STIPULATIONS	
	AIR QUALITY
	All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO _x per horsepower-hour.
	Exception: This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
	Modification: None
UT-S-01	Waiver: None
	AND
	All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO _x per horsepower-hour.
	Exception: None
	Modification: None
	Waiver: None
	NO SURFACE OCCUPANCY – SAN JUAN RIVER ACEC
	No surface-disturbing activities allowed within the San Juan River ACEC to protect scenic, cultural and wildlife values.
UT-S-16	Exception: An exception could be granted if activities are short term or after an analysis the authorized officer determines that the project would benefit the relevant and important values. Small signs, kiosks, route designators, etc. used to manage activities or resources could also be allowed.
	Modification: None
	Waiver: None
	CONTROLLED SURFACE USE – ALKALI RIDGE ACEC
UT-S-17	Cultural properties eligible for or listed on the National Register of Historic Places shall be surrounded by an avoidance area sufficient to avoid direct and indirect impacts. When siting oil and gas facilities, avoidance may require that a facility be moved farther than allowed under the standard lease terms and conditions.
	Exceptions : An exception could be granted if the BLM authorized officer determines that avoidance of direct and indirect impacts to historic properties is not feasible (e.g. avoidance may cause unacceptable damage to other public land resources or affect valid existing rights).
	Modification: None
	Waiver: None

STIPULATIONS	
UT-S-45	NO SURFACE OCCUPANCY – SAN JUAN RIVER SRMA (EXCEPT SEGMENT #5WSR)
	No surface-disturbing activities are allowed within the San Juan River SRMA excluding segment #5 WSR to preserve and protect the developed and potential recreation sites, and the recreational opportunities and visitors' San Juan River experience.
	Exceptions: An exception may be granted if, after an analysis, the authorized officer determines that the disturbance is related to or can be shown to benefit recreational experiences.
	Modification: None Waiver: None
	NO SURFACE OCCUPANCY – DEVELOPED RECREATION SITES
	No surface-disturbing activities allowed within one quarter mile of
	campgrounds and within 200 meters of other developed recreation sites.
	Exception: An exception could be granted if the disturbance is related to
UT-S-55	recreational infrastructure support or if, after an assessment, it is determined
	that the visual intrusions and noise can be mitigated so as to not adversely affect the visitor experience.
	Modification: None
	Waiver: None
	NO SURFACE OCCUPANCY – FRAGILE SOILS/SLOPES GREATER
	THAN 40 PERCENT
	No new surface-disturbing activities allowed on slopes greater than 40% to protect soils, avoid erosion, and maintain public health and safety in sloped embankments.
UT-S-98	Exception: If after an analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives; surface occupancy in the NSO may be authorized. Additionally, a plan would be submitted by the operator and approved by BLM prior to construction and maintenance.
	Modification: None
	Waiver: None
	CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 21-40
UT-S-106	PERCENT
	No new surface disturbance/construction on slopes between 21-40% without a BLM approved site plan that is prepared for any surface disturbing or construction activity. This plan would include an erosion control strategy, survey and design, and reclamation plan.
	Exception: None
	Modification: None
	Waiver: None

STIPULATIONS	
	TIMING LIMITATION – FRAGILE SOILS – MANCOS SHALE
UT-S-109	No surface-disturbing activities allowed during December 1 to May 31 to minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived from the Mancos Shale. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.
	Exception: An exception could be granted if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the authorized officer on a case-by-case basis, depending on current soil and weather conditions.
	Modification: None
	Waiver: None
	NO SURFACE OCCUPANCY – RIVER CORRIDORS, INCLUDING SUITABLE WILD AND SCENIC RIVER SEGMENTS
UT-S-112	No surface-disturbing activities within the area of the Three Rivers and Westwater mineral withdrawals which includes suitable Wild and Scenic River segments. Where the NSO area is physically inaccessible to oil and gas drilling by current directional drilling technology (1 mile from outside the NSO area), it will be closed to oil and gas leasing. However, these lands remain NSO for all other surface disturbing activities.
	Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or the use would provide suitable opportunities for public enjoyment of the applicable resources. No exception for oil and gas leasing. Exceptions could be made on the Colorado River along Highways 128 and 279, along Kane Creek Road, along the Green River from Swasey's Rapid to Ruby Ranch, and along the Dolores River from Entrada Ranch to the Colorado River confluence to maintain or improve infrastructure. These exceptions (subject to appropriate mitigation to minimize impacts to the applicable resources) could include minor rights-of-way to service private land and temporary use authorizations. Modification: None
	Waiver: None

STIPULATIONS	
	NO SURFACE OCCUPANCY – FLOODPLAINS, RIPARIAN AREAS, SPRINGS AND PUBLIC WATER RESOURCES
	No surface-disturbing activities within 100 year floodplains or within 100 meters of riparian areas. Also, no surface-disturbing activities within public water reserves or within 100 meters of springs.
UT-S-122	Exception: An exception could be authorized if: (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to benefit and enhance the resource values.
	Modification: None
	Waiver: None
	NO SURFACE OCCUPANCY – FLOODPLAINS, RIPARIAN AREAS, SPRINGS, AND PUBLIC WATER RESERVES
UT-S-128	No surface-disturbing activities are allowed in active floodplains, public water reserves or within 100 meters of riparian areas along perennial streams and
	springs. Exception : An exception could be authorized if: (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resource values.
	Modification: None
	Waiver: None
	CONTROLLED SURFACE USE – VRM II AREAS
	Surface-disturbing activities must meet the VRM II class objectives.
	Exception: The level of change to the landscape should be low; management
	activities may be seen, but should not attract attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color,
TITE C 450	and texture found in the predominant natural features of the characteristic
UT-S-158	landscape. Surface-disturbing activities that are determined to be compatible
	and consistent with the protection or enhancement of the resource values are
	exempted. Also, recognized utility corridors are exempted only for utility projects which would be managed according to VRM III objectives.
	Modification: None
	Waiver: None

STIPULATIONS	
UT-S-170	Controlled Surface USE – Cultural Cultural properties eligible for or listed on the National Register of Historic Places shall be surrounded by an avoidance area sufficient to avoid impacts. (Although oil and gas activity must also meet this standard, a CSU lease stipulation is not necessary since this can be accomplished under the terms of the standard lease form.) Exceptions: An exception could be granted if the BLM authorized officer determines that avoidance of direct and indirect impacts to historic properties is not feasible (e.g. avoidance may cause unacceptable damage to other public land resources or affect valid existing rights). Modification: None Waiver: None
UT-S-223	TIMING LIMITATION – PRONGHORN FAWNING GROUNDS No surface-disturbing activities from May 1 to June 15 within pronghorn fawning grounds to minimize stress and disturbance during crucial antelope birthing time. Exception: The authorized officer may grant an exception after an analysis the authorized officer determines that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance is allowed. Modification: The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as pronghorn fawning grounds. Waiver: May be granted if the fawning grounds are determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning grounds.
UT-S-234	TIMING LIMITATION – CRUCIAL DEER WINTER RANGE No surface-disturbing activities within crucial deer winter range from November 15 to April 15 to minimize stress and disturbance to deer during crucial winter months. Exception: The authorized officer may grant an exception if, after an analysis, the authorized officer determines that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance is allowed. Modification: The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as deer winter range. Waiver: May be granted if the deer winter range is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the deer winter range.

STIPULATIONS	
	CONDITIONAL SURFACE USE/TIMING LIMITATION – BURROWING OWL AND FERRUGINOUS HAWK NESTING
UT-S-272	No surface disturbances or occupancy will be conducted during the breeding and nesting season (March 1 to August 31 for burrowing owl and March 1 – August 1 for ferruginous hawk) within spatial buffers (0.25 mile for burrowing owl and 0.5 mile for ferruginous hawk) of known nesting sites. Exception: An exception would be granted if protocol surveys determine that
	nesting sites, breeding territories, and winter roosting areas are not occupied.
	Modification: The authorized officer may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.
	Waiver: May be granted if it is determined the habitat no longer exists or has been destroyed.
	CONTROLLED SURFACE USE/TIMING LIMITATION – BALD
	EAGLES
UT-S-275	Bald eagles would be protected as outlined in the Bald Eagle Protection Act of 1940 (16 U.S.C. 668-668d, 54 Stat. 250, as amended). Activities on BLM lands that contain nesting or winter roosting habitat for the bald eagle would be avoided or restricted, depending on the duration and timing of the activity. Bald eagles would be managed according to the Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006c). These management requirements would include restrictions and avoidance measures, including required surveys prior to activity, possible monitoring during the activity, implementation of seasonal and spatial buffers during the breeding season (January 1 – August 31), and avoidance of disturbance in riparian areas unless impracticable. No future ground-disturbing activities would be authorized within a 1.0-mile radius of known bald eagle nest sites year-round. Deviations may be allowed only after appropriate levels of consultation and coordination with the USFWS/UDWR. In addition, no permanent aboveground structures would be allowed within a 0.50-mile radius of a winter roost site if the structure would result in the habitat becoming unsuitable for future winter roosting by bald eagles.
	These requirements would help to mitigate the adverse impacts of human disturbance on bald eagles during breeding and roosting seasons. 1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol.
	2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated.
	3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.

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- 4. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of **January 1 to August 31**, unless the area has been surveyed according to protocol and determined to be unoccupied.
- 5. Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of **November 1 to March 31**, unless the area has been surveyed according to protocol and determined to be unoccupied.
- 6. No permanent infrastructure will be placed within 1.0 mile of nest sites.
- 7. No permanent infrastructure will be placed within 0.5 miles of winter roost areas.
- 8. Remove big game carrion within 100 feet of lease roadways occurring within Bald Eagle foraging range.
- 9. Avoid loss or disturbance to large cottonwood gallery riparian habitats.
- 10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize direction drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers.
- 11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.

Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage. These additional measures will be developed and implemented in coordination with the USFWS/UDWR to ensure continued compliance with the Bald Eagle Protection Act.

Exception: An exception may be granted by the authorized officer if authorization is obtained from USFWS/UDWR. The authorized officer may also grant an exception if an analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the habitat and physical requirements determined necessary for the survival of the Bald Eagles.

Modification: The authorized officer may modify the boundaries of the stipulation area if an analysis indicates, and USFWS/UDWR determines that a portion of the area is not being used as Bald Eagle nesting or roosting territories or if additional nesting or roosting territories are identified.

Waiver: May be granted if there is no reasonable likelihood of site occupancy over a minimum 10 year period.

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UT-S-298	CONDITIONAL SURFACE USE – KIT FOX No surface disturbances within 200 meters of a kit fox den. Exception: An exception could be granted if protocol surveys determine that kit fox dens are not present. Modification: The authorized officer may modify the stipulation area if portions of the area do not contain habitat. Waiver: A waiver may be granted if it is determined that the habitat no longer exists.
UT-S-317	UNIT JOINDER The successful bidder will be required to join the Unit Agreement or show reason why a joinder should not be required.
UT-S-358	AIR QUALITY AND GREENHOUSE GASES All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower. All new and replacement internal combustion gas field engines of greater than 300 design-rated horsepower must not emit more than 1 gram of NOx per horsepower-hour. Purpose: To protect air quality and minimize greenhouse gas emissions. Exception: None Modification: The Authorized Officer may modify the stated requirements in accordance with updated specifications to comply with the Clean Air Act, or as deemed necessary to ensure that the stipulation is sufficient to maintain air quality and protect air quality related values. Waiver: None
UT-S-359	AIR QUALITY I All drilling and production operations are required to adhere to the following minimum standards: 1. Drill rig engines must meet Tier II or better standards, as necessary based on air quality conditions or projections, and consistent with the most stringent Environmental Protection Agency emissions standards that are in force at the time of installation or approval. 2. Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines<300HP and 1g NOx/bhp-hr for engines >300 HP. 3. Low bleed or no bleed pneumatic controller. 4. Dehydrator VOC emission controls to +95 percent efficiency. 5. Tank VOC emission controls to +95 percent efficiency equivalent to NSPS subpart 0000. Purpose: To mitigate any potential impact mineral development emissions may have on regional ozone formation.

STIPULATIONS	
	Exception: None Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: None
UT-S-360	AIR QUALITY II A Fugitive Dust Control Plan is required for mineral activities that would disturb a surface area larger than 0.25 acres or that would involve truck traffic on unpaved or untreated surfaces. Purpose: To minimize the generation of fugitive dust. Exception: None Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: None
UT-S-364	CONTROLLED SURFACE USE – FILMING LOCATIONS A visual assessment is required within 1-mile of the high use filming locations listed below. This assessment must demonstrate that the proposed mineral operations within this area would not result in long-term impairment to the scenic quality from the filming locations. These filming locations include: • Needles Overlook • Colorado River Corridor and Corona Arch • Green River Canyon • Kane Creek Corridor • Looking Glass Rock • View from Dead Horse Point • Potash Road/Shafer Basin (including Fossil Point) • Long Canyon

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	 Highway 211 (including Newspaper Rock) Highway 313 Mineral Bottom Road Behind the Rocks Jeep Route Monitor and Merrimac/Determination Towers/Mill Canyon/Bartlett Wash Gemini Bridges/Bull Canyon Jewell Tibbetts Arch White Wash. Purpose: To protect the immediate foreground of high use filming locations. Exception: The Authorized Officer may grant an exception if a visual assessment demonstrates that the proposed mineral operations would not result in long-term impairment to the scenic quality from the filming location. Modification: The Authorized Officer may modify the stipulation if a filming location ceases to be utilized or if a new location becomes heavily used.
	Waiver: The Authorized Officer may waive the stipulation if the film industry ceases to utilize the area for filming.
UT-S-365	CONTROLLED SURFACE USE - LANDS WITH WILDERNESS CHARACTERISTICS Mineral operations are subject to the following requirements: 1. Multiple wells per pad as appropriate. 2. Well pads would be placed no closer than 2-miles apart. 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads. 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation. 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance. 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character. 7. This stipulation would allow for geophysical operations. 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources. These requirements apply to the following lands identified by the BLM in the 2008 Resource Management Plan (RMP) as having wilderness characteristics: • Arches Adjacent
	 Behind the Rocks Bridger Jack Mesa Dead Horse Cliffs

STIPULATIONS

- Dome Plateau (partial)
- Fisher Towers
- Goldbar
- Gooseneck
- Hatch/Lockhart/Hart
- Hatch Wash
- Horsethief Point
- Hunter Canyon
- Indian Creek
- Labyrinth Canyon
- Lost Spring Canyon
- Negro Bill Canyon
- Shafer Canyon
- Shay Mountain
- Yellowbird.

Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources.

Exception: Where it can be shown that the proposed operation would not cause unacceptable impacts, the Authorized Officer may grant an exception based on any of the factors listed below:

- a. If alternative placement of well pads would enable the operator to use areas that have been previously disturbed.
- b. If alternative placement of well pads would minimize the need for new road construction.
- c. If there is a demonstrated reduction in the impacts to resources.
- d. If there is a valid safety concern.
- e. If the requirement of 2-mile spacing would preclude a lessee/operator from exercising their lease rights where the spacing would locate a well pad outside of the lease.
- f. An exception to the 2-mile placement could be granted if the proponent successfully demonstrates that geologic factors preclude access to a substantial portion of the oil and gas reservoir. An exception to the 2-mile placement would still require the maximum technologically feasible placement of oil and gas wells.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government

STIPULATIONS	
	agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.
	CONTROLLED SURFACE USE – PALEONTOLOGY
UT-S-370	Surveys and monitoring (where appropriate) are required for all surface-disturbing mineral activities in PFYC Class 4 and 5 areas. Where monitoring encounters vertebrate and vertebrate trace fossils during mineral operations, all operations must cease until the BLM determines whether the site can be avoided, protected, or fully excavated.
	Purpose: To protect paleontological resources. Exception: None
	Modification: The Authorized Officer could modify the stipulation if it is determined that the project area is not located within a PFYC Class 4 or 5 area. Waiver: The Authorized Officer could waive the stipulation if it is determined that the entire lease area is not located within a PFYC Class 4 or 5 area.
	NO SURFACE OCCUPANCY – RECREATION (DEVELOPED RECREATION SITES)
UT-S-371	No surface-disturbing activities are allowed within 0.5-miles of developed recreation site boundaries (current and planned, See Appendix D of the Moab MLP ROD).
	Purpose: To protect Federal investment in facilities, to provide for recreational use, and to protect the viewshed and soundscape from the facility.
	Exception: The Authorized Officer may grant an exception if a viewshed analysis indicates no long-term impairment of the visual resources from the recreation site and if it can be demonstrated there would be no auditory impacts to the recreation facility.
	Modification: The Authorized Officer may modify the stipulation to the boundary of the developed recreation site if the site is expanded. Waiver: The Authorized Officer may waive the stipulation if the developed recreation site has been decommissioned.

NO SURFACE OCCUPANCY – RECREATION (HIGH USE RECREATION ROUTES AND TRAILS)

No surface occupancy allowed within 0.5-miles of the centerline of the following high use motorized routes (jeep) and non-motorized trails (hiking and bicycle):

Motorized routes

- Metal Masher (Arth's Rim) jeep route
- Gold Bar Rim jeep route
- Golden Spike jeep route
- Poison Spider jeep route
- Cliffhanger jeep route
- Chicken Corners jeep route
- Moab Rim jeep route
- Kane Creek jeep route
- Lockhart jeep route
- Seven Mile Rim jeep route

Non-motorized trails

- Klondike Bluffs bicycle trails
- Bar M bicycle trails
- Porcupine Rim trail
- Magnificent Seven/7 Up bicycle trail systems
- Ahab bicycle trails
- Lower Monitor and Merrimac bicycle trail
- Hunter Canyon hiking trail

Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground. Non-motorized trail users travel at slower speeds than motorized users; therefore, the buffers provided to protect the recreation experience vary by mode of travel.

Exception: The Authorized Officer could grant an exception if a viewshed analysis indicates no long-term impairment to the immediate foreground view (0.5-miles) and it can be demonstrated that there would be no long-term auditory impairment to the trail or for access roads and pipelines if there are no practical alternatives.

Modification: The Authorized Officer may modify the stipulation if it is determined that a trail, route, or a portion thereof, is no longer being utilized for recreation within the project area.

Waiver: The Authorized Officer may waive the stipulation if it is determined that trails and routes are no longer utilized within the entire lease area.

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	NO SURFACE OCCUPANCY – RECREATION (WESTERN PORTION OF THE CANYON RIMS SRMA)
UT-S-374	No surface occupancy allowed within visual resource management (VRM) Class II areas in the Canyon Rims SRMA, as well as to all lands on the west side of the Anticline Road. This includes the VRM Class II corridor along the Needles and Anticline Overlook roads.
	Purpose: To protect recreational uses and experiences. Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not result in long-term visible impairment from Key Observation Points as defined by the
	BLM VRM Manual. Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.
	NO SURFACE OCCUPANCY – RECREATION (CANYON RIMS SRMA HATCH WASH FOCUS AREA)
	No surface occupancy allowed within the Hatch Wash Hiking and Backpacking Focus Area.
	Purpose: To protect recreational uses and experiences.
UT-S-375	Exception: The Authorized Officer may grant an exception if it is determined that the factors leading to its inclusion in the lease have changed sufficiently such that: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; or 2) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. Modification: The Authorized Officer may modify the stipulation as a result of
	new information if: 1) the protection provided by the stipulation is no longer

justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

BASELINE CONTROLLED SURFACE USE – RECREATION (CANYON RIMS, LABYRINTH RIMS/GEMINI BRIDGES AND SOUTH MOAB SRMAs)

Mineral operations outside the area designated as NSO are subject to the following requirements:

- 1. Multiple wells per pad as appropriate.
- 2. Well pads would be placed no closer than 2-miles apart.
- 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads.
- 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation.

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- 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance.
- 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character.
- 7. This stipulation would allow for geophysical operations.
- 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources.

Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources.

Exception: Where it can be shown that the proposed operation would not cause unacceptable impacts, the Authorized Officer may grant an exception based on any of the factors listed below:

a. If alternative placement of well pads would enable the operator to use areas that have been previously disturbed.

- b. If alternative placement of well pads would minimize the need for new road construction.
- c. If there is a demonstrated reduction in the impacts to resources.
- d. If there is a valid safety concern.
- e. If the requirement of 2-mile spacing would preclude a lessee/operator from exercising their lease rights where the spacing would locate a well pad outside of the lease.
- f. An exception to the 2-mile placement could be granted if the proponent successfully demonstrates that geologic factors preclude access to a substantial portion of the oil and gas reservoir. An exception to the 2-mile placement would still require the maximum technologically feasible placement of oil and gas wells.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

CONTROLLED SURFACE USE – SOIL (SALINE SOILS WITHIN THE MANCOS SHALE)

No surface-disturbing activities would be allowed during the period from December 1 to May 31. This restriction includes heavy equipment traffic on existing roads associated with drilling operations. This restriction does not apply to PPFAs.

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Purpose: To minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived primarily from the Mancos Shale.

Exception: The Authorized Officer may grant an exception if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to

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	the timing restriction could be considered by the Authorized Officer on a case-by-case basis, depending on current soil and weather conditions. Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils. Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire leasehold.	
	CONTROLLED SURFACE USE – SOIL (SALINE SOILS)	
UT-S-383	Compensatory mitigation outside the area of impact for any surface disturbance on saline soils is required. No more than one acre of mitigation would be required for each acre of disturbance. Compensatory mitigation outside the area of impact could include: 1) reclamation of non-designated roads and 2) planting and seeding in appropriate areas to improve soil condition. Purpose: To consider mitigation for saline soils outside the area of impact because it may not be feasible or practical to mitigate impacts to an acceptable level in the same area as the use authorization.	
	Exception: The Authorized Officer may grant an exception if it can be demonstrated that it would be feasible to fully mitigate the impacts to saline soils onsite.	
	Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils. Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire leasehold.	
	CONTROLLED SURFACE USE – SOIL (STEEP SLOPES)	
	An erosion control plan approved by the BLM is required on slopes greater than 21 percent prior to construction and maintenance if these activities cannot be avoided. The plan would include the following: 1) an erosion control strategy; and 2) a BLM-accepted access road and well pad survey and design. Purpose: To minimize soil erosion, sedimentation, soil compaction, runoff and associated loss of soil productivity. Exception: The Authorized Officer may grant an exception if it is determined	
UT-S-384	that the factors leading to its inclusion in the lease have changed sufficiently such that: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; or 2) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination.	
	Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain slopes greater than 21 percent. Waiver: The Authorized Officer may waive the stipulation if it is verified that steep slopes are not present on the entire leasehold.	

STIPULATIONS	
	NO SURFACE OCCUPANCY – WATER (WATER RESOURCES)
UT-S-386	No surface occupancy allowed within public water reserves, 100-year floodplains, and within 500 feet of intermittent and perennial streams, rivers, riparian areas, wetlands, water wells, and springs.
	Purpose: To protect public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, and water wells. Exception: The Authorized Officer may grant an exception only for access roads and pipelines if: a) there are no practical alternatives; b) impacts could be fully mitigated; and c) proposed operations would not result in unacceptable
	impacts. Modification: The Authorized Officer may modify the stipulation if it is determined that the project area no longer contains a public water reserve, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells.
	Waiver: The Authorized Officer may waive the stipulation if public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells are not present on the entire leasehold.
	NO SURFACE USE – WATER (EPHEMERAL STREAMS)
	No surface occupancy allowed within 100 feet of ephemeral streams.
UT-S-387	Purpose: To protect ephemeral streams. Exception: The Authorized Officer may grant an exception if: a) there are no practical alternatives; b) impacts could be fully mitigated; and c) proposed operations would not result in unacceptable impacts.
	Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain an ephemeral stream. Waiver: The Authorized Officer may waive the stipulation if ephemeral streams are verified as not present on the entire leasehold.
	CONTROLLED SURFACE USE – WATER (SPRING AREAS)
UT-S-391	A hydrologic assessment is required in identified spring areas prior to conducting any mineral operations. The hydrologic assessment would include a description of the geology and potentially affected aquifers and springs along with a drilling plan that demonstrates how water resources would be protected. A water monitoring plan would also be required. Monitoring would occur prior to, during, and after anticipated mineral development to detect impacts on springs.
	Purpose: To protect spring areas.
	Exception: The Authorized Officer may grant an exception if it is determined that the factors leading to its inclusion in the lease have changed sufficiently such that: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; or 2) proposed operations would not cause unacceptable impacts. The Authorized

Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

CONTROLLED SURFACE USE - OLD SPANISH TRAIL (HIGH POTENTIAL SITES AND SEGMENTS)

A visual assessment of lands within 2-miles of three high potential sites along the OSNHT (Kane Springs, Looking Glass Rock, and Colorado River Crossing near Moab) is required. A proposed mineral operation must not attract the attention of the casual observer from the OSNHT.

A visual assessment of lands within 2-miles of two high potential segments along the OSNHT (Moab Trail and Mule Shoe) is required. A proposed mineral operation would not result in long-term impairment of the OSNHT viewshed from the perspective of the casual observer from the OSNHT.

UT-S-395

A visual assessment of lands within 2-miles of the south side of the Blue Hills high potential segment along the OSNHT is required. A proposed mineral operation would not result in long-term impairment of the OSNHT viewshed from the perspective of the casual observer from the OSNHT. The existing Class B roads that cross the stipulated area could be utilized as a corridor for the transportation of potash (either by pipeline or truck) from a PLA to a PPFA and are not subject to this stipulation.

Purpose: To protect the setting along high potential sites and segments of the OSNHT.

Exception: The Authorized Officer may grant an exception if the proposed project is not within view of a high potential site or segment as stipulated.

Modification: The Authorized Officer may modify the stipulation to match any changes based on updated information.

new information if: 1) the protection provided by the stipulation is no longer

justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

CONTROLLED SURFACE USE - VISUAL RESOURCES (VRI CLASS II AREAS DESIGNATED AS VRM CLASS III)

Mineral operations are subject to the following requirements:

- 1. Multiple wells per pad as appropriate.
- 2. Well pads would be placed no closer than 2-miles apart.
- 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads.
- 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation.
- 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance.
- 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character.
- 7. This stipulation would allow for geophysical operations.
- 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources.

Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources

Exception: Where it can be shown that the proposed operation would not cause unacceptable impacts, the Authorized Officer may grant an exception based on any of the factors listed below:

- a. If alternative placement of well pads would enable the operator to use areas that have been previously disturbed.
- b. If alternative placement of well pads would minimize the need for new road construction.

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- c. If there is a demonstrated reduction in the impacts to resources.
- d. If there is a valid safety concern.
- e. If the requirement of 2-mile spacing would preclude a lessee/operator from exercising their lease rights where the spacing would locate a well pad outside of the lease.
- f. An exception to the 2-mile placement could be granted if the proponent successfully demonstrates that geologic factors preclude access to a substantial portion of the oil and gas reservoir. An exception to the 2-mile placement would still require the maximum technologically feasible placement of oil and gas wells.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

NO SURFACE OCCUPANCY – VISUAL RESOURCES SCENIC DRIVING CORRIDORS

No surface occupancy allowed within the mapped viewshed of Scenic Backways and Byways designated by the State of Utah and shall not exceed 1-mile from centerline. The Scenic Backways and Byways include Highways 128, 313, 279, and 211, as well as Needles Overlook, Anticline Overlook, and Lockhart Basin (including the Kane Creek Road).

UT-S-403

Purpose: To protect high quality visual resources along State Scenic Backways and Byways.

Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not be visible from the State Scenic corridors.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet

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	resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.
	NO SURFACE OCCUPANCY – VISUAL RESOURCES VRM II AREAS
	No surface occupancy allowed within VRM Class II areas.
UT-S-404	Purpose: To protect high quality visual resources.
	Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not result in long-term visible impairment from key observation points as defined by the BLM VRM Manual.
	Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period. Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys,
	mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.
	CONTROLLED SURFACE USE – AUDITORY MANAGEMENT-
TITE C 400	SOUNDSCAPE (LANDS BORDERING ARCHES AND CANYONLANDS
UT-S-408	NATIONAL PARKS) Operators are required to comply with the following within 6.1 miles (9.800)
	Operators are required to comply with the following within 6.1-miles (9,800 meters) of National Parks:

Noise mitigation efforts will be implemented with a maximum level of 55 decibels for production equipment (measured from the direction of the Park at a distance of 350 feet from source). These sound levels could be achieved by replacement diesel engine exhaust silencers (mufflers) noise barriers, and other noise control measures.

Purpose: To protect the soundscapes of the National Parks.

Exception: None

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

TIMING LIMITATION – WILDLIFE (PRONGHORN FAWNING HABITAT)

No surface-disturbing activities or occupancy allowed within pronghorn fawning habitat from May 1 to June 15.

Purpose: To minimize stress and disturbance during critical pronghorn birthing time.

UT-S-411

Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized for fawning in any given year. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.

Modification: The Authorized Officer may modify the stipulation if a portion of the area is not being used for fawning or if the habitat is being utilized outside of stipulation boundaries as crucial fawning habitat and needs to be protected.

Waiver: The Authorized Officer may waive the stipulation if the fawning habitat is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning habitat.

CONTROLLED SURFACE USE – WILDLIFE (DESERT BIGHORN SHEEP LAMBING AND RUTTING HABITAT)

Drilling operations and permanent facilities would not be allowed within desert bighorn sheep lambing and rutting habitat. Geophysical operations and the construction of roads and pipelines would be allowed during specified timeframes as follows:

- 1. Geophysical exploration would be allowed throughout the lambing and rutting habitat (except for source points in Mineral, Hell Roaring, Spring, and Ten Mile Canyons and 100 feet from their rims) if it occurred between June 16 and October 15 or December 15 through March 31. Receiver lines could be placed throughout the habitat.
- 2. Road construction necessary to exercise mineral lease rights and where no other access is feasible would be allowed throughout the habitat if the construction occurred between June 16 and October 15 or December 15 through March 31. Roads constructed for minerals within this habitat would not be available for public use. Furthermore, these roads would be reclaimed to a natural state at the conclusion of the project.
- 3. Pipeline construction and placement would be allowed throughout the lambing and rutting habitat if construction occurred between June 16 and October 15 or December 15 through March 31.

Purpose: To minimize disturbance within desert bighorn lambing and rutting habitat.

Exception: The Authorized Officer may grant an exception if it is determined that the factors leading to its inclusion in the lease have changed sufficiently such that: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; or 2) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination.

Modification: The Authorized Officer may modify the stipulation if a portion of the area is 1) not being used as desert bighorn lambing or rutting habitat and, 2) if habitat is being utilized outside of stipulation boundaries for lambing and rutting and needs to be protected.

Waiver: A waiver may be granted if the habitat is determined as unsuitable for lambing or rutting and there is no reasonable likelihood of future use as desert bighorn sheep lambing and/or rutting habitat.

UT-S-413

CONTROLLED SURFACE USE – WILDLIFE (DESERT BIGHORN SHEEP AND DEER AND ELK CRUCIAL WINTER HABITAT)

Mineral operations are subject to the following requirements:

- 1. Multiple wells per pad as appropriate.
- 2. Well pads would be placed no closer than 2-miles apart.

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- 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads.
- 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation.
- 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance.
- 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character.
- 7. This stipulation would allow for geophysical operations.
- 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources.

Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources

Exception: Where it can be shown that the proposed operation would not cause unacceptable impacts, the Authorized Officer may grant an exception based on any of the factors listed below:

- a. If alternative placement of well pads would enable the operator to use areas that have been previously disturbed.
- b. If alternative placement of well pads would minimize the need for new road construction.
- c. If there is a demonstrated reduction in the impacts to resources.
- d. If there is a valid safety concern.
- e. If the requirement of 2-mile spacing would preclude a lessee/operator from exercising their lease rights where the spacing would locate a well pad outside of the lease.
- f. An exception to the 2-mile placement could be granted if the proponent successfully demonstrates that geologic factors preclude access to a substantial portion of the oil and gas reservoir. An exception to the 2-mile placement would still require the maximum technologically feasible placement of oil and gas wells.

Modification: The Authorized Officer may modify the stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP; 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP; or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

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Waiver: The Authorized Officer may waive the stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

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UT-LN-04	CRUCIAL MULE DEER AND ELK WINTER HABITAT The lessee/operator has been given notice that the area has been identified as containing crucial deer winter range. Exploration, drilling and other development activities would be restricted from November 15 through April 15. Modifications including seasonal restrictions may be required to the Surface Use Plan of Operations in order to protect the winter range. This limitation does not apply to operation and maintenance of producing wells.
	PRONGHORN FAWNING The lessee/operator is given notice that lands in this lease have been identified as containing antelope fawning habitat. Exploration, drilling and other
UT-LN-15	development activities may be restricted from May 1 through June 15 to protect antelope fawning. Modifications may be required in the Surface Use Plan of Operations including seasonal timing restrictions to protect the species and its habitat.
	WHITE-TAILED AND GUNNISON PRAIRIE DOG
UT-LN-25	The lessee/operator is given notice that this lease parcel has been identified as containing white-tailed or Gunnison prairie dog habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect white-tailed or Gunnison prairie dog from surface disturbing activities in accordance with the Endangered Species Act and 43 CFR 3101.1-2.
	BALD EAGLE HABITAT
UT-LN-37	The lessee/operator is given notice that lands in this lease have been identified as containing Bald Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Bald Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.
	GOLDEN EAGLE HABITAT
UT-LN-40	The lessee/operator is given notice that lands in this lease have been identified as containing Golden Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Golden Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.
	RAPTORS
UT-LN-44	Appropriate seasonal and spatial buffers shall be placed on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006). All construction related activities will not occur within these buffers if preconstruction monitoring indicates the nests are active, unless a site-specific evaluation for active nests is completed prior to construction and if a BLM wildlife biologist, in consultation with USFWS and UDWR, recommends that activities may be permitted within the buffer. The BLM will coordinate with

NOTICES	
	the USFWS and UDWR and have a recommendation within 3-5 days of notification. Any construction activities authorized within a protective (spatial and seasonal) buffer for raptors will require an on-site monitor. Any indication that activities are adversely affecting the raptor and/or its' young the on-site monitor will suspend activities and contact the BLM Authorized Officer immediately. Construction may occur within the buffers of inactive nests. Construction activities may commence once monitoring of the active nest site determines that fledglings have left the nest and are no longer dependent on the nest site. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.
	MIGRATORY BIRD
UT-LN-45	The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations.
	UTAH SENSITIVE SPECIES
UT-LN-49	The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.
	RIPARIAN AREAS
UT-LN-53	The lessee/operator is given notice that this lease has been identified as containing riparian areas. No surface use or otherwise disruptive activity allowed within 100 meters of riparian areas unless it can be shown that (1) there is no practicable alternative; (2) that all long-term impacts are fully mitigated; or (3) that the construction is an enhancement to the riparian areas. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.

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UT-LN-65	OLD SPANISH TRAIL The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail [Old Spanish Trail Recognition Act of 2002, (Old Spanish Trail PLO 107-325)]. Modifications to the Surface Use Plan of Operations may be required to protect the historic integrity of the Trail, its resources, its values – such as landscape view sheds, and outdoor recreational opportunities associated with the foregoing.
UT-LN-67	HISTORICAL AND CULTURAL RESOURCE VALUES The lessee/operator is given notice that lands in this lease may contain significant Historical and Cultural Resources. Modifications to the Surface Use Plan of Operations may be required for the protection of these resources.
UT-LN-68	NOTIFICATION & CONSULTATION REGARDING CULTURAL RESOURCES The lease area may now or hereafter be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), the Archaeological Resources Protections Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA), other statues and Executive Order 13007, and which may be of concern to Native American tribes, interested parties, and the State Historic Preservation Officer (SHPO). BLM will not approve any ground disturbing activities as part of future lease operations until it completes applicable requirements of the National Historic Preservation Act (NHPA), including the completion of any required procedure for notification and consultation with appropriate tribe(s) and/or the SHPO. BLM may require modifications to exploration and development proposals to further its conservation and management objectives on BLM-approved activities that are determine to affect or impact historic or cultural properties and/or resources.
UT-LN-72	HIGH POTENTIAL PALEONTOLOGICAL RESOURCES The lessee/operator is given notice that lands in this lease have been identified as having high potential for paleontological resources. Planned projects should be consistent with BLM Manual and Handbook H8270-1, Chapter III (A) and III (B) to avoid areas where significant fossils are known or predicted to occur or to provide for other mitigation of possible adverse effects (RX, NF, ESR). Modifications to the Surface Use Plan of Operations may be required in order to protect paleontological resources from surface disturbing activities in accordance with Section 6 of the lease terms and 43 CFR 3101.1-2.
UT-LN-96	AIR QUALITY MITIGATION MEASURES The lessee is given notice that the Bureau of Land Management (BLM) in coordination with the U.S. Environmental Protection Agency and the Utah Department of Air Quality, among others, has developed the following air quality mitigation measures that may be applied to any development proposed on this lease. Integration of and adherence to these measures may help

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minimize adverse local or regional air quality impacts from oil and gas development (including but not limited to construction, drilling, and production) on regional ozone formation.

- All internal combustion equipment would be kept in good working order.
- Water or other approved dust suppressants would be used at construction sites and along roads, as determined appropriate by the Authorized Officer.
- Open burning of garbage or refuse would not occur at well sites or other facilities.
- Drill rigs would be equipped with Tier II or better diesel engines.
- Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater.
- Low bleed or no bleed pneumatics would be installed on separator dump valves and other controllers.
- During completion, flaring would be limited as much as possible.
 Production equipment and gathering lines would be installed as soon as possible.
- Well site telemetry would be utilized as feasible for production operations.
- Stationary internal combustion engine would comply with the following standards: 2g NOx/bhp-hr for engines <300HP; and 1g NOx/bhp-hr for engines >300HP.

Additional site-specific measures may also be employed to avoid or minimize effects to local or regional air quality. These additional measures will be developed and implemented in coordination with the U.S. Environmental Protection Agency, the Utah Department of Air Quality, and other agencies with expertise or jurisdiction as appropriate based on the size of the project and magnitude of emissions.

REGIONAL OZONE FORMATION CONTROLS

To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:

UT-LN-99

- Tier II or better drilling rig engines
- Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP
- Low bleed or no bleed pneumatic pump valves
- Dehydrator VOC emission controls to +95% efficiency
- Tank VOC emission controls to +95% efficiency

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UT-LN-102	AIR QUALITY ANALYSIS The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.
UT-LN-117	SHALLOW GROUND WATER PROTECTION ZONE This lease (or a portion thereof) may overlie an area of shallow ground water, the presence of which is supported by geologic and hydrologic data or water level measurements from a nearby well. Information such as depth to ground water, distance to the nearest surface water and/or nearest municipal water well, population potentially affected, soil type, and type of proposed drilling fluid will be used to determine the sensitivity level for reserve pit construction. At the time of development, drilling operators will additionally conform to the operational regulations in: 1) Onshore Oil & Gas Order No. 2 which requires the protection of all usable quality waters; 2) Onshore Oil and Gas Order No. 7 which prescribes measures required for the handling of produced water to ensure the protection of surface and ground water sources; and 3) the Surface Operating Standards and Guidelines for Oil and Gas Development (The Gold Book, Fourth Edition-Revised 2007) provides information and requirements for conducting environmentally responsible oil and gas operations. Additional mitigation measures may be necessary to prevent adverse impacts from oil and gas exploration and development activities. Mitigation measures may include submittal of an erosion control plan with best management practices (BMPs) that addresses sediment and water control with rigorous interim and final reclamation. Project activities in sensitive areas, or near water sources, require a semi or closed-loop drilling system. Conditions of Approval (COAs) may be attached to an application for permit to drill (APD) for shallow ground water protection, e.g., the surface casing must be completed at least 100 feet below the base of the usable water zone (source) and cement returned to surface.
UT-LN-125	LIGHT AND SOUND (SENSITIVE RESOURCES) The lessee/operator may be required to utilize best management practices and the best available technology in order to minimize/mitigate noise and light pollution impacts. In accordance with section 6 of the lease terms and 43 CFR 3101.1-2, modifications to Surface Use Plan of Operations may be required to comply with the following decisions in the Resource Management Plans, Min 6 - Monticello Field Office RMP and Min 12 - Moab Field Office RMP to "encourage conservation of sensitive resource values" the lessee/operator may be required to take measures to minimize the impacts to the values of silence and night skies to visitors of parks, monuments, river corridors and other

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	destinations where light and/or sound impacts would mar the visitor experience. For example, the lessee/operator may be required to install multicylinder pumps, hospital sound reducing mufflers, and/or place exhaust systems in manner that directs noise away from or reduces noise at the area. Additionally, the lessee/operator may be required to utilize such methods such as limiting the height of light poles, limiting wattage intensity, constructing light shields and/or adhering to prescribed restrictions on the timing for conducting artificially illuminated operations in order to minimize/mitigate light pollution impacts. However, the above described requirements will not be applicable when their implementation would adversely affect human health and safety.	
	FLOODPLAIN MANAGEMENT	
UT-LN-128	The lessee/operator is given notice that, in accordance with Executive Order 11988, to avoid adverse impact to floodplains 1) facilities should be located outside the 100 year floodplain, or 2) would be minimized or mitigated by modification of surface use plans within floodplains present within the lease.	
	AIR QUALITY	
UT-LN-136	The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy and Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.	
	CULTURAL RESOURCES I	
UT-LN-137	The lessee/operator is given notice that measures to mitigate the potential impacts to TCPs or cultural plants identified through consultation may be required. Mitigation would be developed through further consultation with affected groups, which may include measures to maintain the viewshed and intrinsic values, as well as the auditory, visual, and aesthetic settings of the resources.	
	CULTURAL RESOURCES II	
UT-LN-138	The lessee/operator is given notice that a viewshed assessment would be required for those cultural sites that receive a high degree of visitor use or properties of traditional religious and cultural importance to a Native American tribe. If the assessment shows that the project would have adverse effects to the historic properties, the project may require relocation. The Historic Properties Visual Assessment for Effect Determination Worksheet would be utilized for the viewshed assessment.	

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	CULTURAL RESOURCES (HIGH POTENTIAL FOR CULTURAL SITES)
UT-LN-139	The lessee/operator is given notice that in areas of high potential for cultural site occurrence there is a higher likelihood of encountering cultural resource concerns (i.e., potential adverse effects) that may require archaeological monitoring, ethnographic data collection, data recovery, and mitigation of historic properties in order to exercise lease rights.
	OLD SPANISH NATIONAL HISTORIC TRAIL
UT-LN-140	The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail [Old Spanish Trail Recognition Act of 2002, (Old Spanish Trail PLO 107-325)]. Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. The Lease Notice would be applied to 2-miles on either side of the trail. Coordination with the National Park Service by the BLM may be necessary.
	BALD EAGLES (NEST SITES AND WINTER ROOST AREAS)
UT-LN-141	The lessee/operator is given notice that the parcel contains habitat for the bald eagle, To protect bald eagle habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside the bald eagle breeding or roosting season. A temporary action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat, or displaces eagles through disturbances, i.e., creation of a permanent structure. Current avoidance and minimization measures include the following: 1. Surveys would be required prior to operations, unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Lease activities would require monitoring throughout the duration of the project. 3. To ensure desired results are being achieved, minimization measures would be evaluated. 4. Water production would be managed to ensure maintenance or enhancement of riparian habitat. 5. Temporary activities within 1.0-mile of nest sites would not occur during the breeding season, which lasts from January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied.

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- 6. Temporary activities within 0.5-miles of winter roost areas, (e.g., cottonwood galleries) would not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
- 7. No permanent infrastructure would be placed within 1.0-mile of nest sites.
- 8. No permanent infrastructure would be placed within 0.5-miles of winter roost areas.
- 9. Remove big game carrion to 100 feet from on lease roadways occurring within bald eagle foraging range.
- 10. Avoid loss or disturbance to large cottonwood gallery riparian habitats.
- 11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers.
- 12. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.

Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage.

GOLDEN EAGLE (NEST SITES AND TERRITORIES)

The lessee/operator is given notice that the parcel contains habitat for the golden eagle. In order to protect the golden eagle habitat, nest sites, and nesting territories, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent and whether it occurs within or outside the golden eagle breeding season. A temporary action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances (i.e., creation of a permanent structure). Current avoidance and minimization measures include the following:

UT-LN-142

- 1. Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol.
- 2. Lease activities would require monitoring throughout the duration of the project.
- 3. To ensure desired results are being achieved, minimization measures would be evaluated.

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	 Temporary activities within 0.5-miles of nest sites would not occur during the breeding season from January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied. No permanent infrastructure would be placed within 0.5-miles of nest sites. Remove big game carrion to 100 feet from on-lease roadways occurring within golden eagle foraging range. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers. Additional measures may also be employed to avoid or minimize effects to the
	species between the lease stage and lease development stage. RAPTORS
UT-LN-143	The lessee/operator is given notice that appropriate seasonal and spatial buffers shall be placed on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and BMPs for Raptors and their Associated Habitats in Utah (BLM 2006). All construction-related activities will not occur within these buffers if pre-construction monitoring indicates the nests are active, unless a site specific evaluation(survey) for active nests is completed prior to construction and if a BLM wildlife biologist, in consultation with USFWS and UDWR, recommends that activities may be permitted within the buffer. The BLM will coordinate with the USFWS and UDWR and have a recommendation within 3 to 5 days of notification. Any construction activities authorized within a protective (spatial and seasonal) buffer for raptors will require an onsite monitor. Any indication that activities are adversely affecting the raptor and/or its young the onsite monitor will suspend activities and contact the BLM Authorized Officer immediately. Construction may occur within the buffers of inactive nests. Construction activities may commence once monitoring of the active nest site determines that fledglings have left the nest and are no longer dependent on the nest site. Modifications to the Surface Use Plan of Operations may be required in accordance with Section 6 of the lease terms and 43CFR3101.1-2.
	MIGRATORY BIRDS The lessee/operator is given notice that surveys for nesting migratory birds may
UT-LN-144	be required during migratory bird breeding season (April 1 to July 31) whenever surface disturbances and/or occupancy is proposed in association with mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the Authorized Officer of the BLM. Based on the

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	result of the field survey, the Authorized Officer will determine appropriate buffers and timing limitations.	
UT-LN-145	FERRUGINOUS HAWK AND BURROWING OWL HABITAT The lessee/operator is given notice that no surface disturbances would be conducted during the breeding and nesting season (March 1 to August 31 for burrowing owl and March 1 to August 1 for ferruginous hawk) within spatial buffers (0.25-mile for burrowing owl and 0.5-mile for ferruginous hawk) of known nesting sites.	
UT-LN-146	WHITE-TAILED PRAIRIE DOG/GUNNISON PRAIRIE DOG HABITAT The lessee/operator is given notice that no surface-disturbing activities within 660 feet (200 meters) of active prairie dog colonies identified within prairie dog habitat would be allowed. No permanent aboveground facilities are allowed within the 660-foot buffer.	
UT-LN-147	KIT FOX HABITAT The lessee/operator is given notice that no surface disturbances would be allowed within 660 feet (200 meters) of an occupied natal kit fox den.	
T&E-23	COLORADO RIVER ENDANGERED FISH The lessee/operator is given notice in order to minimize effects to critical habitats of endangered fish in the Colorado and Green Rivers, surface-disturbing activities within the 100-year floodplain of the Colorado River, Green River, and all associated back waters would not be allowed. Other avoidance and minimization measures include: Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals. Lease activities would require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation reinitiated. Water production would be managed to ensure maintenance or enhancement of riparian habitat. Avoid loss or disturbance of riparian habitats. Conduct watershed analysis for leases in designated critical habitat and overlapping major tributaries in order to determine toxicity risk from permanent facilities. Implement the Utah Oil and Gas Pipeline Crossing Guidance. In areas adjacent to 100-year floodplains, particularly in systems prone to flash floods, analyze the risk for flash floods to impact facilities, and use closed loop drilling, and pipeline burial or suspension according to the Utah Oil and Gas Pipeline Crossing Guidance to minimize the potential for equipment damage and resulting leaks or spills.	

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- Water depletions from any portions of the Upper Colorado River drainage basin are considered to adversely affected and adversely modify the critical habitat of the endangered fish species (bonytail, Colorado pikeminnow, humpback chub, and razorback sucker). Section 7 consultation would be completed with the U.S. Fish and Wildlife Service (USFWS) prior to any such water depletions.
- Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

U.S. Fish and Wildlife Service (Service) Measures to Minimize Effects of Surface Water Pumping to Endangered Colorado River Fish

Issue: Endangered larval fish are very small (<0.5 inches total length) and incapable of directed swimming from the time of hatching through the first 2-4 weeks of their life. Depending on the water year, larval fish may be present in the Green, Colorado, Gunnison, and Yampa Rivers from as early as April 1 to as late as August 31 (earlier in dry years; later in wet years). Young of the year endangered fish are the most susceptible to entrainment.

Goal: Minimize entrainment of Federally listed species into pumps.

Measures:

- 1. The best method to avoid entrainment is to pump from an off-channel location one that does not connect to the river during high spring flows. An infiltration gallery constructed in a Service approved location is best.
- 2. If the pump head is located in the river channel the following stipulations apply:
 - a. Do not situate the pump in a low-flow or no-flow area, as these habitats tend to concentrate larval fishes.
 - b. Limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (see above).
 - c. Limit the amount of pumping, to the greatest extent possible, during the midnight hours (10 pm to 2 am), as larval drift studies indicate that this is a period of greatest daily activity. Dusk and the afternoon are the preferred pumping times, as larval drift abundance is lowest during this time.
- 3. Screen all pump intakes with 3/32" mesh material.
- 4. Approach velocities for intake structures should follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids." For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity should not exceed 0.33 feet per second (ft/s).

NOTICES 5. Report any fish impinged on the intake screen or entrained into irrigation canals to the Service (801-975-3330) or the Utah Division of Wildlife Resources: Northeastern Region 152 East 100 North, Vernal, UT 84078 Phone: 435-781-9453 Southeastern Region 475 West Price River Drive, Suite C, Price, UT 84501 Phone: 435-636-0260 MEXICAN SPOTTED OWL The lessee/operator is given notice that the lands in this parcel contain suitable or designated Critical Habitat for MSO. In order to protect MSO habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances (i.e., creation of a permanent structure). Current avoidance and minimization measures include the following: Surveys would be required prior to implementation of the proposed action. All surveys must be conducted by qualified individual(s) acceptable to the BLM. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5-mile of T&E-25 suitable owl habitat. Determine potential effects of actions to owls and their habitat. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat. Document if action is temporary or permanent. Activities may require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated, and, if necessary, Section 7 consultation reinitiated. Any activity that includes water production should be managed to ensure maintenance of enhancement of riparian habitat. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting.

For all temporary actions that may impact owls or suitable habitat:

1. If the action occurs entirely outside of the owl breeding season from March 1 through August 31, and leaves no permanent structure or permanent habitat disturbance, the action can proceed without an occupancy survey.

- 2. If the action would occur during a breeding season, a survey for owls is required prior to commencing the activity. If owls are found, the activity should be delayed until outside of the breeding season.
- 3. Rehabilitate access routes created by the project through, such means as raking out scars, re-vegetation, gating access points, etc.

For all permanent actions that may impact owls or suitable habitat:

- 1. Survey two consecutive years for owls, according to accepted protocol prior to commencing activities.
- 2. If owls are found, no disturbing actions would occur within 0.5-miles of an identified site. If nest site is unknown, no activity would occur within the designated current and historic Protected Activity Center (PAC).
- 3. Avoid permanent structures within 0.5-mile of suitable habitat unless surveyed and not occupied.
- 4. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5-mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be contingent upon a noise analysis to ensure noise does not encroach upon a 0.5-mile buffer for suitable habitat, including canyon rims.
- 5. Limit disturbances to and within suitable habitat by staying on designated and/or approved routes.
- 6. Limit new access routes created by the project.
- 7. Modifications to the Surface Use Plan of Operations may be required in order to protect the MSO and/or habitat in accordance with Section 6 of the lease terms, the ESA, and the regulations at 43 Code of Federal Regulations (CFR) 3101.1-2.

SOUTHWESTERN WILLOW FLYCATCHER HABITAT (RIPARIAN AREAS)

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The lessee/operator is given notice that the lands in this parcel contains riparian habitat within the range for southwestern willow flycatcher. In order to protect southwestern willow flycatcher habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside the nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of habitat or displaces flycatchers through disturbances, i.e., creation of a permanent structure. Current avoidance and minimization measures include the following:

1. Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must

NOTICES be conducted by qualified individual(s) and be conducted according to protocol. 2. Activities would require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Water production would be managed to ensure maintenance or enhancement of riparian habitat. 4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers. 5. Activities would maintain a 330 feet buffer from suitable riparian habitat year long. 6. Activities within 0.25-mile of occupied breeding habitat would not occur during the breeding season of April 15 to August 15. 7. Noise emissions within 0.25-miles of suitable habitat for the southwestern willow flycatcher will not exceed baseline conditions during the breeding season of April 15 to August 15. 8. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat. 9. Re-vegetate with native species all areas of surface disturbance within riparian areas and/or adjacent land. 10. Avoid loss or disturbance of riparian habitats. Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA. YELLOW-BILLED CUCKOO The lessee/operator is given notice that the lands in or adjacent to this parcel contain potentially suitable habitat that falls within the range for western yellow-billed cuckoo, a Federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the breeding and nesting season. A temporary action is T&E-27 completed prior to the following breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action could continue for more than one breeding season and/or cause a loss of habitat or displace western yellow-billed cuckoos through disturbances. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act (ESA). Integration of and adherence to these measures will facilitate review and

analysis of any submitted permits under the authority of this lease. Following

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these measures could reduce the scope of ESA, Section 7 consultation at the permit stage. Avoidance and minimization measures include the following:

- 1. Habitat suitability within the parcel and/or within a 0.5-mile buffer of the parcel will be identified prior to lease development to identify potential survey needs. Habitat suitability should be determined in accordance with *Guidelines for the identification of suitable habitat for WYBCU in Utah*.
- 2. Protocol Breeding Season Surveys will be required in suitable habitats prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by permitted individual(s), and be conducted according to protocol.
- 3. For all temporary actions that may impact cuckoo or suitable habitat:
 - a. If action occurs entirely outside of the cuckoo breeding season (June 1 to August 31), and leaves no structure or habitat disturbance, action can proceed without a presence/absence survey.
 - b. If action is proposed between June 1 to August 31, presence/absence surveys for cuckoo will be conducted prior to commencing activity. If cuckoo are detected, activity should be delayed until September 1.
 - c. Eliminate access roads created by the project through such means as raking out scars, revegetation, gating access points, etc.
- 4. For all permanent actions that may impact cuckoo or suitable habitat:
 - a. Protocol level surveys by permitted individuals will be conducted prior to commencing activities.
 - b. If cuckoos are detected, no activity will occur within 0.25-mile of occupied habitat.
 - c. Avoid drilling and permanent structures within 0.25-mile of suitable habitat unless absence is determined according to protocol level survey conducted by permitted individual(s).
 - d. Ensure noise levels at 0.25-mile from suitable habitat do not exceed baseline conditions. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon the 0.25-mile buffer for suitable habitat.
- 5. Temporary or permanent actions will require monitoring throughout the duration of the project to ensure that western yellow-billed cuckoo or its habitat is not affected in a manner or to an extent not previously considered. Avoidance and minimization measures will be evaluated throughout the duration of the project.
- 6. Water produced as by-product of drilling or pumping will be managed to ensure maintenance or enhancement of riparian habitat.
- 7. Where technically or economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling is suitable habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.

- 8. Ensure that water extraction or disposal practices do not result in a change of hydrologic regime that would result in loss or degradation of riparian habitat
- 9. Re-vegetate with native species all areas of surface disturbance within riparian areas and/or adjacent uplands.

Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

CALIFORNIA CONDOR (POTENTIAL HABITAT)

The lessee/operator is given notice that the lands located in this parcel contain potential habitat for the California condor. Avoidance or use restrictions may be placed on portions on areas known or suspected to be used by condors. Application of appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A temporary action is completed prior to the following important season of use, leaving for habitat functionality. A permanent action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e., creation of a permanent structure requiring repetitious maintenance or emits disruptive levels of noise).

Current avoidance and minimization measures include the following:

- 1. The Peregrine Fund will be contacted early and throughout project design and implementation to determine and monitor the locations and status of California condors in or near the project area.
- 2. Surveys would be required prior to operations in suitable habitat, unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s) approved by the BLM and must be conducted according to approved protocols.
- 3. All workers will be informed about potential condor presence.
- 4. If condors are present within the project area the Peregrine Fund will be contacted. If there is any potential that the project will affect condors the USFWS will be contacted immediately.
- 5. The project area will be kept clean (e.g., trash disposed of, tools and materials picked up) in order to minimize the possibility of condors accessing inappropriate materials.
- 6. To prevent water contamination and potential condor poisoning, a hazardous material (including vehicle fluids) leakage and spill plan will be developed and implemented. The plan will include provisions for immediate clean-up of any hazardous substance, and will outline how each hazardous substance will be treated in case of leakage or spill. The plan will be reviewed by the district biologist to insure that condors are adequately addressed.

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- 7. If surveys result in positive identification of condor use, all lease activities would require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures would be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.
- 8. Temporary activities within 1.0-mile of nest sites would not occur during the breeding season.
- 9. Temporary activities within 0.5-miles of established roosting sites or areas would not occur during the season of use, which is from August 1 to November 30; unless the area has been surveyed according to protocols consulted on with USFWS and determined to be unoccupied.
- 10. No permanent infrastructure would be placed within 1.0-mile of nest sites.
- 11. No permanent infrastructure would be placed within 0.5-miles of established roosting sites or areas.
- 12. Remove big game carrion to 100 feet from on lease roadways occurring within foraging range.
- 13. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
- 14. Re-initiation of Section 7 consultation with the USFWS would be sought immediately if mortality or disturbance to California condors is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures would be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures would be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.

JONES CYCLADENIA (POTENTIAL, SUITABLE AND OCCUPIED HABITAT)

The lessee/operator is given notice that the lands located in this parcel contain potential habitat for Jones cycladenia.

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In order to minimize effects to the Federally threatened Jones cycladenia, the BLM, in coordination with the USFWS has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the ESA. For the purposes of this document, the following terms are so defined: *potential habitat* is defined as areas that satisfy the broad criteria of the

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species habitat description, usually determined by preliminary, in-house assessment. Suitable habitat is defined as areas that contain or exhibit the specific components or constituents necessary for plant persistence determined by field inspection and/or surveys; it may or may not contain Jones cycladenia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at http://www.fws.gov/endangered/species/. Occupied habitat is defined as areas currently or historically known to support Jones cycladenia, synonymous with "known habitat." The following avoidance and minimization measures should be included in the Plan of Development:

- 1. Pre-project habitat assessments will be completed across 100 percent of the project disturbance area within potential habitat1 prior to any ground disturbing activities to determine if suitable Jones cycladenia habitat is present.
- 2. Species surveys will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous, due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, "avoidance areas"); in such cases, 300 foot buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, surveys:
 - a. Must be conducted by qualified individuals(s) and according to BLM and Service accepted survey protocols.
 - b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season at a time when the plant can be detected (usually April 15 to June 5; however, surveyors should verify that the plant is flowering by contacting a BLM or USFWS botanist or demonstrating that the nearest known population is in flower),
 - c. Will occur within 300 feet from the edge of the proposed right-of-way (ROW) and/or project disturbance for surface pipelines, roads, wellpads, and other facilities requiring removal of vegetation,
 - d. Will include, but not be limited to, plant species lists and habitat characteristics.
 - e. Will be valid until April 15 of the following year.
 - f. Clearance surveys in occupied habitat will be combined with historic plant location data for that particular site to delineate the outer boundary of occupied habitat. The 300 foot avoidance buffer will then be applied to the outer boundary of occupied habitat for that site. This evaluation will occur in coordination with the BLM and Service to ensure that the appropriate buffer is applied to protect both active and dormant Jones Cycladenia plants in occupied habitat.

- g. Electronic copies of clearance survey reports (included appendices) and GIS shape files will be sent no later than December 31st to each of the following:
 - Utah Natural Heritage Program (with copies of NHP field survey forms);
 - Applicable/affected land owners and/or management agencies; and
 - U.S. Fish and Wildlife Service Utah Field Office (mailing address: 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119).
- 3. Design project infrastructure to minimize impacts within suitable habitat:
 - a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300 foot buffers, in general; however, site-specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat.
 - b. Reduce well pad size to the minimum needed without compromising safety.
 - c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad.
 - d. Roads and utilities should share common ROWs where possible.
 - e. Reduce the width of ROWs and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat.
 - f. Place signing to limit off-road travel in sensitive areas.
 - g. Stay on designated routes and other cleared/approved areas.
 - h. All disturbed areas will be re-vegetated with species native to the region, or seed mixtures approved by the action agency and USFWS.
- 4. Where there is occupied habitat, project infrastructure will be designed to avoid direct disturbance and indirect impacts to populations and to individual plants:
 - a. Follow the above recommendations in Section 3 for project design within suitable habitats.
 - b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged.
 - c. Construction of roads will occur such that the edge of the ROW is at least 300 feet from: 1) any plant; 2) the outer boundary of occupied habitat and; 3) avoidance areas.
 - d. Existing roads will be graveled within 300 feet of occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15 to June 5 (flowering period); dust abatement applications will be comprised of water only.

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- e. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat.
- f. Surface pipelines will be laid such that a 300 foot buffer exists between the edge of the ROW and plants and 300 feet between the edge of ROW and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat.
- g. Construction activities will not occur within occupied habitat.
- h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.
- i. A qualified botanist will be onsite during construction to monitor the surface disturbance activity and assist with implementation of applicable conservation measures.
- j. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat.
- k. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
- 5. Dust abatement and reduced speed limits will be applied during flowering dates (April 15 through June 5) within 300 feet of suitable and occupied habitat, including unoccupied suitable habitat.
- 6. For projects that cannot implement the measures or avoidance buffers identified in number 4 above, site specific conservation measures will be developed in coordination with USFWS. Occupied Jones cycladenia habitats within 300 feet of the edge of the surface pipelines' ROWs, 300 feet of the edge of the roads' ROWs, and 300 feet from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the USFWS. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the USFWS.
- 7. Re-initiation of Section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for the Jones cycladenia is anticipated as a result of project activities.

Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and

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	implemented in consultation with the USFWS to ensure continued compliance with the ESA.	
	NAVAJO SEDGE (POTENTIAL, SUITABLE AND OCCUPIED HABITAT)	
T&E-30	The lessee/operator is given notice that the lands located in this parcel contain potential habitat for Navajo sedge (Carex specuicola). In order to minimize effects to the Federally threatened Navajo sedge, the BLM, in coordination with the USFWS (Service) has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during mineral leasing and development (including but not limited to drilling, production, and maintenance operations) are in compliance with the Endangered Species Act. For the purposes of this document, the following terms are so defined: Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description, usually determined by preliminary, in-house assessment. Suitable habitat is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence, determined by field inspection and/or surveys. Habitat descriptions can be found in Federal Register Notice and species recovery plan links at: http://www.fws.gov/endangered/species/. Occupied habitat is defined as areas currently or historically known to support Navajo sedge; synonymous with "known habitat." The following avoidance and minimization measures should be included in the plan of development: 1. Pre-project habitat assessments will be completed across 100 percent of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Navajo sedge habitat is present. 2. Species surveys will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, "avoidance areas"). In such cases, a) 300 foot buffers will be maintained between avoidance areas and subsurface disturbance activities (including drilling), water depletions, or other actions that may r	

- b. Will be conducted in suitable habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be positively identified (usually June 1st to September 30th, however, surveyors should verify that the plant is flowering by contacting a BLM or USFWS *Carex* spp. expert or demonstrating that the nearest known population is in flower).
- c. Will occur within 300 feet from the edge of the proposed right-of-way and/or project disturbance for surface pipelines, roads, well pads, and other facilities requiring removal of vegetation.
- d. Will occur within 1.25-miles of proposed water depletions or other actions that will result in changes to the local hydrology.
- e. Will include, but not be limited to, plant species lists and habitat characteristics.
- f. Will be valid until June 1 of the following year.
- g. Electronic copies of clearance survey reports (included appendices) and GIS shape files will be sent no later than December 31st to each of the following:
 - Utah Natural Heritage Program (with copies of NHP field survey forms);
 - Applicable/affected land owners and/or management agencies; and
 - U.S. Fish and Wildlife Service Utah Field Office (mailing address: 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119).
- 3. Design project infrastructure to minimize impacts within suitable habitat where surveys are technically infeasible.
 - a. For surface-disturbing activities: Infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300 foot buffers; however, site specific buffer distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.
 - b. For subsurface activities (including drilling), water depletions, or hydrologic alteration activities: Infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 1.25-mile surface and subsurface buffers; however, site specific buffer distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.
 - c. No surface (or subsurface) occupancy will be allowed in any down dip(s) of the strata as they could be associated with a Navajo sedge water source. Surface disturbance will not occur within a 300 foot buffer from the outer edge of the down dip(s).
 - d. Ensure that water extraction or disposal practices do not result in change of hydrologic regime.

- e. Ensure above ground contaminants and byproducts are contained and properly managed.
- f. Ensure any casings near or in aquifers are properly sealed and managed.
- g. Fracking will not be allowed within 1.25-miles of the edge of suitable geology, unless hydrological and botanical surveys are completed that positively identify the aquifer as entirely unassociated with any Navajo sedge populations.
- h. Reduce well pad size and potash mining developments to the minimum needed, without compromising safety.
- i. Where technically and economically feasible, use directional drilling, horizontal drilling, or multiple wells from the same pad. Ensure that directional drilling does not intercept or degrade alluvial aquifers.
- j. Limit new access routes created by the project.
- k. Roads and utilities should share common right-of ways where possible.
- 1. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat.
- m. Place signing to limit off-road travel in sensitive areas.
- n. Existing roads will be graveled within 300 feet of suitable habitat; the operator is encouraged to apply water for dust abatement to such areas and within 300 feet of suitable habitat from June 1 to September 30 (flowering and fruit set period), dust abatement applications will be comprised of water only.
- o. Place signing to reduce vehicle speed to 15 mph or lower on dirt or gravel roads within 300 feet of suitable habitat and 25 mph or lower in the project area.
- p. Stay on designated routes and other cleared/approved areas.
- q. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim disturbed areas following completion of activities (drilling or mining) to the smallest area possible. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area.
- r. Post construction monitoring for invasive species will be required.
- 4. Where there is occupied habitat, project infrastructure will be designed to avoid direct disturbance and indirect impacts to populations and to individual plants:
 - a. For surface-disturbing activities: Infrastructure and activities will avoid all occupied habitat and incorporate 300 foot buffers; however, site specific buffer distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.

- b. For subsurface activities (including drilling), water depletions, or hydrologic alteration activities: Infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 1.25-mile buffers; however, site specific buffer distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.
- c. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged.
- d. No surface (or subsurface) occupancy will be allowed in the down dip(s) of the strata associated with the Navajo sedge water source. Surface disturbance will not occur within a 300 foot buffer from the outer edge of the down dip(s).
- e. Ensure that water extraction or disposal practices do not result in change of hydrologic regime.
- f. Ensure above ground contaminants and byproducts are contained and properly managed.
- g. Ensure any casings near or in aquifers are properly sealed and managed.
- h. Fracking will not be allowed within 1.25-miles from the edge of occupied habitat and associated water sources, unless studies are completed that positively identify the aquifer as entirely unassociated with the Navajo sedge population.
- i. Reduce well pad size and potash mining developments to the minimum needed, without compromising safety.
- j. Where technically and economically feasible, use directional drilling, horizontal drilling, or multiple wells from the same pad. Ensure that directional drilling does not intercept or degrade alluvial aquifers.
- k. Limit new access routes created by the project.
- 1. Roads and utilities should share common right-of ways where possible.
- m. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed, where feasible, use the natural ground surface for the road within habitat.
- n. Place signing to limit off-road travel in sensitive areas.
- o. Construction of roads will occur such that the edge of the right of way is at least 300 feet from: 1) any plant; 2) the outer boundary of occupied habitat; and 3) avoidance areas.
- p. Existing roads will be graveled within 300 feet of occupied habitat; the operator is encouraged to apply water for dust abatement to such areas and within 300 feet of occupied habitat from June 1 to September 30

- (flowering and fruit set period); dust abatement applications will be comprised of water only.
- q. Place signing to reduce vehicle speed to 15 mph or lower on dirt or gravel roads within 300 feet of occupied habitat and 25 mph or lower in the project area.
- r. Stay on designated routes and other cleared/approved areas.
- s. The edge of the disturbance should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.
- t. Surface pipelines will be laid such that a 300 foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by Service and BLM when disturbance will occur upslope of habitat.
- u. Construction activities will not occur within occupied habitat.
- v. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.
- w. A qualified botanist will be onsite during construction to monitor the surface disturbance activity and assist with implementation of applicable conservation measures (USFWS 2011).
- x. Place produced oil, water, condensate tanks, or any other by-products in centralized locations, away from occupied habitat.
- y. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim disturbed areas following completion of activities (drilling or mining) to the smallest area possible. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area.
- z. Post construction monitoring for invasive species will be required.
- 5. For projects that cannot implement the measures or avoidance buffers identified above, site specific conservation measures will be developed in coordination with the Service. Occupied Navajo sedge habitats within: 1) 300 feet of the edge of the surface pipeline right of ways; 2) 300 feet of the edge of the road right of ways; 3) 300 feet from the edge of the development areas; and 4) 1.25-miles of subsurface activities (including drilling), water depletions or other hydrologic alteration activities shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed

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after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.

Reinitiation of Section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Navajo sedge is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the Service to ensure continued compliance with the ESA