically or economically feasible, or that another method would create less environmental impact. The Operators will centralize existing development and production facilities to the extent economically feasible.

9. Centralized fracturing processes will be required for all well pads when surface density is ≥ 1 well pad/40 acres, and recommended when well pad surface density is < 1 pad/40 acres, unless the Operator can demonstrate to the satisfaction of the Authorized Officer that centralized fracturing is not reasonable or technically or economically feasible, or that another well completion procedure would create less surface impact.

10. Where technically and economically feasible, and at the earliest possible date, Operators will begin piping produced water and condensate from all wells in the JIDPA to an appropriate condensate collection point or sales line and an appropriate produced water treatment, disposal, or centralized transportation facility. Analyses must be provided within one (1) year of the ROD.

11. Operators are encouraged to use closed loop drilling systems for all drilling operations within the JIDPA. A closed-loop drilling system shall be used in the following circumstances:

    a. the well is completely or partially drilled using oil-based drilling mud;

    b. a groundwater aquifer is suspected or known to occur within 50 feet of the pre-disturbance ground surface (in the event groundwater is not encountered within 50 feet of the surface when the hole for the conductor pipe is drilled, the Operator may revert to a reserve pit system for this well);

    c. there is not sufficient area due to terrain features (deep drainages, cliffs, steep slopes, etc.) at the proposed well pad site for a pad with reserve pit;

    d. there is not sufficient area due to (*fill in the blank the constraining value* [*i.e., critical wildlife habitat* (*describe*), *unmitigatable cultural resource site, etc.*]) at the proposed well pad site for a pad with a reserve pit.

12. Operators will remove/vacuum fluids from reserve pits within 60 days from well completion or they must notify the Authorized Officer. In all cases, fluids will be removed as soon as practical.

13. Surface-disturbing activities shall not be conducted on slopes in excess of 25 percent or within 500 feet of surface water and/or riparian habitat.

14. No well pad, road, or other construction shall be conducted in or with frozen materials, or during periods when the soil is saturated, or when watershed damage is likely to occur.

15. No surface occupancy will be allowed within 300 feet of Sand Draw.

Air Quality

1. Tier II or equivalent diesel engine emission technologies will be required for all drill rigs at the earliest possible date.

2. The BLM will work cooperatively with state and other federal agencies, and with industry, to track emissions in the Pinedale Field Office area.

    a. BLM will track numbers of wells, numbers of drill rigs, drilling emissions, and compressor stations.

    b. The Wyoming Department of Environmental Quality, Air Quality Division (WDEQ–AQD) will continue to track permitted emissions.

    c. Operators will provide BLM with information on their drill rigs, including drilling days, horsepower, load factors, and emission factors within 10 days of the completion of drilling operations for each well.

3. Operators will demonstrate by January 31 each year that emission reductions from the Jonah Infill Drilling Project will reduce the potential impact to visibility as follows:

    a. Demonstration Period: Operators in the JIDPA will begin a 12-month demonstration period beginning with the signing of the ROD. In correspondence with BLM, WDEQ affirmed the State's position that BLM "require the use of Tier II diesel technology on drill rigs used in the Jonah area at the earliest possible date" (WDEQ 2005). Because preliminary modeling conducted for the DEIS indicated that emissions from engines for drilling rigs would have to be further reduced to attain the air quality goals stated above, BLM treats emission factors for Tier 2 engines (EPA 1998) as a reference point for the minimum control of emissions during the demonstration period. Operators in the Jonah and Pinedale fields have suggested several technologies that could achieve emissions lower than Tier 2. As part of this demonstration period, the Operators in the Jonah field will conduct emission tests on various drilling engine technologies as defined in a plan to be developed by the Operator(s) and approved by WDEQ-AQD. The results from this demonstration period will be provided to WDEQ as soon as possible, but no later than 1 year after the ROD is signed. WDEQ will then consider the emissions testing data in the determination of the appropriate Best Available Technology (BAT) for the engines associated with all drilling operations. Until such time as the WDEQ-AQD establishes appropriate BAT standards, Operators will be required to demonstrate that the impact levels from the proposed project will be less than the impact levels of the 80% emission reduction scenario as described in FEIS Section 4.1.2.5 and AQTSD Appendix G, Section G-2. Within 90 days of the ROD, the Operators will submit a plan to BLM that describes in detail how the potential impacts will be minimized.

    b. Implementation Period: All Operators will comply with WDEQ-established BAT standards.

c. In the absence of WDEQ-established BAT standards, the Operators will submit annual operating plans that report the emissions from all emitting units in order to demonstrate that the potential visibility impact from the proposed project will be less than the potential visibility impact levels of the 80% emission reduction scenario described in FEIS Section 4.1.2.5 and AQTSD Appendix G, Section G-2, at a minimum, and to demonstrate that any potential visibility impact decreases as soon as possible to no days with an impact greater than or equal to 1 deciview (dv).

d. Based upon emissions data collected during the demonstration period, BLM may run an air dispersion model, comparable to the model run for the AQIAS, to reassess air quality impacts. BLM, in conjunction with the JIO, will use the results of the model to assess whether emission controls in the JIDPA adequately control emissions to achieve the air quality goals. Annually thereafter, BLM will determine whether an additional model run is necessary based upon field-wide emissions or a comparable indicator selected by BLM (in cooperation with the JIO). Operators should continue to innovate by demonstrating and using new techniques for controlling emissions after the demonstration period.

e. The method by which the Operators will demonstrate potential project visibility impact will be determined by BLM in consultation with WDEQ, EPA, USFS, and National Park Service (NPS). BLM will rely on the Operators to determine how they will attain the reduction in potential visibility impacts from the Jonah Infill project.

f. BLM's performance objective for visibility will be attained if actual visibility monitored by the Bridger Wilderness IMPROVE aerosol sampler complies with the reasonable progress goal of the Wyoming Regional Haze State Implementation Plan.

4. In cooperation with the JIO established under the ROD, BLM will review ozone data collected in the area. If in the future air monitoring were to show ozone exceedances attributable at least in part to sources in the Jonah field, BLM will consult with WDEQ-AQD, EPA, USFS, and NPS to determine whether adaptive management would be needed to mitigate impacts.

5. BLM will continue to work cooperatively with WDEQ, EPA, USFS, and NPS to maintain and enhance concentration, atmospheric deposition, and visibility monitoring in the Pinedale Field Office area. The BLM and cooperating agencies will contribute technical expertise and financial resources to maintaining and enhancing air quality monitoring. The Operators will fund and participate in a joint industry/state/federal monitoring agreement to maintain and enhance air quality monitoring.

Wildlife

Monitoring & Inventory

1. Operators will monitor nesting of raptors, including ferruginous hawk, bald eagle, and burrowing owl; greater sage-grouse lek attendance; and occurrence of other sagebrush-obligate species within the JIDPA in coordination with Authorized Officer and the JIO.

2. Operators will inventory greater sage-grouse seasonal habitats within the JIDPA not already inventoried by BLM or WGFD within 1 year after signing of the ROD for this project; GIS data would be provided to the Authorized Officer with FGDC-compliant metadata. Operators would initiate coordination with the Authorized Officer and JIO prior to implementing this action.

3. Operators will coordinate with the Authorized Officer and JIO to review and revise the Jonah Wildlife Monitoring and Protection Plan within 1 year of the ROD for this project.

Raptors

1. Well pads, access roads, and other aboveground facilities will not be located within 825 feet of an active raptor nest, within 1,000 feet of an active ferruginous hawk nest, or within 2,640 feet of any bald eagle nest.

2. The following seasonal restrictions for surface-disturbing activities near active raptor nests/roosting sites/foraging areas will be imposed: (see Appendix A, Table A.3, of the FEIS)

3. February 1 through July 31, within 0.5 mile of all active raptor nests;

4. February 1 through July 31, within 1.0 mile of all active ferruginous hawk nests;

5. February 1 through August 15, within 1.0 mile of all active bald eagle nests;

6. November 1 through April 1, within 1.0 mile of active bald eagle communal winter roosts; and

7. November 1 through April 1, within 1.0 mile of winter forage areas.

Sage Grouse

1. Surface-disturbing and disruptive activities in greater sage-grouse winter habitat will be avoided from November 15 through March 14.

2. Surface-disturbing and disruptive activities in greater sage-grouse nesting and early brood-rearing habitat within 2.0 miles of an occupied lek, or in identified greater sage-grouse nesting and early brood-rearing habitat outside the 2.0-mile buffer will be prohibited from March 15 through July 15.

3. Surface disturbance and occupancy will be prohibited within 0.25 mile of the perimeter of greater sage-grouse leks, and human activity in these areas will be avoided between 8 p.m. and 8 a.m. from March 1 through May 15.

4. Compressor stations will be sited at least 2.0 miles away from greater sage-grouse leks and no closer than 0.5 mile to an active raptor nest.

Soils/Water

1. A groundwater monitoring program for all water wells in or affected by activities in the JIDPA will be implemented. The following specifics apply:

    a. Water wells will be tested annually for static water level, general chemical constituents as determined by the Authorized Officer, and total petroleum hydrocarbons, using WDEQ-approved methods. Annual reports will be provided to the JIO, BLM (Authorized Officer), WDEQ, and WSEO by January 31.

b. Water withdrawal volumes from all water wells utilized within the JIDPA will be monitored and annual depletion reports provided to the JIO, BLM (Authorized Officer), WSEO, and U.S. Fish and Wildlife Service (USFWS) by January 31 each year.

2. Hydraulic structures (culverts, bridges, low water crossings, silt traps, catchments, retention dams, etc.) placed in existing, natural drainage courses will be engineered and designed by a certified civil engineer to ensure the structures are stable and erosion is minimized. Cross-drain structures installed outside existing, natural drainage courses will not require certified civil engineer design.

3. All well pads, roads, pipelines, and other facilities will be engineered and constructed to minimize sediment discharge onto adjacent undisturbed land or down-channel from the JIDPA and to meet WDEQ stormwater discharge requirements.

4. Operators would provide copies of their Spill Prevention, Control, and Countermeasure (SPCC) plans and Storm Water Pollution Prevention Plans (SWPPPs) to the BLM upon request.

5. Stormwater and snowmelt water would be held on the JIDPA for as long as possible to allow for infiltration and to reduce surface flow velocity and associated sediment loads using geofabrics, jute netting, spreader dikes, retention ponds, additional armoring of existing watercourses, or other appropriate techniques.

Transportation

1. Operators will continue to encourage limiting the speed of all vehicles operated by the leaseholder, Operator, or Operator agents in the JIDPA, and will implement voluntary fugitive dust control measures on primary access roads and heavily used resource roads.

2. Project-required traffic in the JIDPA is limited to BLM-approved roads. Operators will continue to cooperate with the BLM to identify and prohibit use of two-tracks where ROWs have not been obtained.

3. Operators will utilize remote telemetry or equivalent technology at all wells to minimize well monitoring trips, unless proven to the satisfaction of the Authorized Officer on a case-by-case basis that installation of remote telemetry or equivalent technology would not be technically or economically feasible, or that another method would create less environmental impact.

Paleontological Values Protection

1. Operators will suspend all operations if previously undetected vertebrate fossil materials are discovered during surface-disturbing activities. Operations will not resume until authorization to proceed is granted by the Authorized Officer.

Reclamation

1. Operators will maximize interim (production phase) well pad reclamation by recontouring to the drilling rig anchor pins and reclaiming/revegetating to within 20 feet of the wellhead, or to within 20 feet of the wellhead, facilities, tanks, and spill containment structures on those pads with production facilities. The initiation of interim reclamation will commence within 30 days after the

last well scheduled on a pad is put into production. In the event that more than 1 year would lapse between the drilling of wells on a pad, the Authorized Officer may require temporary site stabilization measures.

2. Operators will accelerate reclamation of disturbed areas using innovative seed mixtures and application techniques, supplementing natural precipitation with sprinkler irrigation at key times, and/or other practices as approved by the Authorized Officer.

3. Operators will undertake aggressive invasive plant species and noxious weed control or removal in disturbed areas, be responsible for weed control on all disturbed areas in the JIDPA, and be responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods. Where applicable, a "Pesticide Use Proposal" (Form WY-04-9222-1), surfactant material safety data sheet(s), and maps and/or legal descriptions of the area to be treated will be submitted by the Operator to the Authorized Officer no later than December 1 for use the following spring/summer.

4. The following reclamation objectives will be used to determine success of reclamation. Final determination concerning whether or not a reclaimed area meets the rollover or release standards will be made by the Authorized Officer for the BLM.

    a. Rollover reclamation credit requires establishment of viable site-stabilizing plant growth (e.g., resistant to wind and water erosion) and a plant community that approximates surrounding or ecologically comparable vegetative composition to the maximum extent possible.

    b. Final reclamation requires a range of species composition, diversity, cover and production equal to pre-disturbance levels.

5. Wildlife habitat evaluations using Habitat Evaluation Procedures (HEP) and Habitat Suitability Indices (HSI) for appropriate species will be developed within 1 year of the ROD and will be used to evaluate impacts to habitat and the effectiveness of reclamation and mitigation.

6. Operators will restore those portions of pads not needed for production operations to as close to original contours as practical during interim reclamation to minimize or eliminate the need to re-disturb those reclaimed areas when wells are plugged and abandoned.

7. Operators will employ appropriate topsoil storage and replacement technology and procedures to ensure soil viability and plant rooting potential are maintained.

Noise

1. Operators will utilize flareless completions for all wells within the JIDPA unless proven to the satisfaction of the Authorized Officer on a case-by-case basis that flareless completion operations would not be technically or economically feasible or would be unsafe, and that WDEQ has issued a permit to conduct well completion flaring for that specific well.

2. As directed on a case-by-case basis by the Authorized Officer, Operators will monitor the representative noise levels of drilling, cementing, and completion operations 30 feet from the well pad boundary and provide monitoring data to the Authorized Officer within 30 days of the data collection for the establishment of noise impact charts.

3. Operators will monitor noise at noise-sensitive resource locations, as determined by the Authorized Officer, and annually report results to the Authorized Officer and JIO.

Night Lighting

1. On a site-specific basis, nighttime lighting/glare restrictions (e.g., install light shades/hoods, directional lighting, colored lights, wattage limits, motion detectors; extinguish all unnecessary lighting during non-working hours) may be required, consistent with Occupational Safety and Health Administration requirements.

Cultural/Historic Resources Protection

1. Operators will suspend all operations if previously undetected archaeological or historical materials are discovered during surface-disturbing activities. Operations will not resume until authorization to proceed is granted by the Authorized Officer.

Socioeconomic

1. Operators will provide the BLM with their 3-year operational forecasts for the JIDPA by January 31 of each year during field development. These forecasts will include estimates of total drilling activity by year.

Livestock Grazing

1. In coordination with the Authorized Officer and JIO, Operators will:
   a. Monitor the effects of livestock on reclamation projects and native vegetation including, but not limited to, forage utilization and percent composition.
   b. Monitor the effects of gas field development on livestock operations (i.e., death loss, forage quality, etc.).

Visual Resource Management

1. New production facilities would be painted a non-contrasting color which is harmonious with the surrounding landscape (i.e., shale green, unless otherwise specified by BLM on a case-by-case basis); existing production facilities would be painted that color at the earliest opportunity, and no later than when facilities are due for routine repainting.