

Appendix C
BLM GJFO Standard COAs

BLM GJFO STANDARD SURFACE USE CONDITIONS OF APPROVAL

Company/Operator: Fram Operating, LLC
Federal Lease: Whitewater Unit
Date: June 2014

The following standard surface use COAs are in addition to all stipulations attached to the respective Federal lease.

1. Administrative Notification & Requirements. The operator shall notify the BLM representative at least 48 hours prior to initiation of construction or reclamation activities. A pre-construction meeting may be scheduled to review all conditions and or stipulations with the operator. Complete copies of all applicable permits, shall be kept on site during construction and drilling activities. All on-site personnel shall review the approved permit with the COAs before working on the project.
2. Fire. The operator shall implement measures to prevent fires on public and private land and shall be held responsible for the costs of suppressing fires on public lands that result from the actions of its employees, contractors, or subcontractors. Range or forest fires caused or observed by the operator's employees, contractors, or subcontractors shall be immediately reported to the BLM Grand Junction Dispatch 970-257-4800. All fires or explosions that cause damage to property or equipment, loss of oil or gas, or injuries to personnel shall immediately be reported to the BLM Dispatch and the BLM Grand Junction Field Office at 970-244-3000.

During conditions of extreme fire danger, surface-use operations may be restricted or suspended in specific areas, or additional measures may be required by the BLM.

In cases of fire hazard, BLM may require adaptive management techniques to minimize risks.

3. Other Permits. This authorization is contingent upon receipt of and compliance with all applicable federal, state, county, municipal and local permits, including all necessary environmental clearances and permits (Colorado Oil and Gas Conservation Commission (COGCC), U.S. Army Corps of Engineers (USACE), U.S. Fish & Wildlife, U.S. Forest Service, Colorado Department of Transportation, Colorado Department of Health & Environment, County Health and Road Departments, municipalities, etc.).
4. Existing Uses. The operator shall obtain agreements allowing construction and maintenance with all existing right-of-way holders, authorized users, and pipeline operators prior to surface disturbance or construction of a location or access across or adjacent to any existing or approved rights-of-way or pipelines.

In the case of privately owned surface, the operator shall certify to BLM that a Surface Use Agreement has been reached with the private surface owners prior to commencing construction and that the owner has been provided a copy of the Surface Use Plan of Operations (SUPO) required as part of a federal APD. If Agreement cannot be reached, the operator shall comply with provisions of the laws or regulations governing the Federal right of re-entry to the surface (43 CFR 3814).

5. Migratory Bird Act. New surface disturbance, especially vegetation removal, shall not be allowed between May 15 and July 15, to prevent potential taking of migratory birds and/or eggs, unless otherwise approved in writing by the Grand Junction Field Manager. If surface disturbance is

proposed during this period, a written request for exception and a migratory bird survey shall be submitted for approval prior to any surface disturbance. If vegetation removal is accomplished prior to May 15, exception may be granted to allow project activities to proceed during the closure period.

Any bird found dead, injured or apparently ill, especially in or near a pit, trench, tank, exhaust stack, or fence shall immediately be reported to the BLM, at 970-244-3000.

Open metal or plastic pipes or posts shall be permanently filled or capped, to prevent bird entrapment.

All production equipment with a chimney, vent, or stack shall be fitted with a device such as an excluder cone that prevents birds and small mammals from entering or perching on any part of the chimney. Flat screens inside stacks are insufficient protection.

All open top tanks and pits shall be covered or netted to eliminate any hazard to birds and flying mammals (CERCLA Section 101(14)).

6. Federally Protected Species Notifications. Any dead or injured migratory bird, bald or golden eagle, or species listed by the US Fish and Wildlife Service (FWS) as threatened or endangered, that is found in or adjacent to a pit, trench, tank, exhaust stack, or fence shall immediately be reported to the FWS at: Creed Clayton, USFWS, 445 West Gunnison Avenue, Suite 240, Grand Junction, CO 81501; creed_clayton@fws.gov and to the Grand Junction Field Office at 970-244-3000.
7. Jurisdictional Waters of the U.S. The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers (USACE) prior to discharging fill material into Waters of the U.S. (WoUS) in accordance with Section 404 of the Clean Water Act. WoUS are defined in 33 CFR Section 328.3 and may include wetlands as well as perennial, intermittent, and ephemeral streams. Impacts to WoUS may require mitigation. Copies of any approved USACE permits or verification letters shall be forwarded to the BLM prior to permitted work commencing.

When activity in a wetland is unavoidable, the operator may be required to prevent disturbance by use of wooden or other protective mats and shall restore all temporarily disturbed wetlands or riparian areas. The operator shall consult with the BLM to determine appropriate mitigation, including verification of native plant species to be used in restoration. Temporary and permanent impacts to jurisdictional WoUS may require additional mitigation, including compensatory offsite mitigation. Contact the USACE, Colorado West Regulatory Branch, at 970-243-1199, or susan.nall@usace.army.mil.

8. Heritage Resources - Cultural and Paleontological. All persons in the area who are associated with this authorization shall be informed that any person who, without a permit, injures, destroys, excavates, appropriates or removes any vertebrate fossil, historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361). Any heritage resource discovered requires that work in the area must stop and the BLM Authorized Officer notified. Strict adherence to the confidentiality of information concerning the nature and location of archeological resources would be required of the proponent and all of their subcontractors (Archaeological Resource Protection Act, 16 U.S.C. 470hh).

Inadvertent Discovery:

- a) The **National Historic Preservation Act** (NHPA) [16 USC 470s., 36 CFR §800.13], as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during the Proposed Action implementation, work in that area must stop and the BLM

Authorized Officer (AO) must be notified immediately. Within five working days the AO will determine the actions that will likely have to be completed before the site can be used, assuming in place preservation is not necessary §800.13(b)(3).

- b) The **Native American Graves Protection and Repatriation Act** (NAGPRA) [25 USC 3001 et seq., 43 CFR 10.4] requires that if inadvertent discovery of Native American Human Remains or Objects of Cultural Patrimony occurs, any activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice be made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA §3(d)).
 - c) The **Paleontological Resources Preservation Act** (PRPA) [16 U.S.C. 470aaa] requires the proponent to immediately suspend activities in the vicinity, protect the discovery from damage and notify the BLM Authorized Officer of any paleontological resources discovered as a result of operations under this authorization. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the operator. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.
 - d) If human remains are discovered on private or state land associated with this authorization, the BLM will notify the State of Colorado Archaeologist immediately, which will comply with Colorado Revised Statutes (Appendix) regarding the discovery of human remains (24-80-1302).
 - e) In a new discovery situation, the operator may relocate activities to avoid the expense of mitigation and delays associated with this process, as long as the new area has been appropriately inventoried and has no other resource concerns, and the exposed materials are recorded and stabilized. Otherwise, the operator shall be responsible for mitigation costs. The BLM authorized officer will provide technical and procedural guidelines for relocation and/or to conduct mitigation. Upon verification from the BLM authorized officer that the required mitigation has been completed, the operator will be allowed to resume construction.
9. Big Game Winter Range Timing Limitation. Where winter range areas identified by BLM are not protected by lease stipulations, an annual Timing Limitation (TL) period shall apply from January 1 to March 1, to minimize impacts to wintering big game. All construction, drilling, completion, work-overs and other intensive activities are prohibited during the 60-day period. Requests for exceptions to TLs shall be submitted in writing to the BLM via a Sundry Notice or letter.

10. Range Management. Damage to range improvements (fences, gates, reservoirs, pipelines, etc.) shall be avoided, but if they are damaged, the operator shall immediately repair or replace them.

Where an access road bisects an existing livestock fence, a steel frame gate or a cattle-guard with a bypass gate shall be installed across the roadway, unless a landowner dictates otherwise.

11. Soils. Cuts and fills shall be minimized when working on erosive soils and on slopes in excess of 30 percent. On slopes greater than 50 percent, BLM may require a professional geotechnical analysis and/or engineered plans prior to construction.

All cut and fill slopes for roads and well pads shall be protected against rilling and erosion by BMPs such as soil texturing and seeding or additional measures approved by the BLM to minimize the potential for erosion, soil loss and slope failure. Measures may include matting, geotextiles, weed-free straw crimping, anchored bales/wattles, as needed or as detailed by storm water plan or BLM permit. BMPs shall be monitored and maintained in functional condition.

12. Weed Control. **Before any mobilization of equipment onto public lands**, in order to prevent the spread of invasive species, the operator shall perform inspections to insure that all construction equipment and vehicles are clean and free of soil, mud and vegetative material. The operator shall provide copies of such inspections upon request by the BLM. Vehicles and equipment shall avoid driving through or parking on weeds.

Straw mulch, seeds, BMPs and all materials used on BLM lands shall be certified weed-free. Certification shall be provided to the BLM upon request.

In areas with sensitive plant species, weed treatments shall be limited to spot treatments and require site-specific pre-approval by the BLM.

The operator shall regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the BLM/USFS *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. Pesticide Use Proposals (PUPs) shall be approved by the BLM prior to the use of herbicides.

Annual reports regarding weed management and reclamation success shall be submitted to the Grand Junction Field Office in compliance with the *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*.

13. Dust Abatement. The operator shall prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations or wind events. If dust abatement is insufficient, the BLM may direct the operator to change the level and type of treatment. BLM approval is required before application of surfactants, binding agents, or other dust-suppression chemicals on federally permitted projects and on public lands. More stringent dust control may be required in areas adjacent to Federal- or State-listed threatened, endangered, or sensitive plant species.
14. Pre-Construction and Limits of Disturbance. An onsite pre-construction meeting may be required, to ensure that construction proceeds in accordance with all specifications, approved permit and COAs. At least 48 hours prior to initiation of construction or reclamation activities, contact Julia Christiansen at 970-244-3093 or the Grand Junction Field Office at 970-244-3000.

Construction control and limit-of-disturbance stakes shall be placed before construction, and maintained in place throughout, to ensure construction in accordance with the surface use plan.

Pre-construction storm water BMPs shall be installed before pre-construction inspection.

Limit-of-disturbance (LOD) stakes or markers shall be placed before pre-construction inspection. If disturbed during construction, they shall be immediately replaced before construction proceeds and remain in place until final construction cleanup is completed. Markers shall be visible from one to another and no further than 100 feet apart. Access road, pipeline and pad edges, cut and fill slopes and soil storage areas shall also be distinctively marked with flagging, snow fence or stakes, visible from one to another. All construction control markers shall remain in place until the post-construction inspection with the BLM is concluded.

15. Storm Water Management and Soil Protection. A General Construction Permit from the Colorado Department of Public Health and Environment (CDPHE) is required and a copy shall be provided to the BLM prior to construction. Permit compliance, which coincides with BLM resource protection objectives, requires a site-specific Storm Water Management Plan, controls for storm water run-off and run-on, adaptive BMPs and systematic monitoring and maintenance of all BMPs. Storm water BMPs may also be designed to function as Spill Prevention, Control and Countermeasures (SPCC) controls, reclamation BMPs or visual resource protection BMPs.

Pre-construction storm water BMPs shall be installed before construction starts and be inspected during pre-construction inspections.

All BMPs must be maintained in good repair and functional condition, including clean-out of sediment basins and catchments, and replacement of straw wattles/ bales or silt fence.

16. As-Built Details. Within 30 days of setting production facilities or completing a facility, pipeline, location or new road, the operator shall submit to the BLM a digital “as-built” file that documents the actual boundaries of disturbance for that location/feature. This perimeter shall include all disturbance related to the permitted location: the pad, all storm water BMPs, and the complete disturbance area of new access roads. All fill slopes, cut slopes, associated soil storage areas, etc. shall be depicted. The digital depiction shall be in an ArcGIS-compatible format (shapefile or geodatabase), in NAD83, UTM coordinate system, Zone 13 North, in meters.

17. Drainage Crossings and Culverts. Pads, roads, and pipelines shall be located away from defined drainages wherever possible. Where construction is located within 100 feet of a drainage, an adequate vegetative buffer, artificial buffer (e.g., straw bales, matting, etc.), or filter strip shall be maintained between the constructed feature and the drainage, to minimize sediment transport into the drainage.

All vehicles shall be fueled at least 100 feet from stream corridors.

Any construction activities at perennial, intermittent and ephemeral drainage crossings (e.g. burying pipelines, installing culverts) shall be timed to avoid high flow conditions. The minimum culvert diameter in any installation for a drainage crossing or road drainage shall be 24 inches. Culverts on perennial and intermittent streams shall be designed to allow for passage of aquatic biota. Culverts at drainage crossings shall be designed and installed to pass, without development of a static head at the pipe inlet, at least a 25-year storm event, but may be deemed to require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the USACE recommends designing drainage crossings for the 100-year event. Contact the USACE Colorado West Regulatory Branch at 970-243-1199.

18. Road Construction, Use and Maintenance. Roads shall be crowned or sloped, drained with ditches, culverts and/or water dips, and constructed, sized and surfaced in compliance with BLM Gold Book standards (pp. 24-28).

Water outlets and roadside ditches shall incorporate BMPs such as rip-rap, sediment catchments and anchored check structures that slow water velocity, to prevent erosion and sediment transport. Ditches may be revegetated and/or include large rocks or other BMPs to slow water and settle sediment. Ditch revegetation may be required in erodible soils. All drainage ditches and culverts shall be kept clear and free flowing, and shall be maintained in good condition.

Road use and construction shall halt under conditions of undue damage and erosion to soils, roads and/or locations. When saturated soil conditions exist on access roads or location, or rutting deepens past 3 inches, construction and travel shall halt until soil material dries out, is frozen sufficiently or is otherwise brought to standards that provide for resource protection. Where applicable, initial road base/gravel application shall be of CDOT Class 6 aggregate or equivalent, to a minimum depth of 6 inches.

Where roads are located near drainages, vegetated buffer strips shall be left between areas of disturbance and drainages. (See Drainage Crossings and Culverts.)

All cut and fill slopes for roads (and well pads and related locations) shall be protected against rilling and erosion with BMPs such as soil texturing and seeding or additional measures approved by the BLM. Measures may include geotextiles, weed-free straw crimping/ bales/ wattles/ matting, as needed or as detailed by storm water plan or BLM permit. BMPs shall be monitored and maintained in functional condition.

Roads that access active construction and drilling sites shall be posted with warning signs to alert hunters and recreational vehicle users to project personnel and vehicles in the area. Construction and rig schedules may be included.

Project personnel shall restrict activities and travel to permitted roads and sites.

Operator shall install speed control measures on project-related unpaved roads and enforce them with project personnel.

The operator shall routinely provide timely maintenance of roads. Regular maintenance shall include, but not be limited to dust abatement, reconstruction of the crown, slope, or water dips/bars; blading or resurfacing; clean-out of ditches, culverts, catchments and other BMPs. When rutting of the travel-way deepens to 3 inches, maintenance or upgrade shall be conducted as approved by BLM.

19. Visual Resource Protection. Pads, roads, pipelines and production facilities shall be located and placed to avoid or minimize visibility from travel corridors, residential areas and other sensitive observation points and shall be designed to maximize reshaping of cut/fill slopes and interim reclamation of the pad.

To the extent practical, existing vegetation shall be preserved when clearing and grading for pads, roads, and pipelines. Trees or shrubs may be appropriate to cut or shred in place, to protect visual resources, enhance slope stability or to leave root systems in place. The BLM may direct that cleared trees and rocks be salvaged and redistributed over reshaped cut-and-fill slopes or along linear features. Salvaged native rocks may be also be used where appropriate as perimeter storm water controls, toe slope anchors or angular armor against erosion protection.

To mitigate straight-line visual contrast effects of cut/ fill slopes, pad margins or cleared vegetation, adaptive management techniques may be required by the BLM before or after construction. For example, additional tree removal could be required along a contrasting edge, to create irregularly shaped openings or natural-looking mosaic patterns; surfaces might require texturing or coloring to mitigate visual contrasts.

Construction shall utilize measures such as soil-roughening, recontouring and/or revegetation, and/or shall be employed to reduce contrasts in texture, color and form. Hydro-applied colorant of fill slopes may be required.

To blend with the natural environment, all permanent above-ground facilities placed on the location shall be painted a natural color to blend with the background landscape, in a non-reflective finish. A BLM Standard Environmental Color may be specified.

Where determined by the BLM to be necessary based on site-specific visual impacts of project components, a site-specific Visual Mitigation Plan shall be required before surface disturbance and project activities begin. This plan would include a detailed analysis of potential impacts and mitigation measures that shall be developed and implemented.

20. Construction, Vegetation Removal, Topsoil Stripping and Storage. Pre-construction BMPs shall be installed inspected by the BLM before construction.

Areas of approved activities shall be cleared of brush and trees. Trees or shrubs may be appropriate to cut or shred in place, depending on needs to protect visual resources, enhance slope stability or leave root systems in place. No stump left in place shall exceed six inches in height. Accordingly,

- Trees that are chipped or shredded in place shall be salvaged and stored with topsoil.
- Trees that are cut down, cut up or track-walked shall be salvaged and stored as storm water perimeter controls for later redistribution on reclaimed areas.

A wood cutting permit from the BLM may be required prior to any clearing.

When saturated soil conditions exist on access roads or location, construction shall be halted until soil dries or until activities can proceed without soil damage. No saturated or frozen topsoil shall be stripped.

At the time of construction, (well pads, pipelines, roads, or other surface facilities) topsoil shall be stripped following vegetation removal. Topsoil shall include all suitable growth medium present at a site, as indicated by color or texture — depths may vary across a site. Stripped topsoil and vegetation smaller than 4 inches in diameter shall be segregated and stored separately from sub-soils or other excavated material and replaced prior to final seedbed preparation.

To facilitate its replacement, extend its biological viability and create a berm to control storm water, topsoil shall be wind-rowed around pad perimeter wherever practical. Along pipelines and roads, topsoil shall be wind-rowed, segregated and stored for later redistribution during reclamation.

Topsoil storage piles, storm water control features, temporarily disturbed areas along roads and pipelines, and cut and fill slopes shall be seeded at the time of construction or within 30 days, to stabilize materials, maintain biotic soil activities, and minimize weeds. Seedbed prep shall be required unless seeding occurs immediately after construction.

21. Chemical and Fuels - Secondary Containment /Exclosure Screening – The operator shall prevent all hazardous, poisonous, flammable and toxic substances from contacting soil and/or water. At a minimum, the operator shall install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable or toxic substances. Containment shall be sufficient to contain 110% of the contents as well as any drips, leaks and anticipated precipitation.

All installed production facilities (storage tanks, load outs, separators, treating units, etc.) with the potential to leak or spill oil, condensate, produced water, glycol, or other fluid which may be a hazard to public health or safety shall be placed within an appropriate impervious secondary containment

structure that shall hold 110% of the capacity of the largest single container within it for 72 hours.

All secondary containment systems shall be designed, constructed, and maintained to prevent exposure of wildlife and livestock to harmful substances. The operator shall install effective wildlife and livestock exclusion systems like fencing, netting, expanded metal mesh, lids and grate covers.

Chemical containers shall be clearly labeled, maintained in good condition and placed within secondary containment. They shall not be stored on bare ground, nor exposed to sun and moisture.

Any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported per the Comprehensive Environmental Response Compensation and Liability Act of 1980, Section 102b (CERCLA). Copies of any report to any Federal agency or State government as a result of a reportable release/ spill of any toxic substances shall be furnished to the BLM, concurrent with the filing of the reports to any Federal agency or State government.

The operator shall dispose of any fluids that collect in the containment system which do not meet applicable State or U.S. Environmental Protection Agency livestock water standards, per State law and in a manner so that fluids do not drain to the soil or ground.

The BLM, CDPHE Water Quality Control Division, COGCC and CPW shall be contacted immediately if a reportable spill occurs.

22. Pipelines. Buried pipelines shall have a minimum cover of 48 inches in a roadway and at road crossings, 36 inches through typical soil and rock, and 24 inches in areas requiring rock blasting. The permit holder shall bury a pipeline to a depth that safely accommodates existing land and road uses and routine maintenance activities such as grading.

Pipeline warning signs permanently marked with the operator's and owner's names (emergency contacts) and purpose (product) of the pipeline shall be installed within five days of construction completion and prior to use of the pipeline. Pipeline warning signs are required at all road crossings and along the alignment, visible from sign to sign.

Pipelines installed beneath stream crossings shall be buried to a minimum depth of 4 feet below the channel substrate, to avoid pipeline exposure by channel scour and degradation. Following pipeline burial, the channel grade and substrate composition shall be returned to pre-construction conditions.

All pipeline welds within 100 feet of a perennial stream shall be x-rayed to prevent leakage. Where pipelines cross streams that support Federal- or State-listed threatened or endangered species or other sensitive species, the BLM may require additional safeguards, including double-walled pipe, and remotely-actuated block or check valves on both sides of the stream.

Buried pipelines shall be reclaimed to final reclamation standards at the time of installation.

23. Well Drilling, Testing, and Completion (Pits). Substances specifically listed as a hazardous waste or demonstrating character of a hazardous waste (40 CFR 261) shall not be used in drilling, testing, or completion operations, nor introduced at any time into the reserve or cuttings pit.

The operator shall minimize or preclude releases of hydrocarbons into open pits. Unless the authorized officer approves the release, no oil should go into a pit except in an emergency. The operator must remove any hydrocarbons (oil, condensate, paraffin, diesel, etc.) introduced to a pit within 24 hours of discovery.

During air drilling, the blooey line shall be misted. Cuttings and fluids shall be confined to pits or tanks during drilling, flaring or fracturing operations. Flare or blooey lines shall be directed into a pit and against a bank, or otherwise contained, to prevent dispersion of materials or flame, fluids and cuttings.

All pits that may contain liquid material shall be lined to prevent seepage into the ground. The pit liner shall be maintained in good working condition, with no tears or holes, until the pit is closed.

Pits shall be constructed to prevent accumulating precipitation runoff and to maintain at least two feet of freeboard between the maximum fluid level and the lowest point of containment. If pit fluids threaten to rise higher, the operator shall immediately prevent introduction of additional fluids until sufficient pit capacity has been restored through fluid removal or shall install an alternative approved containment method.

The operator shall prevent wildlife and livestock access (including avian wildlife) to fluids pits that contain or have the potential to contain salinity sufficient to harm wildlife or livestock, to contain hydrocarbons, surfactants, or Resource Conservation and Recovery Act-exempt hazardous substances. For reserve pits, fence all four sides as soon as the pit is constructed. Reconstruct any damage to the rig side of the fence immediately following release of the drilling rig. At a minimum, the operator shall adequately fence all fluids pits and open cellars during and after drilling operations until the pit is free of fluids and the operator initiates backfilling.

Fencing for pits and other facilities with potential to cause harm to big game and other wildlife shall be 8-foot woven wire fence with adequate bracing, constructed at least 2 feet from the edge of the pit berm. The bottom two feet of woven wire shall have openings no larger than 1½ inches, to preclude small animals. All corners shall be braced and fence construction shall be on cut or undisturbed ground. The fence shall be maintained erect and in good condition. (Fencing: BLM Manual Handbook H-1741-1, p. 16)

All open top tanks and pits shall be covered or netted to eliminate any hazard to birds and flying mammals (CERCLA Section 101(14)). The operator shall prevent wildlife, bird and livestock access to fluids pits that could contain salinity sufficient to harm them or to contain hydrocarbons, surfactants, or Resource Conservation and Recovery Act-exempt hazardous substances. At a minimum, the operator shall install approved netting in these circumstances, immediately following release of the drilling rig. The BLM does not approve flagging, floating balls, strobe lights, metal reflectors or noisemakers.

Minimum Netting Requirements: The operator shall:

- a. Construct a rigid structure of steel tubing or wooden posts with cable strung across the pit no further apart than 7-foot intervals along the X and Y axes to form a grid of 7-foot squares.
- b. Suspend netting a minimum of 4 to 5 feet above the pit surface.
- c. Use a maximum netting mesh size of 1½ inches to allow for snow loading while excluding most birds, in accordance with Fish and Wildlife Service recommendations. Refer to: <http://www.fws.gov/mountain-prairie/contaminants/contaminants1c.html>
- d. Cover the top and sides of the netting support frame with netting and secure the netting at the ground surface around the entire pit to prevent wildlife entry at the netting edges. Note:

Other fencing or a wire mesh panel with openings larger than 1½ inches does not sufficiently exclude small wildlife and songbirds unless it is covered by smaller meshed netting.

- e. Monitor and maintain the netting sufficiently to ensure it is functioning as intended, has not sagged closer to the pit, has not entrapped wildlife, and is free of holes and gaps greater than 1½ inches.

Any wildlife or birds found dead or apparently ill in or near pits must be reported to the Grand Junction Field Office immediately.

Any lined pit, any pit constructed with a slope steeper than 3:1, or where entrapment hazards may exist, shall include escape ramps or ladders installed every 50 feet along the slope and at each corner. Example: anchored sections of galvanized chain-link fence at least 24 inches wide extending from the bottom of the pit to the top of the pit slope and across the top edge of the pit liner for at least two feet.

The operator and all subcontractors shall comply with all State wildlife laws. As per Colorado Revised Statute 33-6-109 (1), it is unlawful for anyone to hunt, take or possess wildlife except as permitted by Colorado Statute or by Colorado Wildlife Commission regulation. Colorado statute defines “hunt” to include “trapping” and “capturing.” The trapping and subsequent drowning of wildlife within a pit may be viewed as illegal taking of wildlife and criminal or civil actions/ penalties for wildlife could be imposed. “Wildlife friendly” conditions are intended to prevent wildlife loss and potential legal consequences.

Pits shall be dry prior to soil testing and backfilling and closed per COGCC (EPA Table 910-1) standards. Before backfilling, impervious pit liner shall be removed and disposed of properly. Liquids and solids collected on/in the liners shall not be allowed to come into contact with the pad surface, parent soil or any other earthen layers during site cleanup. Liners shall be properly cleaned prior to removal or removed in such a manner that liquids/solids do not escape. Liners may be washed off into lined ditches, lined sumps or into the lined cellar and then pumped to the lined sumps prior to being removed. At the time of backfilling, all muds and associated solids shall be confined to the pit, with none squeezed out or incorporated into surface materials. A minimum of 4 feet of cover (overburden) is required above any muds or solids. When work is complete, the pit area must support the weight of heavy equipment without subsidence.

24. **Production.** Production facilities shall be located and arranged to facilitate safety and minimize long-term surface disturbance. Typically, this means clustered at the access end of the pad, with tanks in cut. Access to facilities should be provided by a teardrop-shaped road through the production area, so that the driving area may be clearly defined and limited and the teardrop center may be revegetated. This is especially applicable when roads are maintained as “primitive,” per the BLM Gold Book.

To blend with the natural environment, all permanent above-ground facilities placed on the location will be painted a natural color that blends with the background landscape, in a non-reflective finish. A BLM Standard Environmental Color may be specified.

25. Interim Reclamation of Producing Wells.

- a. *Deadlines and Objectives. (Deadlines are subject to extension on a case-by-case basis, following application in writing to the BLM.)*

Interim reclamation shall restore landforms; reestablish/maintain biologically active topsoil, including vegetative cover; control erosion and sediment transport; and minimize losses of habitat, visual resources, and forage throughout the life of the well. (BLM Northwest District

Recommended Outline for Surface Reclamation Planning for Oil and Gas Operations, Including Objectives, Performance and Monitoring Standards, 2013)

Within 6 months following completion of the last well planned on a pad, or after a year has passed with no new wells drilled, IR shall be completed to reduce the well pad to the smallest size needed for production. IR shall include earthwork, seeding and BMPs.

Topsoil storage piles, storm water control features, temporarily disturbed areas along roads and pipelines, and cut and fill slopes shall be seeded at the time of construction or within 30 days, to stabilize materials, maintain biotic soil activities, and minimize weeds. Seedbed prep shall be required unless seeding occurs immediately after construction.

Within 6 months following completion of the last well planned on a pad, or after a year has passed with no new wells drilled, interim reclamation (IR) shall be completed to reduce the well pad to the smallest size needed for production. IR shall include earthwork, seeding and BMPs.

Prior to interim reclamation, the operator shall meet with BLM to inspect the disturbed area, to review the existing reclamation plan and agree upon any revisions to the plan.

Seed tags shall be submitted for BLM approval at least 14 days before proposed seeding date.

Notify the BLM at least 48 hours prior to beginning any reclamation work.

Weed-free certification, seed tags, and a Subsequent Report Sundry Notice describing the reclamation shall be submitted to the Grand Junction Field Office within 30 days of seeding.

IR performance standards shall be considered met when disturbed areas not needed for long-term production operations or vehicle travel have been

- recontoured and stabilized, and
- revegetated with a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community that anchors soils, minimizes visual impacts, and provides forage.

At a minimum, the established plant community shall consist of species included in the seed mix and/or desirable species which occur in the surrounding natural vegetation. Permanent vegetative cover will be determined successful when the basal cover of desirable perennial species is at least 80 percent of the basal cover of the adjacent undisturbed area or of potential basal cover as defined in the National Resource Conservation Service Ecological Site(s) for the area.

Operators and right-of-way holders are required to meet reclamation performance standards. Successful compliance with standards is determined by the BLM. If revegetation is unsuccessful, subsequent treatments and reseeding shall be required until standards are met.

- b. *Recontouring and Seedbed Preparation.* Leaving in place only the areas needed for production, pull fill slope soils up and return them to cut areas, pushing up and over the edges of the cut. Compacted areas to be reclaimed shall be ripped in two passes at opposite directions before being reshaped.

Following recontouring, evenly redistribute salvaged topsoil. Soil amendments may be permitted or required. Seedbed preparation shall consist of scarifying (roughening) spread topsoil prior to seeding, unless seeding takes place immediately or is drilled. Seedbed

preparation techniques may include pocking, ripping, disking or other soil roughening techniques. If contour cultivating is approved, it shall be 4-6 inches deep or to the depth of redistributed topsoil. If pocking, pit the surface with small depressions to form micro-basins, in a "fish scale" pattern. Construct them along the contour, across (not parallel with) the natural flow of water and/or prevailing wind.

- c. *Seed Mixes.* All disturbed areas shall be seeded with a seed mixture approved by the BLM, consistent with BLM standards in terms of species and seeding rate for the specific habitat type within the project area.
- Seed shall contain no noxious, prohibited or restricted weed seeds and contain no more than 0.5 percent by weight of other weed seeds.
 - Only viability-tested, certified seed for the current year, with a minimum germination rate of 80% and a minimum purity of 90% shall be used.
 - Seed that does not meet the above criteria shall not be applied to public lands.
- d. *Approved Seed Mixture.* All disturbed areas shall be seeded with the following:

EXAMPLE SEED MIX Species Name	Common Name	Synonym	Lb/ac (PLS)
Native Grasses			
<i>Koeleria macrantha</i>	Prairie junegrass		1.0
<i>Muhlenbergia montana</i>	Mountain muhly		1.0
<i>Elymus elymoides</i>	Bottlebrush squirreltail	<i>Sitanion hystrix</i>	2.0
<i>Elymus glaucus</i>	blue wildrye		5.0
<i>Elymus trachycaulus</i> , Var. "Pryor" or "Primar"	slender wheatgrass	<i>Agropyron trachycaulum</i>	2.7
<i>Festuca idahoensis</i>	Idaho fescue		0.5
Native Perennial Forbs			
<i>Wyethia amplexicaulis</i>	Mule's ear sunflower		3
<i>Linum lewisii</i>	Blue flax		0.5
<i>Penstemon strictus</i>	Rocky Mountain penstemon		1.0
<i>Sanguisorba minor</i> , Var. "Delar"	Small Burnet		2.0
This rate is for drilled seed and will be doubled for broadcast seeding.			18.7

- e. *Seeding procedures.* Seeding shall be conducted no more than 24 hours following final seedbed preparation. If interim revegetation is unsuccessful, the operator shall implement subsequent reseedings until interim reclamation standards are met.

Where possible, drill seed ½ inch deep, following the contour of the site. Follow drill seeding with culti-paction or crimped weed-free straw mulch, to enhance seed-to-soil contact and prevent loss of seeds and soil. In areas that cannot be drilled, broadcast seed at 2.0 times the application rate, within 24 hours of soil work. If seeding takes place later than within 24 hours of dirt work, cover seed ½ to 1 inch deep with a harrow or drag bar, unless pocking. When pocking is used as seedbed preparation, seed must be broadcast within 24 hours of soil prep.

- f. *Erosion Control.* Cut-and-fill slopes shall be protected against erosion with the use of pocking/pitting, lateral furrows, hydromulch or other measures approved by the BLM. Near drainages or in areas with high erosion potential, additional revegetation, BMPs or methods may be required, to reduce soil erosion and sediment transport.

- g. *Fencing and Site Protection.* The pad shall be fenced to BLM standards to exclude grazing livestock for the first two growing seasons or until seeded species are firmly established, whichever comes later. The BLM shall approve the type of fencing.

In deer and elk habitat, fences for livestock exclusion shall not exceed 40 inches. The four-strand fence shall have smooth top and bottom wires. Distance from the ground to the bottom smooth wire shall be no less than 16 inches. Distance from the top wire to the second wire shall be no less than 12 inches. Middle wires shall be barbed, with 6 inch spacing.

- h. *Monitoring.* The operator shall regularly monitor, for reclamation success and for invasive species, all sites categorized as “operator reclamation in progress” and shall submit an annual monitoring report of these sites to the BLM by December 1 of each year. The annual report shall document whether attainment of reclamation objectives appears likely. If objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing approved or specified measures.

26. Final Reclamation. The long-term objective of final reclamation is to return the land, following authorized use, to a condition approximating that which existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats.

A well pad with no producing well shall undergo final reclamation within no more than 1 year following plugging and abandonment of the final well on that pad. Buried pipelines shall be reclaimed to final reclamation standards at the time of installation.

Prior to final reclamation of a well pad or pipeline, the operator shall meet with BLM to inspect the disturbed area, review the existing reclamation plan, and agree to any changes to the plan.

The BLM shall be notified at least 48 hours prior to commencing any reclamation work and within 48 hours of completion of reclamation work.

Prior to recontouring and reseeding the pad, the operator shall complete the following:

- All equipment, facilities, and trash shall be removed from the location.
- Each borehole shall be plugged and capped, and its related surface equipment removed.
- Subsurface pipelines shall be purged and plugged at specific intervals.
- Dry hole markers shall be subsurface, to prevent their use as raptor perching sites.

Recontouring for final reclamation shall consist of returning the pad, material storage piles, cut-and-fill slopes, and storm water control features to natural contours that blend with adjacent undisturbed areas, as specified in the final reclamation plan or final reclamation plat approved by BLM.

Requirements for seedbed preparation, soil amendments, seed, seeding procedures, mulching, erosion control, fencing, site security, and monitoring shall be as specified for interim reclamation.