

Appendix B
Data Collection and Reporting Requirements and Conditions of Approval

Table B-1 summarizes the data collection and reporting requirements of the Selected Alternative. For a full description of the collection and reporting requirements, refer to the source document(s) in the Final Environmental Impact Statement (EIS).

Table B-1 Data Collection and Reporting Requirements

BLM	KMG	Source	Reporting Requirements
X	X	Biological Opinion p.27	In order to monitor the impact of incidental take, either the Bureau of Land Management (BLM) or Kerr-McGee Oil & Gas Onshore LP (KMG) must report the progress of the action and its impact on the species to the United States (U.S.) Fish and Wildlife Service (USFWS) as specified in the incidental take statement.
X		Biological Opinion p.29	The BLM is required to submit to the USFWS office an annual report of water depletions associated with oil and gas development, due to the USFWS office on a yearly basis by October 31.
	X	Biological Opinion p.29	Any annual cactus monitoring reports associated with the proposed action must be submitted to the USFWS and BLM by January 31 each year following monitoring.
	X	Biological Opinion p.29	Upon locating dead, injured, or sick Federally listed species, immediate notification must be made to the USFWS's Salt Lake City Field Office at (801) 975-3330 and the USFWS's Division of Law Enforcement, Ogden, Utah, at (801) 625-5570. Instructions for proper care, handling, transport, and disposition of such specimens will be issued by the USFWS's Division of Law Enforcement.
	X	Final EIS Section 4.6.2.2 Mitigation RANGE-2	An annual coordination meeting between KMG, the BLM, and livestock operators will be held during July of each year.
	X	Water Monitoring Plan p. O-2	The operators will develop a comprehensive Quality Assurance Project Plan, which will include a comprehensive Sampling and Analysis Plan.
	X	Water Monitoring Plan p. O-12	Water quality monitoring results will be entered into a database and summarized quarterly.
	X	Water Monitoring Plan p. O-12	Submit an annual report of monitoring activities to the BLM and other agency stakeholders.
	X	Water Monitoring Plan p. O-12	A final water quality monitoring report will be completed at the conclusion of the project.
	X	Water Monitoring Plan p. O-12	If any water quality constituents or flow-related parameters listed in Table O-1 are found to exceed established "action" levels, the operators will inform the BLM, UDEQ, and UDOGM in writing.

KMG must comply with the Conditions of Approval (COAs) of the Selected Alternative, which are listed in **Table B-2. These COAs do not reiterate or excuse implementation of the primary components of the Selected Alternative as described in Chapter 3.0 of this Record of Decision (ROD).** The COAs were generated from the standard operating practices: Applicant-committed environmental protection measures (ACEPMs); Best Management Practices (BMPs); and mitigating measures from the Final EIS, Biological Opinion, and Water Monitoring Plan. They do not reiterate the regulatory requirements listed in Table 1.5-1 of the Final EIS, or the project description from Section 2.7 of the Final EIS, which are integral to the Selected Alternative.

The “Source” column identifies where the COA(s) originated. The “Resource” column identifies the resources for which the COAs were identified, including: Air Quality, Cultural Resources, Geology, Paleontologic Resources, Public Safety, Range Resources, Soils, Surface Disturbance, Transportation, Vegetation, Visual Resources, Water Resources, Wilderness Characteristics, and Wildlife.

To facilitate implementation, potentially conflicting measures have been reconciled. For example, one ACEPM required no surface disturbance with 0.25 mile of a sage grouse lek, but a mitigation measure called for no surface disturbance within 0.5 mile of a sage grouse lek. The COA retained the more restrictive measure.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
ACEPM Final EIS Appendix A and Biological Opinion p. 12	Surface Disturbance	<ul style="list-style-type: none"> • KMG will utilize shared well pads to the extent possible, in consideration of technical, environmental, and economic viability, to minimize the amount of total surface disturbance in the Greater Natural Buttes Project Area (GNBPA). • Each new produced water disposal well will be located on existing production locations. • KMG will evaluate deepening existing wells to accomplish Mesaverde-only completions before twinning an existing well. • KMG will strive to continually improve the development processes in order to minimize the surface impact where practical. • KMG will carefully evaluate drilling multiple wells from a single pad on an ongoing basis and has included the potential to use multiple wells from a shared pad in the GNBPA to the extent that KMG determines technically and economically viable.
Biological Opinion p. 13	Surface Disturbance	KMG has committed to reclaim, to the standards established by the appropriate surface management agency (SMA), any disturbed areas that result from their construction activities. This includes aggressive control of noxious and invasive plant species within the GNBPA and to re-establishment of vegetation in disturbed areas as outlined within their reclamation plan. The plan includes using a seed mix that can include both native and non-native, non-invasive species. The final reclamation should be such that additional noxious weed control will be minimized or become unnecessary,
ACEPM Final EIS Appendix A	Various (Surface Disturbance)	<ul style="list-style-type: none"> • KMG will evaluate burying pipelines after site-specific evaluation of surface and subsurface conditions with consideration of the materials that will be transported through the pipelines. KMG proposes to bury approximately 10 miles of pipelines transporting produced water and 25 miles of gas-transportation pipelines. In areas where there is sufficient soil to excavate and after consultation with the BLM Authorized Officer (AO), KMG will bury well gathering lines adjacent to access roads. • KMG will locate gathering lines adjacent to access roads. KMG will locate larger pipelines adjacent to roads or within existing utility corridors.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
ACEPM Final EIS Appendix A	Air Quality:	<ul style="list-style-type: none"> • KMG will use water or other BLM-approved dust suppression during drilling and completion operations for dust abatement on access roads, as needed. KMG will use water or other BLM-approved dust suppression in high traffic areas during production operations for dust abatement, as needed. • KMG employees will comply with speed limits on unpaved county roads used for access and will use safe vehicle speeds on other access unpaved roads. • KMG will install low-emission glycol dehydrators at all existing and new compressor stations and production wells. • KMG will install electric compression, where feasible (approximately 50 percent of the compression horsepower to be electrically driven). • KMG will install emission controls having a control efficiency of 95 percent on existing condensate tanks with a potential to emit of greater than 20 tons per year (tpy), and on new condensate tanks with a potential to emit of 5 tpy volatile organic compounds (VOCs). • KMG will install low-bleed pneumatic devices at all new compressor stations and production facilities. Within 6 months after signing of the ROD, all existing high-bleed pneumatic devices will be replaced with low-bleed pneumatic devices. High-bleed devices may be allowed to remain in service for critical safety and/or process reasons. • KMG will use green completions for all well completion activities. • KMG will phase in the use of Tier II drill rig engines (90 percent by 2010 and 100 percent by 2012), with phase-in of Tier IV engines or equivalent emission reduction technology as soon as possible thereafter, but no later than 2018. • KMG will implement a natural gas or liquid natural gas drilling rig engine pilot project as soon as operationally feasible, but no later than 1 year after the ROD. This pilot project will ascertain emission reduction benefits, operating experience and, if successful, may result in more natural gas or liquid natural gas engine use in the Uinta Basin. • KMG will install lean-burn natural gas-fired stationary compressor engines or equipment with equivalent emission rates. • KMG will install catalysts on all natural gas fired compressor engines to reduce the emissions of carbon monoxide and VOCs. • KMG will install dry seals on new centrifugal compressors. • KMG will install and optimize artificial lift.
ACEPM Final EIS Appendix A	Air Quality:	<p>KMG will implement an annual inspection and maintenance program to reduce VOC emissions, including:</p> <ul style="list-style-type: none"> • Performing inspections of thief hatch seals and Enardo pressure relief valves to ensure proper operations. • Reviewing gathering system pressures to evaluate any areas where gathering pressure may be reduced, resulting in lower flash losses from the condensate storage tanks.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
ACEPM Final EIS Appendix A	Air Quality	<p>KMG and BLM will develop a project-specific adaptive management strategy, to be informed by periodic emission inventory updates. Implementation of this strategy and associated application of “enhanced” ozone mitigation measures will be required once the project is initiated if: 1) U.S. Environmental Protection Agency designates the area “nonattainment” for ozone; 2) there is a monitored ozone standard exceedance; 3) the Air Resources Management Strategy (ARMS) modeling shows that additional mitigation is needed to prevent future ozone exceedances; or 4) the ARMS group establishes industry-wide mitigation requirements through ongoing modeling. If implementation of this adaptive management strategy is triggered, the applicant commits to working with the BLM to analyze project-specific “enhanced” mitigation measures and employ them within 1 year. The measures to be considered could include, but will not be limited to, the following:</p> <ul style="list-style-type: none"> • Reducing the total number of drill rigs. • Installing Tier IV or better drill rig engines. • Seasonally reducing or ceasing drilling during specified periods. • Using only lower-emitting drill and completion rig engines during specified time periods. • Using natural gas-fired drill and completion drill rig engines. • Replacing internal combustion engines with gas turbines for natural gas compression. • Using electric drill or compression engines. • Centralizing gathering facilities. • Limiting blowdowns or restricting them during specified periods. • Installing plunger lift systems with smart automation. • Employing a monthly Forward Looking Infrared, or FLIR, program to reduce VOCs. • Enhancing a direct inspection and maintenance program. • Employing tank load out vapor recovery. • Employing enhanced VOC emission controls with 95 percent control efficiency on additional production equipment having a potential to emit of greater than 5 tpy.
ACEPM Final EIS Appendix A	Air Quality	<p>KMG will jointly support (with other active oil and gas industry operators, oil and gas industry vendors, and non-industry emission source contributors) activities undertaken by a BLM/Industry Work Group that may include:</p> <ul style="list-style-type: none"> • Model calibration with monitored and meteorological data; • Source apportionment sensitivities; • Ozone precursor sensitivities; and • Mitigation control sensitivities.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
ACEPM Final EIS Appendix A	Air Quality	<p>KMG will implement the following Ozone Awareness and Outreach Plan:</p> <p>Mobile Sources:</p> <ul style="list-style-type: none"> • Refuel vehicles in the evening hours: Employees and contractors will be encouraged to refuel their vehicle fleet during the cooler evening hours; • Refuel activities: Operators will not overfill fuel tanks and will ensure that fuel caps are properly installed; • Minimize vehicle engine idling: Employees and contractors will minimize vehicle idling when practicable, resulting in the emission of reduced ozone precursors; • Minimize vehicle miles traveled: Employees and contractors will plan ahead to consolidate trips and minimize miles traveled between various drilling, production, and compression sites; • Double-up vehicle occupancy: Employees and contractors will maximize vehicle occupancy whenever possible to reduce the number of vehicles in operation and to eliminate redundant trips; and • Review vehicle maintenance: KMG will review fleet maintenance prior to summer weather to ensure that vehicles operate as efficiently as possible, reducing combustion emissions. <p>Training and Outreach:</p> <ul style="list-style-type: none"> • Staff Awareness: KMG will conduct annual training for regional staff to ensure increased ozone awareness; • Industry Awareness: KMG will participate in forums sharing BMPs for oil and gas sources. Technology and work practices can change dramatically with greater understanding of the creation of ozone. Sharing BMPs will educate all industry partners and facilitates the transfer of technology between industry partners.
ACEPM Final EIS Appendix A and Final EIS Section 4.2.2.2 Mitigation CR-1	Cultural Resources	<ul style="list-style-type: none"> • A Class III archeological survey has been conducted on all federal and/or Indian Trust lands in the GNBPA. All personnel will refrain from collecting artifacts and from disturbing any significant cultural resources in the area. KMG will be responsible for informing all persons in the area who are associated with this Project that they may be subject to prosecution for knowingly disturbing historic or archaeological sites or for collecting artifacts. All vehicular traffic, personnel movement, construction, and restoration activities will be confined to the areas examined, as referenced in the archaeological report, and to the existing roadways and/or evaluated access routes. If historic or archaeological materials are uncovered during construction, KMG will immediately stop surface disturbing activities that might further disturb such materials and contact the appropriate AO. • If deemed appropriate by the AO, construction activities within areas having a high site potential will be monitored by a qualified archaeologist for the presence of subsurface cultural material.
Final EIS Section 4.3.2.2 Mitigation GEO-1	Geology	<p>If blasting operations are scheduled to occur within 2 miles of an active gilsonite mine, the mine operator will be notified at least 24 hours prior to blasting to coordinate activities for mine worker safety.</p>

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
ACEPM Final EIS Appendix A and Final EIS Section 4.5.2.2 Mitigation PALEO-1 and PALEO-2	Paleontological Resources	<ul style="list-style-type: none"> • KMG will conduct a paleontological survey on all of its federal locations. All personnel will refrain from collecting fossils and from disturbing any significant fossils in the GNBPA. If fossils are uncovered during construction, KMG will immediately stop surface disturbing activities that might further disturb such materials and contact the appropriate AO. • All fossils of potential scientific importance will be avoided by surface disturbing activities as directed by the AO. • Pending the results of the pre-construction surveys, the BLM could require data recovery at high-value fossil sites that cannot be avoided.
ACEPM Final EIS Appendix A	Public Safety	KMG will construct fences to surround its proposed evaporation ponds to prevent the public or animals from accessing these facilities. In consultation with the BLM AO, KMG will comply with applicable Occupational Safety and Health Administration requirements by taking measures such as installing "warning" signs at locations where public access could result in potential safety issues.
Final EIS Section 4.6.2.2 Mitigation RANGE-1, and RANGE-3 through RANGE-6	Range Resources	<ul style="list-style-type: none"> • During the Application for Permit to Drill permitting process, surveys will be conducted to identify active range improvements, including livestock and wildlife water sources/systems, sheep lambing areas, and shearing areas in coordination with the BLM and the livestock operators. As feasible, no roads, well pads, construction/production facilities, or linear facilities will be placed within 200 meters of range improvements, including livestock and wildlife water sources/systems. If avoidance is not feasible, features will be relocated to an alternate location per the SMA or AO guidance. Alternate locations will be approved by the BLM on BLM lands, by the Bureau of Indian Affairs (BIA) on Indian Trust lands, and by the surface manager on all other lands. • Damage to livestock and livestock facilities will be reported as quickly as possible to the BLM and affected livestock operators. Operators will develop and employ prevention measures to avoid damaging fences, gates, and cattleguards, including upgrading cattleguard gate widths and load-bearing requirements and fencing all open pits and cellars. • If partial or complete removal of a fence cannot be avoided, the fence will be braced and tied off per the BLM guidance. Where the fence is crossed by a road, the fence will be braced and a cattleguard and gate installed per BLM guidance. • On allotments where open range lambing occurs, no development will occur within a 0.5-mile buffer of active lambing areas during the lambing season (April 1 to June 1). • Speed limits will be followed and signs will be erected in lambing/calving areas, shipping pastures, or adjacent to working corrals to warn vehicle operators.
Final EIS Section 4.9.3.2 Mitigation SOIL-1 and SOIL-2	Soils	<ul style="list-style-type: none"> • As directed by the AO, mats will be used during drilling and other development activities to reduce disturbance impacts to underlying soils.
ACEPM Final EIS Appendix A	Transportation	<ul style="list-style-type: none"> • Project wells will utilize centralized compression facilities. • The use of telemetry will reduce the frequency of well visits and therefore decrease vehicle traffic within the GNBPA, one objective of combining production facilities.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
<p>ACEPM Final EIS Appendix A and Final EIS Section 4.11.2.2 Mitigation VEG-1 through VEG-3</p>	<p>Vegetation</p>	<ul style="list-style-type: none"> • In accordance with the procedures described in its Pesticide/ Herbicide Use Plan, KMG will monitor for the growth of invasive species resulting from surface disturbance caused by Project activities and will control weeds caused by Project activities. • KMG will use its best efforts to control noxious weeds along access road authorizations, pipeline route authorizations, well sites, or other proposed facilities by spraying or mechanical removal. A list of noxious weeds will be obtained from the BLM or the appropriate County Extension Office. On BLM-administered land, a Pesticide Use Proposal will be submitted and approved prior to the application of herbicides or other pesticides or possibly hazardous chemicals. • KMG will conduct pre-disturbance weed inventories to identify locations of noxious and invasive weed species. • No roads, well pads, construction/production facilities, or linear facilities that will result in new surface disturbance will be placed within active floodplains or the 100-year floodplain of Bitter Creek or the White River, or within 100 meters of riparian areas or in riparian habitat on BLM-managed lands. An exemption will be allowed for surface disturbance from these activities in the areas if: 1) there are no practical alternatives; or 2) the impacts could be fully mitigated. • Plateau herbicide will be the preferred method used for control of cheatgrass (<i>Bromus tectorum</i>). The use of this and other methods to control cheatgrass on BLM-administered lands will be approved through a Vernal Field Office pesticide use permit. • A 1- or 2-year rest period or mechanical control will be required prior to reseeding on areas treated with herbicide spraying.
<p>Biological Opinion p. 12</p>	<p>Vegetation: Weed Management</p>	<p>An integrated weed management plan will be developed and will include the following components:</p> <ul style="list-style-type: none"> • Surveying for special status plant species before treating an area; • Considering effects to special status species when designing herbicide treatment programs; • Using drift reduction agents to reduce the risk of drift hazard; and • Using selective herbicide and a wick to backpack sprayer to minimize risks to special plants.
<p>Final EIS Section 4.11.2.2 Mitigation SSS-1 and SSS-3, ACEPM Final EIS Appendix A, and Biological Opinion pp. 9 and 13</p>	<p>Vegetation: <i>Sclerocactus wetlandicus</i></p>	<ul style="list-style-type: none"> • The BLM and USFWS Clay Reed-mustard and Graham’s Beardtongue Conservation Agreement Recommended Measures (Final EIS Appendix N) will be implemented for surface disturbing activities, • The BLM and USFWS Uinta Basin Hookless Cactus Conservation Measures (Final EIS Appendix M) will be implemented for surface disturbing activities except when superseded by the Biological Opinion as documented below, such as in the monitoring requirements and buffer distances. • KMG will not construct new mancamps within occupied threatened and endangered plant habitat. <p>The following applicant committed conservation measures will help minimize the impacts of the proposed action to <i>Sclerocactus wetlandicus</i> occupied habitats:</p> <ul style="list-style-type: none"> • Pre-project habitat assessments; • Site inventories within suitable habitat; • Minimization of surface impacts through project design; • Adherence to a minimum buffer between the edge of the surface disturbance and identified plants and populations; • Flagging of avoidance areas before and during construction; and • Avoid concentrating water flows or sediments into occupied habitat.

Table B-2 Conditions of Approval

Source	Resource	Conditions of Approval
<p>Final EIS Section 4.11.2.2 Mitigation SSS-2 as modified in the Biological Opinion pp. 9 - 10</p>	<p>Vegetation: <i>Sclerocactus wetlandicus</i></p>	<p>The following measures were instituted in the programmatic Biological Assessment for KMG/Anadarko's Natural Buttes and will be carried forward into the Greater Natural Buttes EIS:</p> <ul style="list-style-type: none"> • Where populations or individuals of <i>Sclerocactus wetlandicus</i> are located within 300 feet of the proposed edge of the right-of-way (ROW), the following actions will be taken to minimize the impacts: <ul style="list-style-type: none"> - Silt fencing will be used to protect cacti that are within 300 feet and down slope or downwind of surface disturbance. Fencing is intended to prevent sedimentation or dust deposition and will be evaluated for effectiveness by a qualified botanist. - A qualified botanist will be on site to monitor surface-disturbing activities when cacti are within 300 feet of any surface disturbance. - Dust abatement (consisting of water only) will occur during construction where plants are closer than 300 feet from surface-disturbing activities. - Cacti within 300 feet of a proposed surface disturbance will be flagged immediately prior to surface-disturbing activities and flags will be removed immediately after surface-disturbing activities are completed. Leaving cacti flagged for as short a time as possible will minimize drawing attention to the cacti and reduce the potential for theft. - Pipelines will be sited to maximize the distance from adjacent <i>Sclerocactus wetlandicus</i>. - Project personnel associated with construction activities will be instructed to drive at a speed limit of 15 miles per hour on unpaved roads and to remain on the existing roads and ROWs at all times. • For permanent surface pipelines, KMG will adhere to existing cacti survey/buffer guidelines of 300 feet, or amended guidelines if developed by the BLM and the USFWS. In areas where avoidance by 300 feet is not feasible and populations or individuals of <i>Sclerocactus wetlandicus</i> are within 50 feet of the proposed alignment of permanent surface lines, the following actions will be taken to minimize the impacts: <ul style="list-style-type: none"> - Prior to construction, flag individual cactus. Once pipe installation is complete, remove the flagging. - Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing. - Have a qualified botanist present during construction to monitor surface line installation. • As per discussions and email with the BLM on October 18, 2011, KMG will contribute to the Utah <i>Sclerocactus</i> mitigation fund to further study the effects of development on <i>Sclerocactus wetlandicus</i> in the Uinta Basin and the effectiveness of current mitigation measures (see measure #2 on page 10 of the BO for more details). This contribution will be provided over the first 5 years of project development and in lieu of the required 3-year monitoring described in the Vernal BLM Resource Management Plan (RMP) for cacti found within 300 feet of planned surface disturbance that cannot be rerouted. This is consistent with the intent of the RMP for the effects of development to be effectively monitored within the project area and to better assess conservation measures to avoid or minimize these impacts in the future. • The following considerations are required for those wells where KMG deems completion fluid recycling is appropriate based on new well density and topography: <ul style="list-style-type: none"> - Temporary lines associated with recycling of completion water will be sited in existing ROWs. The pressure in the lines is less than 50 pounds per square inch and the lines are constructed of rigid aluminum; therefore, virtually no movement will occur during operation. - If surface water completion lines are placed within the footprint of a road disturbance (i.e., where vegetation does not grow due to continued road use or maintenance activities), <i>Sclerocactus wetlandicus</i> surveys will not be necessary. - A qualified botanist will survey a 50-foot-wide corridor along roads where temporary lines are planned to ensure the <i>Sclerocactus wetlandicus</i> is not present.

Table B-2 Conditions of Approval

Source	Source	Source
<p>Final EIS Section 4.11.2.2 Mitigation SSS-2 as modified in the Biological Opinion pp. 9 – 10 (Continued)</p>	<p>Vegetation: <i>Sclerocactus wetlandicus</i> (Continued)</p>	<ul style="list-style-type: none"> - If cacti are found within the 50-foot-wide survey corridor and avoidance is necessary (to ensure the line is more than 50 feet away from identified cactus), the new alignment will, if possible, be such that the cacti are topographically higher than the re-aligned line so that a potential spill from the line will not impact the identified cacti. - If it is not possible to re-align the surface lines to avoid individuals or populations of the <i>Sclerocactus wetlandicus</i> that are within 50 feet of surface disturbance, the following actions will be taken to minimize impacts: <ul style="list-style-type: none"> ▪ Prior to construction, flag individual cacti. Once pipe installation is complete, remove the flagging. ▪ Prior to construction, install protective fencing around the cacti if they are down gradient of the surface pipe. Once pipe installation is complete, remove the protective fencing. ▪ Have a qualified botanist present during construction to monitor surface line installation.
<p>Biological Opinion pp. 10-11</p>	<p>Vegetation: <i>Sclerocactus wetlandicus</i></p>	<ul style="list-style-type: none"> • To help mitigate impacts to cactus that may occur with development, KMG will fund cactus studies following approval of a final Greater Natural Buttes ROD at a level of \$60,000 per year for 5 years in lieu of the cactus study funding commitment outlined in the 2010 Programmatic Biological Opinion. KMG will be allowed to review and provide input to cactus study work plans prior to study implementation and will be given an opportunity to review study results prior to submittal of results for publication. KMG will exercise no control over final study design or study results submitted for publication. • Avoidance of cactus by 300 feet will take priority in the expansion of pads within the cactus core conservation areas. When the 300-foot buffer cannot be avoided in pad expansions KMG will notify the USFWS and work with the BLM (and the BIA if on Indian Trust surface) to determine a pad expansion that places a priority on avoiding cactus impacts. • KMG will follow existing ROWs and/or roads in constructing new buried pipelines within the cactus core conservation areas. For instance, where a new buried pipeline is unable to follow an existing ROW and/or road (typically for safety reasons) and exceeds 600 feet in length, KMG will notify the USFWS and work with the BLM (and the BIA if on Indian Trust surface) to determine a route that places a priority on avoiding cactus impacts. • KMG retains the right to perform necessary maintenance activities on all existing pipelines within the cactus core conservation areas. Maintenance activities will avoid impacts to cactus to the extent practicable. • KMG will fund a study in the amount of \$100,000 in addition to typical expenditures for pad reclamation to evaluate the technical feasibility of re-planting the Uinta Basin hookless cactus during pad reclamation activities. KMG will be allowed to review and provide input to the study work plan prior to study implementation and will be given an opportunity to review study results prior to submittal of results for publication. KMG will exercise no control over final study design or study results submitted for publication.
<p>ACEPM Final EIS Appendix A and Final EIS Section 4.12.2.2 Mitigation VIS-1 through VIS-3</p>	<p>Visual Resources</p>	<ul style="list-style-type: none"> • KMG will utilize low-profile tanks in the portions of the GNBPA visible from the White River or will utilize topographic features, to the extent available, to prevent viewing the tanks from the White River. • KMG will utilize topographic features, to the extent available, and utilize screening or other design measures, to the extent practical, to prevent stationary permanent equipment from being viewed from the White River. KMG will develop methods for screening facilities on a site-specific basis. • Operating equipment on all lands contained within the boundaries of the project will be painted in a flat non-reflective color that is compatible with the surrounding landscape as specified by the appropriate SMA. Unpainted steel pipe will be used for surface gathering pipelines, which after rusting will blend with the existing landscape. • Dye or other screening techniques will be used to reduce visibility of landform cuts and fills in VRM Class II areas. • Production facilities will not be placed in VRM Class II areas.

Table B-2 Conditions of Approval

Source	Source	Source
<p>ACEPM Final EIS Appendix A as modified in the Biological Opinion p. 12-13 and Final EIS Section 4.13.4.2 Mitigation WATER-1 through WATER-8</p>	<p>Water Resources</p>	<ul style="list-style-type: none"> • KMG will attempt to maximize the use of produced water for completion purposes. • Gas pipelines associated with new and future construction that cross or are within 100-year floodplains will be buried. • KMG will utilize the applicable USFWS' BMPs for work in Utah streams where pipelines or roads cross a stream. • KMG will utilize BLM Hydraulic Considerations for Pipeline Crossings of Stream Channels (prepared by the Utah State Office BLM, Salt Lake City, Utah). KMG will not construct new mancamps within 0.5 mile of floodplains of major drainages (Sand Wash, Cottonwood Wash, Bitter Creek, White River, and Green River). • Where the development of new wells in 100-year floodplains is unavoidable, closed-loop circulation systems for drilling fluids will be used. • As feasible, construction of new compression will not occur within 0.5 mile of major drainages (Sand Wash, Cottonwood Wash, Bitter Creek, White River, and Green River) and within occupied threatened and endangered plant habitat. • Any pipeline conveying produced water or other industrial liquid across the White River, Green River, Bitter Creek, Cottonwood Wash, Coyote Wash, or Sand Wash will be provided with shut-off valves immediately outside the 100-year floodplain on both sides of the crossing. • Any pits used to store drilling fluids, produced water, or hydro-fracturing fluids on or within 100 meters of wetlands, riparian areas, floodplains, or channels with defined bed and banks will be lined with clay or a restrictive synthetic material. After use, any lined pits will be abandoned in accordance with appropriate SMA regulations and guidance. • Storage and parking locations for hazardous materials, lubricants, fuel tanks or trucks, and refueling activities will be a minimum distance of 100 meters from wetlands, riparian areas, and channels with defined bed and banks. Such materials storage or refueling activities will be outside the 100-year floodplains of the White River, Green River, Bitter Creek, Cottonwood Wash, Coyote Wash, and Sand Wash. • Flow monitors will be installed on produced water pipelines to detect possible leaks. • KMG will employ industry BMPs to control stormwater runoff, including appropriate measures to prevent disturbed sediments from reaching the White River drainage during precipitation events. New gathering pipelines will be installed parallel to and within approximately 10 feet of access road running surfaces unless precluded by topography, county prohibitions (where installed adjacent to county maintained roads), or other engineering constraints. • KMG will implement Reasonable and Prudent Practices for Stabilization and develop Storm Water Pollution Prevention Plans for individual new construction sites associated with compressor stations, processing plants, and pipeline projects that disturb more than 5 acres. • KMG will position two 15-foot emergency response spill trailers in areas in or near the GNBPA to respond to accidental spills or releases. At least one of the trailers will be located at a drilling site near the White River, if necessary. Each trailer will be equipped with 300 feet of 10-inch Techniboam, tow bridles, and anchor sets. In addition, the trailers contain sorbent pads, sorbent booms, flash lights, life jackets, Tyvek suits, and other safety equipment. KMG has conducted training sessions that included 2 days of instruction and field exercises with 15 field employees. The training was conducted by the Texas Engineering Extension Service Emergency Services Training Institute. • The water resources monitoring plan (Final EIS Appendix O) will be implemented.
<p>ACEPM Final EIS Appendix A</p>	<p>Wilderness Characteristics</p>	<p>KMG will not disturb the surface for project-related activities in NENW Section 22, T10S-R23E.</p>

Table B-2 Conditions of Approval

Source	Source	Source
<p>ACEPM Final EIS Appendix A and Final EIS Section 4.15.2.3 Mitigation WFM-3 and WFM-4</p>	<p>Wildlife</p>	<ul style="list-style-type: none"> • On BLM administered land, KMG will adhere to seasonal and spatial buffers applicable to occupied raptor nests in the GNBPA in consideration of the Raptor BMPs from Appendix A of the Vernal RMP. • In order to minimize potential of electrocution mortality of raptors, KMG will utilize methods and designs described in Suggested Practices for Raptor Protection on Power Lines (APLIC 2006) and in Mitigating Bird Collisions with Power Lines (APLIC 1994) during construction, operation, and maintenance of power lines. • KMG will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks. In addition, KMG completed retrofitting approximately 1,014 existing exhaust stacks in 2007. • Tree removal within pinyon- juniper habitat will occur outside of the nesting season for migratory birds (April 1 to July 31). • Bird exclusion netting will be installed over reserve pits containing water and left open for more than 30 days in order to eliminate migratory bird and bat exposure to potentially toxic drilling fluids.
<p>ACEPM Final EIS Appendix A and Final EIS Section 4.15.2.3 Mitigation SSS-3 through SSS-12</p>	<p>Wildlife</p>	<ul style="list-style-type: none"> • KMG will utilize low-profile tanks in areas where sage grouse leks are determined to be active to minimize the opportunities for raptor perching. • No surface disturbing activities will be allowed within 0.5 mile of active greater sage-grouse leks year round. • Prior to siting new well pads or locating new access roads between 0.5 and 2.0 miles of a greater sage-grouse lek, habitat mapping (using available soils and vegetation data, 2009 National Agriculture Imagery Program imagery, and field verification) to determine areas of suitable greater sage-grouse habitat will be conducted with coordination between KMG, the BLM, and the Utah Division of Wildlife Resources. Once these data are available, they will be used to identify non-greater sage-grouse habitat, or the lowest quality greater sage-grouse habitat, to determine a surface development pattern that may be least impacting to greater sage-grouse and may allow a viable population of greater sage-grouse to continue to persist in the East Bench area until total reclamation has been achieved. • No surface disturbing activities will occur within 2 miles of an active greater sage-grouse lek during the breeding season (February 15 through June 15). Outside of the breeding season, existing roads and facilities will be utilized to the extent possible, and any new development will be located as far away from the lek as possible. • Within 2 miles of an active greater sage-grouse lek during the breeding season (February 15 through June 15), construction and operational activities will be avoided at dawn (sunrise to 9:00 a.m.) and dusk (5:00 p.m. to sunset) when birds are likely to be on a lek. • Within 2 miles of an active greater sage-grouse lek, the best available technology (e.g., installation of multi-cylinder pumps, hospital sound reducing mufflers or other sound reducing devices, and placement of exhaust systems) will be installed as appropriate to reduce noise levels at, or direct noise away from, active greater sage-grouse leks. The reduction of noise levels will be reduced to decibels on the A-weighted scale levels established in ongoing and future studies regarding noise impacts to greater sage-grouse. • Tanks for wells within 2 miles of an active greater sage-grouse lek will be located out of line-of-sight of the lek, or will be squat tanks. Off-site tanks or central tank batteries will be considered where technically and administratively feasible. • Roads within 2 miles of an active greater sage-grouse lek will be constructed to the minimum standard and width possible to meet safety concerns. In addition, road maintenance activities during the greater sage-grouse breeding season (between February 15 and June 15) will be minimized. • Mats will be utilized where feasible, instead of traditional pad construction, to minimize the disturbance to greater sage-grouse habitat. • Within 2 miles of an active greater sage-grouse lek, interim reclamation seed mixes will be designed to provide habitat for greater sage-grouse. • No surface disturbing activities will occur within identified greater sage-grouse crucial winter habitat in the southern portion of the GNBPA from November 15 to March 14.

Table B-2 Conditions of Approval

Source	Source	Source
ACEPM Final EIS Appendix A	Wildlife	<ul style="list-style-type: none"> • KMG will enter into discussions with the BLM to determine how, when, and for what species wildlife monitoring may be implemented. • KMG will participate in industry groups and projects to support efforts to reduce impacts to wildlife that may result from oil and gas activities in the GNBPA. • KMG will enter into discussions with the BLM to mutually investigate possibilities for voluntary offsite mitigation measures for wildlife habitat enhancement after evaluation of the effectiveness of onsite mitigation, including BMPs.
ACEPM Final EIS Appendix A as modified in the Biological Opinion p. 7-8, 28	Wildlife: Colorado River Fish	<ul style="list-style-type: none"> • KMG agreed to have the Upper Colorado River Recovery Program serve as a conservation measure within the proposed action. • KMG will make a one-time payment that has been calculated by multiplying the Project's peak annual depletion (757 acre-feet) by the depletion charge in effect at the time payment is made. For Fiscal Year 2012 (October 1, 2012, to September 30, 2012), the depletion charge is \$19.21 per acre-foot for the average annual depletion which equals a total payment of \$14,541.97 for the Project. A minimum of 10 percent of the total payment will be provided to the USFWS's designated agent, the National Fish and Wildlife Foundation, at the time of issuance of the Federal approvals from the BLM, with the rest paid when construction commences. <p>KMG will adhere to the following mitigation regarding the protection of threatened and endangered fish:</p> <ul style="list-style-type: none"> • For areas of fresh water collection, the following measures will be implemented: <ul style="list-style-type: none"> - An infiltration gallery will be constructed in a USFWS-approved location. An infiltration gallery is basically a pit or trench dug within the floodplain to a depth below the water table. Water is drawn from the pit rather than from the river directly. If this is not possible, limit pumping within the river to off-channel locations that do not connect to the river during high spring flows. - If water cannot be drawn using the measures below, and the pump head will be located in the river channel where larval fish are known to occur, the following measures apply: <ul style="list-style-type: none"> ▪ Avoid pumping from low-flow or no-flow area as these habitats tend to concentrate larval fishes; ▪ Avoid pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and ▪ Avoid pumping, to the greatest extent possible, during the midnight hours (10:00 p.m. to 2:00 a.m.) as larval drift studies indicate that this is a period of greatest daily activity. Dusk is the preferred pumping time as larval drift abundance is lowest during this time. ▪ Screen all pump intakes with 3/32-inch mesh material. ▪ Report any fish impinged on the intake screen to the USFWS (801.975.3330) and the Utah Division of Wildlife Resources: Northeastern Region 152 East 100 North Vernal, UT 84078 Phone: (435) 781-9453

Table B-2 Conditions of Approval

Source	Source	Source
ACEPM Final EIS Appendix A as modified in the Biological Opinion p. 7-8, 28 (Continued)	Wildlife: Colorado River Fish (Continued)	<p>KMG will adhere to the following reasonable and prudent measures and terms and conditions regarding the protection of threatened and endangered fish:</p> <ul style="list-style-type: none"> • Conduct all proposed actions in a manner that will minimize all impacts to listed endangered fish species and their designated critical habitat. The following will be implemented to ensure compliance with this Reasonable and Prudent Measure: <ul style="list-style-type: none"> - To ensure proper tracking of water depletions from the Upper Colorado River System, KMG will notify the BLM and/or the USFWS office as to what water resources will be used for the Project as they are designated, and the amounts that will be withdrawn from each one. - Coordinate with the USFWS office regarding design and placement of any structures that may need to be placed in washes or 100-year floodplains of tributaries to the White River and the White River itself. - Appropriate erosion control and revegetation measures will be employed. In areas with unstable soils where seeding alone may not adequately control erosion, grading will be used to minimize slopes and water bars will be installed on disturbed slopes. Erosion control efforts will be monitored by the operator and necessary modifications will be made to control erosion.
Final EIS Section 4.15.2.3 Mitigation WFM-1 and WFM-2	Wildlife	<ul style="list-style-type: none"> • Dirt ramps will be built and maintained at an angle not to exceed 45 degrees every 150 to 200 feet along open pipeline trenches to reduce habitat fragmentation and increase accessibility of small animals (mammals, reptiles, amphibians) to adjacent habitats. • On level or gently sloping ground (5 percent slope or less), surface pipelines (4 inches or greater in diameter) will be elevated a minimum of 6 inches above the ground to allow passage of small animals beneath the pipe. This ground clearance will be achieved by placing the pipeline on blocks at intervals of 150 or 200 feet or as appropriate.
Final EIS Section 4.15.2.3 Mitigation SSS-2	Wildlife / Special Status Species	Development activity will be avoided within 660 feet of white-tailed prairie dog colonies. If not possible, development will be designed in coordination with the BLM to minimize impacts to active colonies.

References:

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, California.

_____. 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute. Washington, D.C. 78 pp.