

APPENDIX D

EXAMPLES OF MITIGATING MEASURES

INTRODUCTION

This appendix contains a list of typical mitigating measures that may be applied on a case-specific basis, to the fullest extent possible consistent with valid existing rights, to all development and use within the reservoir area. This list includes best management practices, conditions of approval, and mitigating measures that have been identified and used for resource management and protection by Reclamation, BLM, BIA, and other agencies in the general vicinity of Navajo Reservoir. They are derived, in part, from the following documents:

- Reclamation Manual, Policies, Directives and Standards; and former Reclamation Instructions
- Reclamation Standard Oil/Gas Lease Stipulations (form 3109-1)
- FFO (BLM) 2003 RMP and ROD
- BLM/BIA/SUIT ROD for Oil/Gas Development on the SUIT Reservation.
- MOA between State of New Mexico, BLM, and USFS for resource protection during oil/gas development in the San Juan Basin
- CO BLM 1991 Oil/Gas Leasing EIS

Federal, State and local regulatory agencies (such as the Environmental Protection Agency, the Corps of Engineers, the New Mexico Oil Conservation Division, the Colorado Oil and Gas Conservation Commission, and county land use divisions, etc.) may also require various mitigation measures within their jurisdiction. Such measures may be required by law or policy or may be developed during their review of a given proposal. Some of these measures may be similar to some listed here; others may be entirely different.

Mitigating measures may be applied as stipulations at a leasing or other permitting stage, or as conditions of approval for specific development actions. The measures to be applied to a given action will be based on a site and action specific reviews with additional NEPA documentation. A specific measure will not be appended to the authorization document if it is included in the proposed action or the plan of operations. Additional mitigating measures, not listed here, may be developed during the authorization process to address site-specific resource concerns. All mitigating measures will be consistent with valid existing rights. Unless otherwise specified, the operator or holder of the appropriate authorization shall be responsible for completing the identified action.

The measures in this list are considered generic. The actual wording may change depending on the agency authorizing or administering the development, or based on the case-specific review, however, the intended result is similar. Also, the various measures, though only listed in one category, may also be applicable to other categories.

Exceptions, waivers, or modification to any measure contained within a use authorization (lease, permit, grant, license, etc.) will be considered on a case-by-case basis. Any such exceptions, waivers, or modifications must have prior written approval, including documented supporting analysis, from the Authorized Officer (AO) with Reclamation concurrence before being implemented. In some instances Reclamation may be the authorizing agency. Any such exception, waiver or modification may have additional mitigating measures attached to it.

GENERAL OPERATIONS

Notification of Activities

1. The operator/holder or his contractor shall contact the AO (specify timeframe and action) .

Note: Some common timeframes and activities include:

- a. not less than 48 hours prior to commencing construction of the [list facility(ies)] (road, pipeline, well pad, parking lot, etc.).
- b. at least 24 hours prior to commencing construction of the [list facility(ies)] .
- c. not less than 48 hours before starting reclamation work
- d. within 48 hours of completion of reclamation work.
- e. at least 3 days prior to commencing construction or any surface disturbing activities

2. Prior to commencing (list activity) on reservoir area lands, the operator/holder shall contact the Lands/Recreation Team Leader, USBR, Western Colorado Area Office, Durango, Colorado, at (970) 385-6500, within the same timeframe as specified for contacting the AO.

Plan of Operations

1. The operator/holder shall conduct all operations in accordance with a design or Plan of Operations approved in writing by the AO, including any attached specifications and conditions of approval.
2. The operator/holder shall coordinate with Reclamation and its managing entity, in developing a Plan of Operations or a surface use plan for proposed activities within the reservoir area.
3. The operator/holder shall ensure that all employees and sub-contractors are aware of the approved _____ (design, plan of operations, surface use plan, etc.) and any requirements prior to commencement of operations.
4. The operator/holder, before any work begins, shall provide all sub-contractors with a copy of the approved _____ (design, surface use plan) including any requirements.
5. The operator/holder shall prepare and submit to Reclamation and its managing entity a plan of development which represents a 3-5 year development scenario. The purpose of this plan is to make more informed resource decisions recognizing the land management agencies' requirements to mitigate effects to resources, and the development concerns of the operator.
6. The operator/holder shall keep a copy of the approved (document) (design, surface use plan, APD, license agreement, etc.) with its conditions of approval on location and available for inspection at all times during construction, drilling, and/or reclamation activities, as directed by the AO.

General Operations

1. The operator/holder shall not initiate any construction or other surface disturbing activities for the facility or activity without prior written authorization to proceed from the AO. Any Notice to

Proceed shall authorize construction or use only as therein expressly stated and only for the particular location or use therein described.

2. The following requirements shall apply to this [list activity or facility]. The failure of the operator/holder to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to applicable authority.
3. The AO will conduct a preconstruction conference with the operator/holder prior to the holder's commencing construction and/or surface disturbing activities on the (list facility or activity). The holder and/or his representative shall attend this conference. The holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with this action shall also attend this conference to review the plan(s) of development and any requirements in the authorizing document.
4. At least five (5) days prior to a pre-construction conference for a pipeline right-of-way, the operator/holder shall provide maps or survey plats of this project to all operators of all pipelines crossed or paralleled on public/Federal lands, and contact and invite them to attend this meeting. Determining the names and contact points of these operators is the responsibility of the holder. If requested by the AO, the holder shall certify these contacts were made and that the required information was given to the affected parties.
5. Prior to construction activities, the operator/holder shall survey and place appropriate construction control stakes and/or lathes, as directed by the AO or the Surface Managing Agency (SMA), to ensure construction of the facility in accordance with the approved design or development plan. If stakes are disturbed, they shall be replaced before proceeding with construction.
6. The operator/holder shall clearly mark the centerline and/or exterior limits of the right-of-way, as directed by the AO or the SMA (set reference markers for all angle stations [P. I.] on both sides of the right-of-way). The operator/holder shall mark the exterior boundaries of the right-of-way with stake and/or lathe at 100- to 200-foot intervals or as otherwise directed by the AO or the SMA.
7. The tops of the stakes and/or lathes shall be painted and the lathes flagged in a distinctive color as determined by the operator/holder.
8. The survey station numbers shall be marked on the boundary stakes and/or lathes at the entrance to and the exit from public/Federal land. The holder shall maintain all boundary stakes and/or lathes in place until final cleanup and restoration is completed and approved by the AO or the SMA. The stakes and/or lathes shall then be removed as directed by the AO or the SMA.
9. The operator/holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the AO or the SMA to ensure construction in accordance with the plan of development.
10. No surface disturbing activities shall take place on the subject right-of-way until the associated authorization document is approved. The holder shall adhere to those requirements in the Surface Use Program of the authorization document which are relevant to any right-of-way facilities.

11. The operator/holder shall construct, operate, and maintain the facilities, improvements, and structures associated with this authorization in strict conformity with the approved plan of development which was made a part of this authorization on [date].
12. The operator/holder shall not initiate any relocation, additional construction, or use that is not in accord with the approved plan of development and this authorization without the prior written approval of the AO with the concurrence of the SMA.
13. A copy of the complete authorization, including all stipulations and approved plan(s) of development, shall be made available to the AO on the authorized use area, during construction, operation and termination. Noncompliance with the above shall be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety, or the environment.
14. When compressor units or any other equipment associated with the facility are washed, the fluids (i.e., scrubber cleaners) shall be properly disposed of to prevent ground contamination or hazard to livestock or wildlife.
15. If the surface management agency changes any of these requirements, the operator/holder shall contact the AO before implementing surface management agency requirements.
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 - 16. All trash and refuse shall be disposed of in accordance with local, State, and Federal regulations. Wherever possible, refuse should be recycled. Trash and refuse on site shall be confined in a wire cage, dumpster, or other covered container. No trash or refuse shall be disposed of on site; it shall be hauled to a properly permitted landfill for disposal. There shall be no burning of trash or refuse.
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17. The facility area and lease or permit premises shall be maintained in a workmanlike manner with due regard to safety, conservation, and appearance.
18. Surface disturbance and vehicular traffic shall be limited to the designated routes and locations.
19. Use of pesticides and herbicides shall comply with applicable federal/state laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides or herbicides, the operator/holder shall obtain from the AO a written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary. Emergency use of pesticides must be approved in writing by the AO prior to use.
20. The operator/holder shall, at all times, take proper precautions to prevent or suppress fires. Wildland fires shall be reported to the appropriate _____ BLM District or Field Office. All other fires or explosions that cause damage to property, equipment, loss of oil or gas, or result in injuries to personnel shall be reported to the AO and other appropriate entities.
21. "Off-site mitigation" measures will be mutually developed by the land management agency and the company involved. This may include on-the-ground improvements for wildlife habitat and initiation of monitoring studies. Some details are outlined in BLM's existing Cooperative Agreement for the Mitigation and Enhancement of Wildlife Habitat in the Farmington Resource Area.

22. If the operator/holder fails to comply with the terms and conditions of the use authorization, the AO will notify and instruct the operator as to the appropriate action to be taken. If the operator fails to take the appropriate action, the AO will enforce action in accordance with applicable regulations.

23. The operator/holder shall provide for the safety of the public entering the construction area, this includes, but is not limited to, barricades for open trenches, flagmen with communication systems for single-lane roads without intervisible turnouts, and attended gates for blasting operations.

24. No surface disturbance or construction activities shall be allowed within _____ feet of _____, which shall be clearly marked as specified by the AO or the SMA. [Specify distance and resource requiring protection].

25. No gravel or other related minerals from new or existing pits on reservoir area lands shall be used in construction of roads, well sites, etc., without prior approval from Reclamation.

Clearing/Grubbing

1. Clearing the right-of-way in vegetative types other than forest or woodland types shall consist of knocking (scalping) off the tops of brush or removal of all plant parts at those locations designated by the AO or the SMA.

2. Clearing, grading, and/or other disturbance of soil and vegetation shall be limited to the minimum area required for construction of the facility, and shall include:

- A. A maximum width of ___ feet.
- B. Trimming trees in preference to cutting trees, and cutting trees in preference to bulldozing them, as directed by the AO or the SMA.
- C. Not clearing trees to allow passage of equipment for stringing the line without the prior written approval of the AO or the SMA.
- D. That trees cleared from the facility location shall be left for wood gathering activities. (see tree clearing requirements elsewhere)

3. If “cross country” access or travel is necessary, clearing vegetation or grading a roadbed shall be avoided wherever practicable.

4. During clearing activities, trees removed from the facility location and/or right-of-way shall be made available for wood gathering and slope stabilization.

5. Trees, 6 inches in diameter or greater, shall be severed from the stump, leaving a stump no greater than 12-inches above ground level measured on the uphill side and de-limbed.

6. Trees shall be moved aside prior to any soil disturbing activities. Care shall be taken not to mix soil with the trees.

7. The tree trunks and limbs greater than six-inches in diameter shall be left whole or cut to manageable lengths and stacked along the facility location or an access road, as directed by the AO, for easy access by wood gatherers,.

8. Slash (limbs and small trees (< 6" diameter), and brush) from clearing the facility location or right-of-way shall be stockpiled adjacent to the facility location or right-of-way and separate from the top-soil for use during rehabilitation of the disturbed area.

9. Trees with a trunk diameter less than 6 inches shall be used to stabilize slopes and control erosion. These trees may be removed entirely without de-limbing and placed outside of the construction zone.

Construction

1. The corner of the [specify facility] (well pad, compressor station, parking lot, etc.) shall be rounded off to avoid [specify item/situation to be avoided] (wetland, wash, cliff, steep slope, etc.).

2. The wash shall be diverted around the _____ side of the [facility].

3. The final cut or back slope of the [facility] (access road, well location, compressor station, parking lot, etc.) shall not exceed a [insert ratio] ratio. The final fill slope shall not exceed a _____ ratio. To obtain this ratio, pits and slopes shall be back-sloped into the pad upon completion of drilling. Construction slopes may be much steeper during drilling, but shall be recontoured to the above ratio during reclamation.

4. The upper edges of all cut banks on the facility shall be rounded.

5. Side hill cuts of more than three (3) feet high are not permitted. Areas requiring cuts greater than 3 feet shall be terraced so that no cut is greater than three (3) feet high.

6. The existing and proposed access roads shall be crowned, ditched and/or dipped from [specify area] to the location, prior to use for moving the drill rig onto the site.

7. Crowning and ditching on both sides of the road are required. The road cross section shall conform to the cross section diagrams available from BLM [USBR]. The crown shall have a grade of approximately two percent (i.e., two-inch crown on a 14-foot wide road).

8. Within 60 days of completion of construction, two (2) copies of an "as built" survey map shall be filed with the Lands/Recreation Team Leader, USBR, Western Colorado Area Office, 835 E. 2nd Avenue, Suite 400, Durango, Colorado 81301.

Pipelines/Rights-of-Way

1. Pipeline location warning signs shall be installed within 5 days of completion of construction.

2. New pipelines and power lines shall be restricted to existing road and local utility corridors to the fullest extent possible.

3. Permanent or temporary pipelines for water disposal will be installed as early as possible to eliminate excessive truck traffic in sensitive wildlife areas.

4. Construction holes left open over night shall be covered. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into the hole.

5. The holder is encouraged to use a “rock trencher” or “rock saw” type of machine (or other technology that reduces environmental disturbance) when any rock is encountered to aid in minimizing environmental disturbance. Use of these types of equipment may be required by the AO or the SMA on specific locations.
6. Use of explosives in any amount or a hydraulic or cable ripper for intermittent distances greater than fifty (50) feet must be approved in writing by the AO prior to use.
7. Only one road or access route shall be permitted to each transmission pole site that requires access.

Roads

1. The proposed access road shall follow the flagged or marked route, except as may otherwise be agreed upon during the on-site inspection.
2. Road surfacing material shall be compacted with a sheep’s-foot compactor.
3. Upgrading and surfacing of the collector road shall be done during the spring and summer of [year] .
4. Work on the remaining local and resource roads to bring them to BLM or SMA standards shall be accomplished by the summer of [year] .
5. The operator/holder shall upgrade and maintain access roads as necessary to prevent soil erosion and accommodate year round traffic.
6. All maintenance and upgrading of existing roads shall be done within the existing disturbed area.
7. Road surfacing is not required at this time, but may be applied at the holder’s discretion. However, if it becomes evident that there is resource damage or it becomes evident the road is receiving excess damage, surfacing shall be required.
8. Comprehensive road management plans for units will be developed jointly with land management agencies, unit operators, and the public. Actions to be considered in these plans will include road closures for non-authorized activities, agency enforcement responsibilities, public participation, and maintenance for roads.
9. All temporary roads used for construction shall be reclaimed after construction is completed.

Reclamation (Recontouring and Revegetation)

1. The operator/holder shall reclaim, including recontouring and revegetation, all areas of surface disturbance unnecessary to operations in accordance with a reclamation plan approved by the AO and/or the SMA.
2. Existing requirements for rehabilitation and reclamation shall continue to apply in areas that contain visual scars and/or severe erosion.
3. Operators will submit a plan of reclamation to the surface management agency.

4. The operator/holder shall, in cooperation with Reclamation, develop a reclamation plan for surface disturbance on reservoir area lands associated with this facility.
5. A copy of the approved reclamation plan shall be available on site for inspection at all times during reclamation activities.
6. Reclamation of areas disturbed by seismic operations shall be completed, as directed by the AO and/or the SMA, within 30 days of terminating seismic work on any line.
7. Delay of reclamation for any reason, such as weather, must be approved by the AO and/or the SMA.
8. When no longer needed for operations, disturbed areas shall be recontoured to approximately the original contours. During reclamation of the site, the fill material shall be pushed into the cuts and up over the backslope. No depressions that will trap water or form ponds shall be left.
9. The stock-piled topsoil material from construction shall be evenly spread over the areas to be reclaimed after the disturbed areas have been recontoured.
10. Topsoil shall be spread uniformly over all unoccupied disturbed areas (outside the ditch line, fence line, and work area).
11. Topsoil spreading shall not be done when the ground or topsoil is frozen or wet.
12. For long-term facility sites (i.e., roads, well or other surface facility locations, etc.), the stock-piled topsoil material shall be evenly spread over the reshaped cut and fill slopes.
13. The operator/holder shall evenly spread the excess soil excavated from pole holes within the right-of-way and in the immediate vicinity of the pole structure.
14. Water bars shall be constructed on the recontoured slopes as directed by the AO or the SMA (see soils section).
15. The operator/holder shall establish adequate perennial vegetative cover on disturbed areas as directed by the SMA. Additional work shall be required in case of seeding or planting failures.
16. All disturbed surfaces shall be reseeded with the following seed mixture:

Species	Lbs. PLS/Acre
[Enter Seed Mix]	
17. Unless otherwise approved by the SMA, seed mixtures shall consist of native species adapted to the locale.
18. The seedbed shall be prepared by disking or ripping following the natural contour. Seed shall be drilled into the seedbed on the contour to a depth no greater than ½ inch. In areas that cannot be drilled, the seed shall be broadcast at double the specified seeding rate and then harrowed into the soil. Certified weed free seed is required.
19. Fall seeding must be completed after September 1 and prior to prolonged ground frost.

20. Hand seeding with hydro-mulch, excelsior netting and/or mulch with netting ____ shall be required on slopes in excess of ____ %, as directed by the AO or SMA.
21. The operator/holder shall mulch disturbed areas following seeding operations. The mulch shall meet the following requirements, as designated by the AO or the SMA:
- A. Grass, straw or hay mulch shall be from oats, wheat, rye, or other approved grain crops, or approved herbaceous mowings, and free from noxious weeds or other objectionable material as determined by the AO or the SMA. Such mulch shall be suitable for placement with mulch blower equipment and shall be spread at 2,000 to 3,000 pounds per acre (or one to two inches deep).
 - B. Hydro-mulch material shall be natural or cooked wood cellulose fibers that readily disperse in water and are non-toxic. The homogenous slurry or mixture shall be capable of application with power spray equipment. A colored dye that is non-injurious to plant growth may be used when specified. Wood cellulose fiber shall be packaged in new, labeled containers.
22. After recontouring and reseeding the disturbed areas, the stockpiled slash (trees and limbs < 6”in diameter, and brush) shall be placed on the reseeded areas and mechanically walked down after placement or chipped for mulch and placed evenly over the reseeded areas not used for long-term operations.
23. Any rocks removed from the construction area during clearing and/or ditching operations shall be scattered back on the right-of-way in a random arrangement and not in bunches.
24. The operator/holder shall reconstruct rock rims to near as possible to the original.
25. Species shall be planted in pounds of pure live seed per acre:
 Percent Pure Live Seed (PLS) = % Purity x % Germination/100
- Two lots of seed can be compared on the basis of PLS as follows:
- | <u>Source No. One (poor quality)</u> | | <u>Source No. 2 (better quality)</u> | |
|---|------------|---|------------|
| Purity | 50 percent | Purity | 80 percent |
| Germination | 40 percent | Germination | 63percent |
| Percent PLS | 20 percent | Percent PLS | 50 percent |
| <i>5 lb. bulk seed required to make 1 lb. PLS</i> | | <i>2 lb. bulk seed required to make 1 lb. PLS</i> | |
26. The seed mixture used must be certified weed free. There shall be no primary or secondary noxious weeds in the seed mixture. Seed labels from each bag of seed shall be available for inspection while seed is being sown.
27. Seeding should be accomplished between July 1 and September 15, however, the later date may be extended on a case-by-case basis with AO and/or SMA approval.
28. Compacted areas shall be ripped to a depth of twelve inches and disked to a depth of six inches before seeding.
29. Seed shall be drilled on the contour (not up and down the slope) with a disk-type drill with two boxes for various seed sizes. The drill rows shall be eight to ten inches apart. The seed shall be planted between one-half and one inch deep. The seeder shall be followed with a drag, packer, or roller to insure uniform coverage of the seed, and adequate compaction.

30. Where slopes are too steep for contour drilling, a “cyclone” hand seeder or similar broadcast seeder shall be used. Seed shall then be covered to the depth described above by whatever means is practical, i.e. hand raked. If the seed is not covered, the prescribed seed mixture amount (pounds PLS/acre) shall be doubled.

31. Seeding shall be repeated if a satisfactory stand is not obtained as determined by the AO and/or the SMA upon evaluation after the second growing season.

32. If upon abandonment of a facility or wells, the SMA considers the access road not necessary for the management and multiple-use of the area, the road shall be recontoured to approximately the original contours and revegetated as prescribed.

33. Abandoned roads shall be protected from vehicular travel by construction of barriers sufficient to prevent vehicular traffic beyond the barriers. Said barrier shall be constructed at entrances to the abandoned road.

NATURAL AND CULTURAL RESOURCE PROTECTION

Water Quality

1. The operator/holder shall line pits with an impervious material at least 12 mils thick.
2. Prior to closing the pit, the liner shall be cut off at mud level. The excess liner shall be hauled to a licensed disposal area.
3. Earthen berm(s) shall be placed on the _____ side(s) of the location between the reserve pit and the wash.
4. Facilities shall be sited so there is an undisturbed buffer zone between the facility site and the stream bank or the reservoir shoreline as directed by the AO or the SMA.
5. Facilities shall be designed and constructed to minimize the direct connection of impervious areas to adjacent drainages or water bodies.

Air Quality

1. During its operations, the operator/holder shall control dust on the access roads, the right-of-way, and/or the facility location in accordance with a surface use plan approved by the AO or the SMA. Any dust control method other than local natural surface water or sand and gravel (i.e., chemicals, produced water, etc.) requires AO or SMA approval prior to its use.

Noise Reduction

1. The operator/holder shall, where applicable, comply with NTL 04-2 FFO, Management of Sound Generated by Oil and Gas Production and Transportation.
2. The proximity of residences in the area places this well location under Zone 2 noise mitigation requirements. This requires that the operator file a sundry notice prior to placing a compressor unit on location (should one be needed during the production phase of this well).

The sundry notice shall include information on why the compressor is needed, the estimated time the compressor shall be in use, and the manufacturer's data (size of unit, horsepower, model type and type of motor). A 1:24,000 (7.5 minute series) map shall be submitted with the sundry. The map shall show the proposed compressor location and all noise sensitive areas (fee surface, residences, schools, churches, farms, known ACECs and SMAs, etc.) within a two-mile radius of the compressor location. In addition, a 24-hour weighted average, background survey may be required.

*** Stipulation wording may be adjusted to suit agency requirements and for Zone 1 or Zone 3.

3. Oil and gas operations within the State of Colorado, including gas facility operations, shall comply with the following maximum permissible noise levels. Operations involving pipeline or gas facility installation or maintenance, the use of a drilling rig, workover rig, or stimulation are subject to the maximum permissible noise levels for industrial zones. The type of land use of the surrounding area shall be determined by the Commission in consultation with the local governmental designee with consideration any applicable zoning or local land use designation. In the hours between 7:00 a.m. and the next 7:00 p.m. the noise levels permitted below may be increased ten (10) dBA for a period not to exceed fifteen (15) minutes in any one (1) hour period. The allowable noise level for periodic, impulsive or shrill noises is reduced by five (5) db(A) from the levels shown.

<u>ZONE</u>	<u>7 am to next 7pm</u>	<u>7 pm to next 7 am</u>
Residential/Agricultural/Rural	55 db(A)	50 db(A)
Construction (After 1/1/2007)	50 db(A)	45 db(A)
Commercial	60 db(A)	55 db(A)
Light Industrial	70 db(A)	65 db(A)
Industrial	80 db(A)	75 db(A)

Guidance for the measurement of sound levels from oil and gas operations is provided in COGCC regulations at 802.c. (from COGCC regulations at 802. Noise Abatement, as of 1/30/2006)

4. Exhaust from all engines, motors, coolers and other mechanized equipment should be vented in a direction away from all occupied buildings to the extent practicable.

5. All facilities with engines or motors which are not electrically operated and within four hundred (400) feet of occupied buildings shall be equipped with quiet design mufflers or equivalent. All mufflers shall be properly installed and maintained in proper working order.

6. The operator/holder shall comply with all applicable federal, state, and local rules and regulations for reduction of noise from its operations.

Soils

1. Surface disturbance shall be kept to the minimum necessary to complete the planned development.

2. Topsoil, or the top-most layers of soil material, shall be stripped to a depth of _____ inches and stockpiled adjacent to the construction zone of the facility (well pad, compressor station, road, pipeline, campground, parking area, etc.).

3. The stockpiled topsoil material shall be spread on the recontoured portions of the facility prior to reseedling.

4. Top soil spreading shall not be done when the ground or topsoil is frozen or wet.

5. The operator/holder shall construct water bars on disturbed areas as directed by the AO or the SMA. Water bars shall be constructed to: (1) cross the full width of the disturbed area; (2) cross the contour lines of the slope at a grade of about one to two percent; (3) drain away from the disturbed area; (4) begin and end at natural grade and in vegetation or rock whenever possible; and (5) prevent siltation and clogging.

6. The maximum slope distance between water bars shall be as follows:

For grades of less than 2%-	200 feet;
For grades of 2% to 4%-	100 feet;
For grades of 4% to 5%-	75 feet;
For grades greater than 5%-	50 feet.

Note: The slope distances given here are from the Third Edition (January 1989) of Surface Operating Standards for Oil and Gas Exploration and Development and are suitable for most soil types. The AO or the SMA may require different spacing based on soil type and other factors.

7. Following use, off-road travel routes, landing zones and staging areas shall be chisel plowed to a depth of 12 inches to break up soil compaction, and then water bars shall be constructed on the disturbed area, as required by the AO or the SMA.

8. A diversion ditch [diversion ditches] shall be constructed on the _____ side of the facility (well pad, compressor station, campground, parking lot, etc.).

9. Culverts of sufficient size to handle at least a 25-year flood shall be used for cross drains on roads where drainage dips or low-water crossings are not feasible. The minimum culvert diameter is 18 inches.

10. A ___-inch diameter culver shall be placed at locations as discussed during the onsite inspection.

▪ 11. All [construction?] activity shall cease when soils or road surfaces become saturated to a depth of three inches, unless otherwise approved by the AO or the SMA.

12. There shall be no mud blading on the access road. Vehicles may be towed through the mud, provided they stay on the roadway.

13. Development will be restricted in areas that have special topographical (steep or broken and/or on benches) and soil concerns. Development in such areas will be considered on a case-by-case basis and will contain strict mitigation stipulations.

▪ 14. Surface disturbance will be prohibited in any of the following areas or conditions. Exception, waiver, or modification of this limitation may be approved in writing, including documented supporting analysis, by the AO with concurrence from Reclamation.

- A. Slopes in excess of 20 percent
- B. Within 500 feet of surface water and/or riparian areas.
- C. Within the closer of either 0.25 mile or the visual horizon of historic trails.
- D. Within areas prone to landslide.

- E. When soil material is frozen or saturated.
- F. When watershed damage is likely to occur.

15. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction or maintenance equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

16. The holder shall construct low-water crossings in a manner that shall prevent any blockage or restriction of the existing channel. Material removed shall be stockpiled for use in rehabilitation of the crossing.

17. Drainage control shall be ensured over the entire road through the use of borrow ditches, drainage dips, out-sloping, in-sloping, natural rolling topography, and/or turnout (lead-off) ditches. Every drainage dip shall drain water into an adjacent turnout ditch.

18. If snow removal from the road is undertaken, equipment used for snow removal operations shall be equipped with shoes to keep the blade ___ inches off the road surface. Holder shall take special precautions where the surface of the ground is uneven and at drainage crossing to ensure that equipment blades do not destroy vegetation.

19. Compressor units not equipped with a drip pan for containment of fluids shall be set within a containment area that is lined with an impervious material at least 8 mils thick and enclosed with a twelve inch high berm.

20. All vehicle use within the [specify area] shall be confined to the facility location, right-of-way, and designated access routes, roads or trails.

21. Sediment trapping devices (e.g., hay bales, silt fencing, soil retention blanket, etc.) to minimize off-site transport of sediments shall be installed as directed by the AO or the SMA.

22. Vegetated drainage ways with low-pitched side slopes that collect and slowly convey runoff shall be installed as directed by the AO or the SMA.

23. The operator/holder shall utilize modular block porous pavement where directed by the AO or the SMA.

Vegetation

1. No hardwood tree with a diameter of ten inches or more at the base, or any ponderosa pine, or Douglas-fir tree is to be removed or damaged without prior approval from the AO or the SMA.
2. No blading of the right-of-way or cross-country travel routes is permitted.
3. The operator/holder shall control weeds, including invasive weeds, on disturbed and reclaimed areas associated with its right-of-use. The holder shall consult with the AO, Reclamation, and local authorities for acceptable weed control methods.

Wetland/Riparian

1. A buffer strip of vegetation ___ feet wide shall be left between areas of surface disturbance and riparian and wetland vegetation as determined necessary by the AO or the SMA.

2. No development activity or surface occupancy shall be permitted in wetland areas (as defined in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands), except as may otherwise be authorized on a case-by-case basis by the AO or the SMA. Any wetland acreage destroyed shall be mitigated by the acreage ratio as prescribed by the US Fish and Wildlife Service.
3. No surface occupancy or use is allowed within the active floodplain.

Wildlife/Wildlife Habitat

1. No [specify activity(ies)] (construction, surface disturbing, drilling, completion, reclamation, revegetation) activities shall be conducted within [specify location] between:
 - December 1 and March 31 within of mule deer and elk winter range.
 - February 15 and July 15 within 0.5 miles of an active raptor nest.
 - November 1 and March 31 within buffer zones (0.25 miles) around bald eagle winter use areas
2. The following requirements shall may be implemented and enforced to protect historic and active raptor nests from proposed facility construction and human activities:
 - a) Surveys to detect nest occurrence shall be conducted in suitable breeding habitat within 0.5 mile of a proposed activity site.
 - b) Seasonal closures from 2/15 through 7/15 shall be imposed within 0.5 mile of an active nest.
3. Unless otherwise agreed to by the AO or the SMA in writing, power lines shall be constructed in accordance with the standards outlined in "Suggested Practices for Raptor Protection on Powerlines," Raptor Research Foundation, Inc., 1981. The Holder shall assume the burden and expense of proving that pole designs not shown in the above-mentioned publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the AO or the SMA. The AO or the SMA reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.
4. To avoid disturbance in elk and deer crucial winter range, no construction, drilling, completion, excavation, or reclamation activities shall be permitted between December 1 and March 31. All such activities should be concluded prior to December 1.
5. The operator/holder shall schedule regular facility maintenance outside of any crucial wildlife use periods.
6. To minimize indirect loss of big game winter range habitats, the operator/holder shall install and maintain lockable steel gates on access roads as required by the AO or the SMA. These gates shall remain closed and locked from September 1 through May 15 throughout the project life, once drilling and well completion operations are completed in respective areas. Use of closed road segments will be restricted to legitimate, authorized activities associated with facility maintenance and monitoring conducted by employees or authorized agents of the United States, the State, the operator, or the operator's subcontractors. Unauthorized use of these roads or failure to lock these gates during specified time frames by the operator or the operator's subcontractors will be considered a violation of the terms of this use authorization.

From May 16 through August 31 of each year, these gates shall remain unlocked and open to general public access.

The operator shall coordinate with the AO and Reclamation in the selection of gate sites. Some areas may require preconditioning of the roadway to achieve maximum closure effectiveness (including ATVs). Reclamation requires placement of gates at the following general locations:

<u>GATE NUMBER</u>	<u>LEGAL DESCRIPTION</u>	<u>REMARKS</u>
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7. In addition to the normal seed mix used on the disturbed areas, the operator/holder shall plant [species] seedlings on slopes as directed by the AO or the SMA. It is also advisable to obtain a nursery specialist to assist and advise with this project.

8. All open permanent production or storage tanks made of fiberglass, steel, or other such materials and used for the containment of oil, condensate, produced water, and/or other oil/gas production waste shall be screened, netted, or otherwise covered to protect migratory birds and other wildlife from access.

Threatened and Endangered Species or Species of Concern

1. A species specific survey and clearance for threatened and endangered and/or other species of concern shall be completed within realistically potential or known habitat prior to commencement of proposed activities, as directed by the AO or the SMA. Said surveys shall be in accordance with the established protocol for the applicable species. Restrictions will be placed on surface disturbing activities in suitable habitat until these inventories are complete. The absence of any threatened/endangered species must be confirmed prior to approval of any activity which may adversely affect the habitat. If the presence of a threatened/endangered species is found, additional restrictions on use or development will be imposed.

2. No surface occupancy or use shall be allowed within designated critical habitat for threatened or endangered species.

- 3. Site specific mitigation plans shall be developed in coordination with the US Fish and Wildlife Service for any threatened or endangered species impacted by a proposed action.

- 4. Any new water depletions from habitat for listed fishes shall require consultation with the US Fish and Wildlife Service.

- 5. Areas of potential suitable habitat for bald eagle shall be inventoried, as directed by the AO or the SMA, prior to the approval of an action. This includes a one-half mile strip around Navajo Reservoir. If the presence of a bald eagle is confirmed, restrictions on development will be imposed. USFWS and affected agency shall be involved in Section 7 consultation, if necessary.

- 6. A two-day winter survey shall be conducted, as directed by the AO or the SMA, within the [identify location] to determine if any communal bald eagle roosts are present near or within the areas proposed for construction.

- 7. The Authorized officer shall be notified of the location of any roost trees identified and

known roost trees shall be avoided.

8. Mature cottonwood trees (≥ 10 inches diameter) removed during construction shall be replaced at a ratio of 10 saplings to one mature tree.

9. Individual “species of concern” plants documented during a survey shall be mapped and reported to the Authorized officer. Occupied areas adjacent to the area to be disturbed shall be flagged and protected from disturbance during operations.

10. A qualified botanist shall transplant all [list species] plants from areas to be disturbed into suitable adjacent habitat in accordance with proven transplanting methods.

11. Site specific protection measures shall be implemented for transplant sites, as directed by the AO or the SMA. Such protection measures may include staking, flagging, fencing, and on-site monitoring.

12. As part of reclamation activities, some of the transplanted threatened/endangered plants shall be replaced within areas disturbed by construction but not necessary for operations and maintenance.

13. Using a third-party contractor and a monitoring plan approved by USFWS and the AO or the SMA, the permittee shall monitor the transplanted individuals for a period of at least 5 years following transplanting. A report of the monitoring results shall be made to the authorized officer.

Cultural Resources

1. A Class III (100% pedestrian) cultural resource inventory shall be completed by a qualified professional archaeologist prior to construction in the following areas: _____ . A report of the inventory shall be submitted to and approved by the AO and/or Reclamation with stipulations as appropriate to comply with EO 11593 and Section 106 of the National Historic Preservation Act of 1966.

2. If, in its operations the holder discovers any cultural remains, monuments, or sites, or any object of antiquity subject to the Antiquities Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. Secs. 431- 433), the Archaeological Resources Protection Act of 1979 (Public Law 96-95), and 43 CFR, Part 3, the holder shall immediately cease activity and report directly to the Field Office Manager. The Bureau shall then take such action as required under the acts and regulations. The holder shall follow the mitigation requirements set by the Bureau concerning protection, preservation or disposition of any sites or materials discovered. In cases where salvage excavation is necessary, the cost of such excavation shall be borne by the holder, unless otherwise stated.

3. Surface disturbing activity within _____ (legal description or stations) shall be monitored at the time of the disturbance by a qualified professional archaeologist and the report of that monitor submitted on behalf of the holder and approved by the AO and/or Reclamation unless otherwise stated.

4. If Native American cultural items are discovered during a Reclamation activity for which there is no plan, work will cease immediately in the area of discovery and the requirements of NAGPRA regulations (43 CFR 10.4) will be followed.

▪ 5. Any cultural resource (historic or prehistoric site or object) discovered by the project leader, or any person working on his behalf, on Reclamation land shall be immediately reported to the *archaeologist at the Western Colorado Area Office, Durango, CO*. The project leader shall suspend all operations in the immediate area of such discovery until authorization to proceed is issued by the archaeologist. An evaluation of the discovery will be made by the archaeologist to determine appropriate actions to prevent the loss of significant cultural or scientific values.

6. A cultural survey and clearance shall be required for any proposed surface disturbing activities outside of existing disturbed areas prior to the start of such activities.

7. Areas of extremely high density archaeological sites may limit any ground disturbance activity. Development will be considered on a case-by-case basis.

8. If, in its operations, the operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery shall be suspended and the discovery promptly reported to the BLM Field Manager. BLM will then specify what action shall be taken. If there is an approved “discovery plan” in place for the project, then that plan shall be executed. In the absence of an approved “discovery plan,” the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any treatment is completed. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archaeological Resources Protection Act of 1979, as amended.

9. If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery shall be suspended and the monitor shall promptly report the discovery to the BLM Field Manager. BLM will then specify what action shall be taken. If there is an approved “discovery plan” in place for the project, then that plan shall be executed. In the absence of an approved “discovery plan,” the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any treatment is completed.

10. If, in its operations, the operator/holder damages, or is found to have damaged, any previously documented or undocumented historic or prehistoric cultural resources, excluding “discoveries” as noted above, the operator agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archaeological Resources Protection Act of 1979, as amended.

Paleontologic Resources

1. If, in the conduct of operations, paleontologic materials (fossils) are observed, the operator/holder shall immediately contact the AO. The operator/holder shall cease any operations

that would result in the destruction of such objects. The results of further investigation shall dictate site-specific stipulation for avoidance or salvage of any potentially significant paleontologic resources.

- 2. Any paleontological resource discovered by the project leader, or any person working on his behalf, on Reclamation land shall be immediately reported to the *archaeologist at the Western Colorado Area Office, Durango, CO*. The project leader shall suspend all operations in the immediate area of such discovery until authorization to proceed is issued by the archaeologist. An evaluation of the discovery will be made by the archaeologist to determine appropriate actions to prevent the loss of significant cultural or scientific values.
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Recreation

1. No surface occupancy shall be allowed within developed recreation areas without proper NEPA compliance.
2. To minimize general remote recreational vehicular access to the reservoir and the reservoir area, the holder/operator shall install and maintain lockable steel gates on access roads as required by Reclamation. The operator shall coordinate with the AO and Reclamation in the selection of gate sites. Some areas may require preconditioning of the roadway to achieve maximum closure effectiveness, including ATVs and dirt bikes.

These gates shall remain locked and closed to general public access year-long. Use of closed road segments will be restricted to legitimate, authorized activities associated with valid existing rights, as well as, authorized resource management activities conducted by employees or agents of the US, and the State. Unauthorized use of these roads or failure to lock these gates by the operator/holder or their subcontractors will be considered a violation of the terms of this use authorization.

Visual Resources

1. A tree screen shall be left on the _____ side(s) of the [specify facility] .
2. Except as otherwise allowed by the AO or the SMA, all permanent or long-term, above ground structures not subject to safety requirements shall be painted to blend with the natural color of the landscape. The paint used shall be a non-glare, non-reflective, non-chalking color of [list color] _____:
 - a. Juniper Green (Federal Color 595a-34127)
 - b. Slate Gray (Munsell Soil Color 5Y 6/1)
 - c. Carlsbad Canyon Brown (Munsell Soil Color 2.5Y 6/2)
 - d. Desert Brown (Munsell Soil Color 10Y 6/3)
3. Instead of being painted, the leg-off shall be left unpainted so that the rusty finish on the pipe would blend with the surroundings.
4. The compressor shall be painted to match the well facilities.
5. To reduce potential safety hazards, the operator/holder may mark designated structures adjacent to roads with a reflective material.

6. The operator/holder shall use non-reflective transmission lines and conductors at the following locations: [list locations].
7. The operator/holder shall coordinate with the AO and Reclamation on the design and color of the poles and transmission lines to achieve the minimum practicable visual impacts.
8. The operator/holder shall not site facilities on the ridgeline above the reservoir.
9. Class II visual objectives shall apply to all development within the [specify area]. The management objective of this class is to retain the existing character of the landscape. The level of change should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
10. Class III visual objectives shall apply to all development within the [specify area]. The management objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Management activities may attract attention, but should not dominate the view of the casual observer.
11. Class IV visual objectives shall apply to all development within the [specify area]. The management objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change can be high, however, the impact of activities should be minimized through careful location, minimal disturbance, and repeating the basic elements of the characteristic landscape. Management activities may dominate the view and be the major focus of viewer attention.
12. Low profile production equipment will be required on this location due to the proximity of Navajo Lake State Park (NM) or Navajo State Park (CO).

LAND USE OPERATIONS AND PROTECTION

Oil/Gas Development

1. Oil and gas development on USBR managed land around Navajo Reservoir will be managed under NSO constraints within 500 feet of the maximum high water line (elevation 6101.5 feet above MSL), within 500 feet of the San Juan River and on all new federal] leases.
2. No surface occupancy constraints will be applied to oil and gas development within 1,500 horizontal feet of Navajo Dam and its appurtenant structures.
3. No drilling shall be allowed within 1500 feet of Navajo Dam and its appurtenant structures. This includes the foundation of the dam which extends 1,320 feet upstream and 1,260 feet downstream of the dam axis. (T. 30 N., R.7 W., Sec. 18: S2; Sec. 19: N2, N2SW4, N2N2SE4).
4. Written notice shall be provided to Reclamation 15 days prior to any and all intended surface activities in connection with exploration, drilling, or any other activity associated with, or leading to, oil and gas production (including seismic activity) on any Reclamation lands.

5. There will be no surface occupancy within 200 horizontal feet of the centerline of any constructed or proposed Reclamation tunnel, canal, aqueduct, pipeline, lateral, drain, transmission lines, telephone lines, and roadways.
6. Berms or firewalls shall be constructed around all storage facilities. Said berms or firewalls shall be of sufficient size to contain the storage capacity of tanks, or the combined storage capacity of tanks if a rupture could drain more than one tank. Berm and firewall walls shall be compacted with appropriate equipment to assure proper construction.
7. Reserve pits shall be closed and rehabilitated within 90 days after well completion or 120 days after the well is spudded. All reserve pits remaining open after 90 days require written authorization from the AO or the SMA.
8. Mud and blow pits shall be constructed so as to not leak, break or allow discharge of liquids or produced solids. At least half of the capacity of the reserve pit must be in cut. The top of the outside wall of the reserve pit should be smoothed-off with a minimum of one blade width. The pit should have adequate capacity to maintain 2 feet of free board. Pits shall not be located in natural drainages. Pit walls are to be "walked down" by a crawler type tractor following construction and prior to usage. Any plastic material used to line pits must be removed to below ground level before pits are covered. The final grade of reserve pit (after reclamation) shall allow for surface drainage away from the pit area.
9. All unguarded pits (reserve/production/blow) containing liquids shall be fenced with woven wire. Drilling pits shall be fenced on three sides and once the rig leaves the location, the fourth side shall be fenced. All fencing must be a legal fence in accordance with [list state] state law.
10. All liquid waste, completion fluids and drilling products associated with oil and gas operations shall be contained and then buried in place, or removed and deposited in an approved disposal site.
11. Liquids in pits shall be allowed to evaporate, or shall be properly disposed of, before pits are filled and recontoured. The AO must be notified at least 24 hours prior to fluid hauling. Under no circumstances shall pits be cut and drained. Aeration of pit fluids must be confined within the pit area.
12. Upon completion of the well, the reserve pit shall be covered with screening or netting and remain covered until the pit is reclaimed.
13. All production pits 16 feet in diameter or larger shall be covered with screening or netting.
14. New development, whenever feasible, shall be twinned to existing well locations. Options to be considered include directional drilling, re-completions, multiple completions, centralizing of locations and unorthodox locations.
15. Production equipment (including any facilities associated with pipeline construction) shall be placed on location so as to not interfere with reclaiming the cut and fill slopes to their proper ratio. If equipment interferes with the proper reclamation of the slope, the operator/holder shall be required to move the equipment so proper reclamation can occur.

Use Authorizations/Rights-of-Way

1. If a pipeline or other type of right-of-way is separate from any permanent access, roads shall not be constructed within the right-of-way where the terrain is such that vehicles may maneuver without the aid of such roads.
2. To restrict unauthorized travel on non-road rights-of-way, the operator/holder shall, at each location where the right-of-way separates from a road, construct a barrier sufficient to prevent vehicular traffic beyond that barrier.
3. Boundary adjustments in lease [number] shall automatically amend this right-of-way to include that portion of the facility no longer contained within the above described lease. In the event of an automatic amendment to this right-of-way grant, the prior on-lease/unit conditions of approval of this facility shall not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate, shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic adjustment.
4. Prior to crossing, using or paralleling any improvement on Reclamation land, the operator shall contact the owner of the improvement to obtain mitigating measure to prevent damage to the improvements.
5. Upon completion of construction, the holder shall post as directed by the AO, the Bureau serial number assigned to this right-of-way grant at the following location(s) _____.
6. From Sta. _____ to Sta. _____ the pipeline shall be buried in the existing road or within twenty (20) feet of the edge of the traveled surface of the existing road.
7. The pipeline shall be laid above ground from Sta. _____ to Sta. _____ and no blading shall be allowed between these stations.
8. Plastic pipe shall not be used in the construction of a surface pipeline.
9. All surface pipeline(s) shall be buried at least three (3) feet [deep] where they cross any road or areas associated with a road (i.e., bar ditches, water turnouts, etc.). The pipeline shall be marked with suitable signs on either side of a road crossing(s).
10. Any surface pipeline constructed adjacent to a road shall be located at least twenty (20) feet from the traveled surface of the road.
11. This “loop line” shall be constructed within twenty (20) feet of the existing pipeline.
12. Clearing of right-of-way for cathodic protection shall:
 - A. Be limited to knocking off the tops of brush in brushy vegetative types.
 - B. Not include grading or removal of the grass cover or low growth vegetation is prohibited, except immediately along the ditch line, and in rough or broken terrain.
 - C. Provide that, in woodland or forest vegetation, trees cleared from the right-of-way shall be left for wood gathering activities. The trees shall be moved aside prior to any soil disturbing activities. Soil shall not be mixed with the trees during right-of-way clearing.
 - D. Be limited to a width of _____ feet.
13. The cathodic cable shall be spanned above ground from Sta. _____ to Sta. _____.

14. The cathodic cable shall be constructed in the access road or within fifteen (15) feet of the access road from Sta. ____ to Sta. ____.

15. The pole structure of the powerline shall be constructed as illustrated in the drawings submitted in the application for this right-of-way and included in this [list authorization type] as Exhibit _____. Any deviation from the illustration specifications requires written approval of the AO or the SMA.

Transportation System

1. Reclamation project operation and maintenance roads shall not be used for access without the prior approval of Reclamation.

2. This grant is for an existing road(s) under the terms of the New Mexico Policy, Standards, and Procedures for Existing Roads issued effective January 1, 1990. This right-of-way grant shall be deemed to describe the existing road(s) as it exists on the ground as of April 8, 1991, notwithstanding the descriptions contained herein.

3. This road shall have a minimum driving surface of fourteen (14) feet, a maximum bladed width of ____ feet excluding turnout ditches and turnouts, and a maximum grade of 10 percent (pitches over 10 percent that are less than 300 feet in length may be allowed).

4. All roads on public lands and/or reservoir area lands must be maintained in good, passable condition.

5. The access road shall be rerouted around the _____ edge of the [specify facility] (well pad, etc.) during [specify] (construction, drilling, completion, etc) activities for safety reasons. Upon completion of said activities and cleanup, the road shall be returned to its original alignment.

6. Unless otherwise approved by the AO or the SMA, vehicle turnouts shall be constructed along this road. Turnouts shall be located at 2000-foot intervals, or the turnouts shall be inter-visible, whichever is less. Turnouts shall conform to diagrams that can be obtained from the AO.

7. Any roads used exclusively for construction purposes shall be adequately closed to all vehicular travel, and rehabilitated after completion of construction. The manner of closure shall be determined in conjunction with a representative of the AO, with concurrence of Reclamation.

8. The holder is responsible for notifying the parties listed below for sharing in road maintenance.

<u>Right-of-way</u>	<u>Holder</u>	<u>Address</u>	<u>Telephone</u>
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9. All weather access is desired and surface material (____) is economically available, therefore the road shall be surfaced. The surfacing material shall be compacted to minimum thickness of ____ inches. Prior to using any mineral material from an existing or proposed federal source, authorization must be obtained from the AO or the SMA.

10. Vehicle use shall be restricted to authorized roads and locations.

Livestock Grazing/Facilities

1. For temporary cross-country travel (such as seismic operations), no fences shall be cut unless specifically authorized by the AO or the SMA. Vehicle crossings of fences shall be made at existing gates. Gates shall be left closed.

2. Each fence crossed by this [list facility or action] shall be secured to H-braces prevent slacking of the wire, before the wire is cut. A temporary wire gate or other acceptable closure shall be installed on cut fences the same day the fence is cut and the opening shall be managed as necessary to prevent passage of livestock during construction or other temporary activities.

3. The operator/holder is responsible for contacting the grazing lessee(s) named below, prior to crossing any fence on Reclamation land or any fence between Reclamation land and private land, and to offer the lessee(s) an opportunity to be present when the fence cut(s) is/are made so the lessees can be satisfied that the fence is adequately braced and secured.

Lessee _____ Phone _____ Address _____

4. Upon completion of construction or other temporary activities the operator/holder shall complete one of the following actions as directed by the AO or the SMA:
 - A. Install a cattleguard with an adjacent gate. The cattleguard and gate shall be constructed to specifications provided by the AO or the SMA.
 - B. Install a metal gate capable of being locked. The gate shall be constructed to specifications provided by the AO or the SMA.
 - C. Reconstruct the fence to specifications provided by the AO or the SMA.

5. Cattleguards, their foundation designs, and their construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) H-20 load rating, except that AASHTO U-80 rated grids shall be required where loads are expected to exceed H-20 loading. Cattleguard grid dimensions shall not be less than eight feet wide and not less than 14 feet long. A wire gate with a minimum width of 16 feet shall be provided on one side of the cattleguard. (See BLM standard drawings for cattleguards.)

6. Each cattleguard must have clearly visible identification marks welded into it indicating its ownership, well name and number, or other facility associated with the cattleguard.

7. A minimum distance of ten (10) feet of undisturbed surface shall be maintained between fence lines and roads that are constructed parallel to fences.

8. When construction activity breaks or destroys a natural barrier used for livestock control, the gap thus created shall be fenced to prevent drift of livestock. The subject natural barrier shall be identified and fenced by the holder per instructions from the AO or the SMA.