

United  
States  
Department  
of  
Agriculture

Forest  
Service



November  
2007

# Record of Decision

## E Seam Methane Drainage Wells Project

**Federal Coal Lease C-1362**  
**Federal Coal Lease COC-56447**  
**Federal Coal Lease COC-67232**

**Grand Mesa, Uncompahgre and Gunnison National Forests**  
**Paonia Ranger District**  
**Gunnison County, Colorado**

Sections 17-29 and 32-34, Township 13 South, Range 90 West and  
Sections 1-5 and 8-10, Township 14 South, Range 90 West, 6<sup>th</sup> Principal  
Meridian.

*/Charles S. Richmond/*

*11/8/2007*

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CHARLES S. RICHMOND

Date

Forest Supervisor



# **Record of Decision**

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### ***DECISION AND REASONS FOR THE DECISION***

#### ***Background***

Mountain Coal Company (MCC), operator of the West Elk Mine, brought forward methane drainage needs for E seam reserves in 2006. In October 2007, MCC submitted two technical revisions to the Colorado Division of Reclamation Mining and Safety (DRMS) to revise their existing mining permit by adding plans for methane drainage needed to mine reserves in the E Seam. The E Seam Methane Drainage Wells (MDWs) are needed for MCC to comply with Mine Safety and Health Administration (MSHA) requirements to manage methane in the underground mine to ensure worker safety. The environmental effects of the E Seam Methane Drainage Wells are documented in the *Deer Creek Shaft and E Seam Methane Drainage Wells Project Final Environmental Impact Statement (FEIS)* This Record of Decision (ROD) addresses the Forest Service decisions related to the E Seam MDWs.

The Forest Service identified the need to fulfill the obligations of its role as the federal surface land management agency in the DRMS's coal mine permitting process, and the associated USDI-Office of Surface Mining Reclamation and Enforcement (OSM) mine permit modification process that would approve MCC to construct, operate, and reclaim the E Seam MDWs and associated access on National Forest System lands. The OSM participated in the project analysis as a cooperating agency.

The purpose of the agency's action is to protect public health and safety, to prevent loss of leased federal coal resources, and to facilitate safe and efficient production of compliant and super compliant coal reserves, and allow the federal coal lease holder to exercise lease rights. The operations would enable continued recovery of leased federal coal reserves in compliance with Federal coal lease terms and requirements.

This project supports the Forest Service minerals mission to facilitate orderly development and production of energy resources, and contributes to meeting the need for energy resources developed and produced in an environmentally sound manner. The project responds to the goals and objectives outlined in the Amended GMUG Land and Resource Management Plan (GMUG Forest Plan, USDA FS 1991) which calls for encouraging environmentally sound energy and minerals development. By providing for

coal leasing and development in this area, the GMUG Forest Plan and Bureau of Land Management's (BLM) Uncompahgre Basin Resource Management Plan (Uncompahgre RMP, USDI BLM 1989) acknowledged that the area could at some future time support surface facilities necessary to support coal production.

The GMUG Forest Plan also identified providing livestock forage, managing big game winter range and protecting riparian habitat as the desired future conditions of the area. The proposed action is designed to be consistent with moving the area towards those desired conditions. The Uncompahgre RMP supports coal leasing and development in the area with respect to management of mineral resources.

The *Deer Creek Shaft and E Seam Methane Drainage Wells Project Final Environmental Impact Statement* (FEIS) documents the analysis of two action alternatives to meet this Forest Plan desired condition.

### **Decision**

Based upon my review of all the alternatives and the supporting information in the project record, I have selected Alternative 2 – The Proposed Action, for the E Seam MDWs and associated access.

My decision on the E Seam MDWs and associated access includes that the Forest Service will provide concurrence to OSM recommending that the USDI Undersecretary for Land and Minerals approve mining plan modifications for the E Seam MDWs brought forth in technical revisions to MCC's mine permit issued by the DRMS. The Forest Service concurrence includes post-mining land use direction and protections for non-mineral resources as further described below.

This decision approves placing the E Seam MDWs and associated access roads at the locations shown in Appendix B (E Seam MDWs Decision Map,).

Specific Components of this decision include:

- Drilling and casing of up to 168 MDWs located on up to 146 drill locations NFS lands as needed for methane drainage.
- Constructing approximately 15.8 miles of new temporary access road, which includes a 0.6-mile rerouting of an existing life-of-mine administrative access road to address issues related to geologic hazards, sedimentation control and maintenance issues. About 2.3 miles of the new temporary access road is in the West Elk Inventoried Roadless Area (IRA).
- Using and performing maintenance (upgrading) on approximately 4.8 miles of existing National Forest System Roads (NFSR) and approximately 2.0 miles of existing ATV routes on NFS lands;
- Installing passive and/or active degassing equipment;
- Operating and maintaining wells for methane drainage while recovering E Seam reserves;
- Interim reclamation of mud pits, seeding and mulching out-slopes and cut-slopes,
- Plugging MDW drill holes when no longer needed and performing final reclamation to support the post-mining land use;
- Decommissioning by obliteration all new temporary access roads, and decommissioning existing roads either to desired service level or obliterating them to support the post-mining land uses at end of needed project use.
- Converting portions of the Poison Gulch Road (NFSR 711.2C) from a full-sized system road to a System ATV trail (which is the current primary use of the route) at the end of the project;
- Conducting contemporaneous final reclamation of the MDW sites to be reviewed annually through the DRMS permitting process;
- Using the existing life-of-mine administrative access roads known as the West Flatiron Road, Long Draw Saddle (and Extension) for all project-related traffic, in addition to NFSRs 710, 711,

711.2A and 711.2B for over-size and over-length vehicles (drill rig and transport of construction equipment). Commercial use of NFSRs is subject to the terms of a Forest Service Road Use Permit.

- Decommissioning the Long Draw Saddle life-of-mine road to an ATV trail by per decisions issued in 2002 and 2006, by 2010.

My decision includes the needed protections for non-mineral resources on NFS lands will be implemented. The protections are given in the Design Criteria of the Proposed Action (as it pertains to the E Seam MDWs and associated access) (Chapter 2 of the FEIS and Appendix C of this document)).

My decision includes granting relief to lease stipulations limiting occupancy in riparian areas, wetlands and floodplains. The effects to these areas are anticipated to occur near the Dry Fork of Minnesota Creek and Lick Creek, and are mainly associated with the upgrade of exiting roads or ATV routes. The effects in these areas are expected to be minimal, and Design Criteria will be used to further minimize effects. Granting this relief is consistent with the Forest Plan, which allows mineral activities in riparian areas, so long as disturbance is minimized and timely reclamation occurs (FEIS, page 8).

This decision also acknowledges that some MDW drill locations and temporary road alignments may cross areas of geologic hazards and slopes on which use and occupancy is stipulated in the federal coal leases. For areas where this situation may be encountered, I approve interdisciplinary team review of physical placement of MDW locations and road alignments during implementation to further minimize surface disturbance and ensure that proper best management practices are used.

The post-mining land use for E Seam MDWs and associated access locations are wildlife habitat, livestock grazing and maintaining aquatic/riparian ecosystem function. Reclamation plans have been designed to support these post-mining land uses (Appendix C). Approval of the E Seam MDWs and associated access is consistent with the GMUG Forest Plan (Final EIS, Chapter 1, Purpose and Need).

When compared to the other alternatives, the selected alternative best meets the purpose and need for the action to facilitate safe and efficient production of compliant and super-compliant coal reserves, and best supports the commitment of the federal government to facilitate production of leased reserves. Further, this alternative allows the federal coal lessee to construct structures and equipment as provided in their lease rights (Final EIS, Chapter 1, Purpose and Need). This alternative supports the Forest Service Minerals Policy to foster and encourage environmentally sound energy and mineral development, and responds to National Energy Policy.

Placement of the E Seam MDWs and associated access was achieved through careful review of lease stipulations, current surface resource conditions, and anticipated coal seam conditions; and designed to minimize surface disturbance including best management practices and design criteria for use of NFS lands (see Appendix C). This alternative meets requirements under federal coal program laws and implementing regulations (see Final EIS, Chapter 1, Authorizing Actions), and other applicable natural resource laws (see Findings Required by Other Laws and Regulation below), and the National Environmental Policy Act.

In the event of any contradiction or conflict between descriptions or depictions of authorized actions, my decision is to be taken from the project documents in the following order of precedence: first the

description in this ROD, second the representations on the Decision Map and legal descriptions (Appendix B), and finally descriptions in the FEIS.

The following items were found to be inaccurate in the Final EIS, or the situation has changed, and is, therefore, corrected in this errata.

<b>FEIS Section</b>	<b>Page of FEIS</b>	<b>Errata</b>
Federal Coal Leases	5	In the time since the Final EIS was published (August 17, 2007), readjustment of federal coal lease C-1362 was completed by BLM. The effective date of the re-adjustment was September 1, 2007. The activities in this project are consistent with the re-adjusted lease terms which were to reword older stipulation language to be consistent with newer lease stipulation language.
Capture/Use of Methane and Leasing of Coal Mine Methane	45	At the end of the first paragraph in the right hand column, the sentence “Direction may include issuing oil and gas leases with a no surface occupancy stipulation” made an incorrect reference to Judge LaPorte’s (9 <sup>th</sup> District Court for the Northern District of California) November 29, 2006 Clarification on the Re-Instatement of the RACR. The situation with respect to the Court Order is correctly stated on page 7 of the Final EIS in the section Roadless Area Conservation Rule of 2001 (RACR).
Use Horizontal Boreholes or Longhole Horizontal Boreholes and Directionally Drill MDWs from Outside IRAs	46-47	Due to formatting errors the columns had become jumbled. These sections should read as is shown in Appendix A of this document.
Riparian Vegetation	87 (2 <sup>nd</sup> Paragraph, 3 <sup>rd</sup> Sentence)	Although the majority of proposed operations in riparian areas are along the Dry Fork of Minnesota Creek, road construction proposed along Lick Creek also has a potential to affect riparian vegetation, and should be included. Text is changed to:  “These are primarily associated with stream crossings and roads located along the Dry Fork of Minnesota Creek and along Lick Creek.”
Riparian Vegetation	88 (2 <sup>nd</sup> Paragraph)	To better reflect the notation within Table 3-8 and clarify the location and impacts to the described wetlands, text is changed to:  “Less than one acre of marsh-like (wetland) vegetation is located within proposed road corridors along the Dry Fork of Minnesota Creek ( <b>Table 3-8</b> ). Potential impacts to marsh-like vegetation would be reduced due to the limited extent and quick recovery after reclamation of these habitats.”

<b>FEIS Section</b>	<b>Page of FEIS</b>	<b>Errata</b>
Table 5-1	184 -192	The notation with the listing of Rocky Mountain Clean Air Action in the left hand column of the table indicates their comment letter was received after the comment period, and that the organization had no appeal standing was made in error. Their comment letter was duly postmarked by the close of the comment period (project file); therefore, this organization retains eligibility under FS appeal regulations.

***Reasons for the Decision***

Applicable Laws, Regulations, and Policy

The selected alternative meets requirements under the Mineral Leasing Act, as amended, the National Environmental Policy Act, National Forest Management Act, Surface Mining Control and Reclamation Act, the Colorado Surface Coal Mining Reclamation Act, and other applicable laws and regulations (refer to the Findings Required by Other Laws and Regulations section of this document and FEIS, Chapter 1, Authorizing Actions).

How Issues Were Considered

The key and non-key issues identified for the project are shown in Chapter 1 of the FEIS. Primary issues of concern related specifically to E Seam MDWs and associated access included effects of road construction in the West Elk Inventoried Roadless Areas (IRA), effects of methane venting on air quality and climate change, and heavy traffic use on county roads,. To address these, the Forest Service considered alternatives (both analyzed in detail and Alternatives Considered but Eliminated from Detailed Study) described in Chapter 2 of the FEIS.

Concerns were raised on the project with respect to activities occurring in the West Elk Inventoried Roadless Area (IRA). In response to concerns from the public, the FEIS analyzed the effects of MDW locations and road construction in the IRA under Alternative 2. Only temporary roads that could be authorized using Exception 7 to the Roadless Area Conservation Rule of 2001 (RACR) were considered in the FEIS (see Summary Description of the Proposed Action Activity In Inventoried Roadless Areas, Roadless Area Conservation Rule of 2001, Federal Coal Leases Sections in Chapter 1 and Development of Proposed Action in Chapter 2 of the FEIS for further discussion). Additionally, as a measure of comparison, Alternative 3 –No Activity in (Inventoried) Roadless (Area) which did not include any drill locations or road construction in the IRA was added to the FEIS.

Venting methane (a greenhouse gas) was a concern for various reasons including effects on air quality, desire for capture and use of the methane, and contribution of methane release on climate change. Methane release effects on air quality are analyzed in the Air Quality section, Chapter 3 of FEIS. Methane volume estimated to be released was, however, reported at the State level for fossil fuel combustion where a level of change (or significance) could be determined. It should be noted that future methane release is estimated to be a reduction by 50-60% of what is currently being released by mine operations at the West Elk Mine based on the differences in coal seams. Further, no air quality regulations or standards governing methane have been promulgated at this time.

The situation related to capture and use of the methane is addressed in Alternatives Considered but Eliminated from Detailed Study (FEIS, Chapter 2), and in the Response to Comments (Chapter 5 of the FEIS). Additional information is given in responses to EPA’s August 7, 2007 letter (Project File).

Some respondents wished to have the contributions of the project on climate change analyzed in detail; however, due to lack of reasonably available modeling, there is no way to predict global-scale effects from this project. Therefore, global warming was considered a non-significant issue for this analysis and outside the scope of analysis (FEIS, Chapter 2 and Response to EPA's August 7, 2007 Letter, project file).

With respect to road use for construction equipment, the FEIS discloses the effects of construction traffic in Chapter 3, Transportation. Oversize/over-length vehicles such as the drill rig and semi-trucks (large equipment transport) would access from the west through the town of Paonia, then via Minnesota Creek Road (Delta County/Gunnison County Road 710), and NFSRs 710 and 711. The estimated traffic associated with use of county roads for oversized vehicles is estimated at 5 round trips per year until project completion. County road use was addressed and resolved between the company and the county through a maintenance agreement process.

Other issues raised with respect to E Seam MDWs and associated access of these activities are presented in the FEIS (Chapters 1 and 3). For all disciplines, Best Management Practices and Design Criteria will be implemented to minimize effects.

Benefits will also occur from implementation of my decision. By allowing the E Seam MDWs and associated access, leased Federal coal reserves will continue to be mined and made available to supply energy needs of the country. This will continue to provide economic benefit to the surrounding communities for the next 12 years.

#### Factors Other Than Environmental Effects Considered In Making the Decision

The purpose and need of this project is to protect public health and safety, to prevent loss of leased federal coal resources, and to facilitate safe and efficient production of compliant and super compliant coal reserves. The purpose and need also support the rights of the Federal Coal Lessee to construct structures which may be necessary to exercise lease rights (EIS, Chapter 1 Purpose and Need). My decision supports the Purpose and Need for this project.

My decision fulfills the Federal Government's policy to foster and encourage mineral development (Mining and Mineral Policy Act of 1970), the Federal Land and Management Policy Act (FLPMA), and complies with the GMUG Forest Plan direction.

Coal in the North Fork Valley is desirable because it is considered "compliance coal" under the Clean Air Act emissions standards. The coal from the area is low sulfur, low ash, and has high burning capabilities. Facilitating its recovery is beneficial to the energy needs of the country.

#### Identification of the Environmental Documents Considered in Making the Decision

This decision was made after carefully considering the contents of the EIS, public comments, agency response to comments, and the supporting project record. The GMUG Forest Plan was reviewed and this decision is determined to be consistent with it (EIS, Chapter 1 *Authorizing Actions, Forest Plan*). The numerous other environmental documents (EIS, Chapter 1, *Other Analysis Completed in the Vicinity of the Project Area*) prepared for activities in the area were also consulted.

#### How Considerations Were Weighed And Balanced In Arriving At The Decision

The resource impact analyses presented in the EIS (Chapter 3, and summarized in Table 2-3) shows potential impacts to surface resources which are minimized by using Design Criteria for the action given in Appendix C. Further, I considered the rights of the coal lessee conveyed under the federal coal lease, as well as the needs to comply with other agency requirements.



I have also considered Executive Order 13212, which directs federal agencies to take steps to increase the energy supply to our nation, and the Energy Policy Act of 2005.

This decision will result in about 2.3 miles of temporary road construction in the West Elk IRA. I understand that many interested parties are concerned about any development in (IRA). Road construction activities in IRAs are currently managed under the direction of the 2001 RACR, as reinstated by the 9<sup>th</sup> District Court for the Northern District of California (FEIS, pp. 7-8). The temporary road construction activities in the IRA approved in this decision are consistent with the 2001 RACR, as approving this construction is allowable under Exception 7 to the 2001 RACR (roads needed for the continuation, extension, renewal of a mineral lease on lands that were under lease as of January 12, 2001) since the leases involved were issued prior to 2001 (C-1362 dates to 1967 and COC-56447 dates to 1995, see FEIS, pp.5-6)<sup>1</sup>. , Consistent with requirements of the RACR, all temporary roads constructed in the IRA for the purposes of this project will be reclaimed by full obliteration including recontouring and revegetation when no longer needed to access MDWs. Further, the roads will only be open during project use to the proponent and for administrative purposes (i.e., no public access). See Appendix C of this document or Table 2-1, Design Criteria in the FEIS for information on Roads and Roads in Inventoried Roadless Area, and other resources to see measures that will be taken to minimize effects in the IRA.

In addition, this area (as described in Chapter 3 of the FEIS, Inventoried Roadless Areas) has been effected by both road construction and other uses. The portion of the West Elk IRA where the project area is located has seen the construction of approximately 30 miles of road since 1979 and was not deemed suitable for inclusion in the Colorado Wilderness Act of 1980, nor was it considered suitable in the 2005 Roadless Inventory and Evaluation of Potential Wilderness Areas (GMUG, 2005) due to compromised quality and management of roadless character.

Although the Forest Service responsibility within the federal coal program relates to use of the surface lands, I acknowledge that implementation of this decision could result in the release of about 7 million cubic feet per day of methane. Further, I understand other federal agencies and private interests are concerned about release of methane from the mine into the atmosphere, and I share the goal of having the gas resources under lease to facilitate mitigating<sup>2</sup> the release of methane by some mechanism should it be feasible. Up to this point, mitigating released methane has not been possible because the gas resources (which are federally managed) are not under lease, and therefore implementing any mitigation could not occur (FEIS, pp. 44 to 46, Chapter 5 and responses to EPA letter in project file). To this end, I committed that the GMUG would complete the needed work to forward consent to BLM leasing the gas lease parcels that are coincident with the Federal coal leases in the project area. However, due to the presence of IRA in the project area, not all of the lands nominated for gas lease could be brought forward for lease as such would be inconsistent with the RACR as reinstated by the 9<sup>th</sup> District Court for the Northern District of California. As of the date of this ROD, the GMUG had forwarded all lands nominated for gas lease in the project area outside of the IRA to the Rocky Mountain Regional Office per standard procedure. By completing this work, the first critical step to affording potential methane release mitigation is underway. On a related note, interested parties also expressed the desire to condition the gas leases so to be complimentary with on-going coal operations. The BLM Colorado State office and Forest Service are currently reviewing this issue. It is anticipated that these particular gas lease nominations would not be ready for gas lease sale until 2008.

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<sup>1</sup> No road construction in the IRA portions of Federal Coal Lease COC-67232 (effective March 1, 2007) is included in this decision.

<sup>2</sup> Methods of mitigating methane release to reduce greenhouse gas emissions and current understanding of feasibility of them are discussed in the FEIS Chapter 2 and 5, and in the GMUG response to an EPA letter in the project file.

### Relationship to Public Involvement

Public comments were sought throughout this project (refer to *Public Involvement* Section of this document for a summary of public involvement, and Chapters 4 & 5 of the FEIS).

I considered input from members of the community and other agencies in making this decision.

### **Other Alternatives Considered**

The No Action Alternative (FEIS, Chapter 2, Alternative 1), and an alternative that considered no activity in the West Elk IRA (FEIS, Chapter 2, Alternative 3) were the other alternatives that were studied in detail. The No Action Alternative was the environmentally preferred alternative, because no surface disturbance would occur. A more detailed comparison of these alternatives can be found in the FEIS on Table 2-2.

Under the No Action alternative, current management plans, existing approvals related to coal mining, and non-coal related activities would continue to occur or guide management of the project area (see FEIS Chapter 2, Alternative 1). Under the No Action Alternative construction of the E Seam MDWs and associated access would not occur. Selection of the No Action Alternative would essentially cause the West Elk Mine to cease operations because the MDWs are required by MSHA to maintain safe levels of methane in the E Seam workings. Without an approved ventilation plan, the mining company could not receive approval from other Federal or State agencies for mining and ventilation plans. This could result in a reduced capacity for MCC to meet its coal contractual obligations resulting in a decreased ability to recover currently leased federal coal reserves which would have expanded negative effects on local economy. Selection of this alternative would not meet the purpose and need, and would be inconsistent with rights granted by the coal lease, the Forest Plan, and national policy.

Under Alternative 3-No Activity in Roadless, no surface activity would be permitted in the West Elk IRA; the remainder of the proposed activities would be the same as the Proposed Action. In this alternative, the number of MDW locations would be reduced to 135, and overall road construction would reduce to approximately 14 miles. This limited access would result in reduced capacity to extract about 10 million tons of leased coal reserves, and shorten mine life by about 2 years, and could have attendant negative effects on local economy. It could also result in failure to meet MSHA ventilation needs. Selection of this alternative would not fully meet the purpose and need, and would be inconsistent with rights granted by the federal coal leases, the Forest Plan, and national policy as activity in IRAs is permitted as it fits under exceptions to the 2001 RACR.

### **Public Involvement**

The Notice of Intent (NOI) to prepare an environmental impact statement (EIS) for the Deer Creek Shaft and E Seam Methane Drainage Wells was published in the *Federal Register* on September 18, 2006. The NOI asked for public comment on the proposal from September 18 through November 2, 2006. In addition, as part of the public involvement process, the agency published legal notices in the *Grand Junction Daily Sentinel* and *Delta County Independent* as papers of record and sent approximately 35 scoping letters to required agencies, Tribes, and interested parties list (project file). The NOI was posted on the GMUG's public planning webpage, and the project was included on the GMUG's Quarterly Schedule of Proposed Actions. GMUG personnel briefed the North Fork Coal Working Group at its quarterly meetings on October 10, 2006, January 16, April 10, and July 10, 2007. An additional article was published in the *Delta County Independent* on November 1, 2006 written by an unknown source.

Five comments were received during initial scoping. Using the comments from internal scoping, the public, other agencies, and associations and the interdisciplinary team, a list of issues was developed (EIS, Chapter 1, Issues).

A Draft EIS was prepared, and the Notice of Availability for comment appeared in the Federal Register on March 23, 2007. Legal notice of opportunity to comment appeared in the *Grand Junction Daily Sentinel* (April 5, 2007) and the *Delta County Independent* (April 4, 2007). Seven (7) parties, comprised of other agencies and interested parties, submitted comments on the Draft EIS. Responses were prepared to all comments received and are contained in Chapter 5 of the Final EIS. The Notice of Availability of the Final EIS was published in the *Federal Register* on August 17, 2007.

### ***Findings Required by Other Laws and Regulations***

To the best of my knowledge, this decision complies with all applicable laws and regulations. In the following, I have summarized the association of my decision to some pertinent legal requirements.

Executive Order 13212 of May 18, 2001. This Order called the federal agencies to expedite their review of permits for energy-related projects while maintaining safety, public health, and environmental protections. My decision is consistent with this Order.

National Forest Management Act of 1976: The GMUG Forest Plan was approved in 1983 and amended in 1991, as required by this Act. This long-range land and resource management plan provides guidance for all resource management activities in the Forest. The National Forest Management Act requires all projects and activities to be consistent with the Forest Plan.

Bringing forward the consistency of post-mining land use with the Forest Plan, along with protections for non-coal resources (Design Criteria listed in Appendix C) in the concurrence to OSM's recommendation for Department-level approval, is consistent with the intent of the GMUG Forest Plan's long term goals and objectives listed in EIS. The project was designed in conformance with Forest Plan standards and incorporates appropriate Forest Plan guidelines for minerals management, big game winter range, livestock grazing and riparian area management (Forest Plan, pages III-63 to 69).

#### *Forest Plan Consistency*

No Forest Plan amendment, site-specific or otherwise, would be required for implementation of this project. All actions are consistent with the Forest Direction and Management Area standards and guidelines of the Plan.

In specific, this project is consistent with the Forest Plan in the following ways:

- All alternatives are consistent with the Clean Water Act and Forest Plan standards for water resources.
- The selected alternative is consistent with Forest Service Manual 2580-Air Resource Management and the 1991 GMUG Forest Plan.
- The proposed action is consistent with Forest Plan standards for geology which establishes limits on ground-disturbing activity on unstable slopes and highly erodible sites.
- The proposed action is consistent with Forest Plan standards for soils that establish limits on ground-disturbing activity on unstable slopes and highly erodible sites.
- The proposed action is consistent with the Forest Plan, NFMA, FSM 2670 at 2670.22 - Sensitive Species, Executive Order 11990 - Protection of Wetlands, and Executive Order 131120 - Invasive Species.
- The alternatives would not result in a decline or reduction of viability of the populations of sensitive species identified to occur on the GMUG National Forests.
- All alternatives are consistent with the Forest Plan regarding Management Indicator Species (MIS), In May 2005 the Forest Supervisor on the Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG) issued an amendment that, in part, revised the list of Management Indicator

Species (MIS). The GMUG has reinstated MIS requirements per the 1982 planning regulations (per guidance provided in 36 CFR 219.19) to monitor both habitat and populations. The GMUG has considered and will continue to consider the “best available science” in forest and project level planning, including data and analysis needs for MIS. The GMUG Forest Plan establishes monitoring and evaluation requirements that employ both habitat capability relationships and, at the appropriate scale, population data. The analysis completed for this project examined how the project directly or indirectly affects selected MIS habitat and populations and how these local effects could influence Forest-wide habitat and population trends.

- The proposed action is consistent with the Forest Plan and all other laws governing archaeological resources.
- The proposed alternative is consistent with Forest Plan direction for recreation and special uses.
- The proposed action is consistent with Forest Plan and current direction for management of IRAs.
- The selected alternative is consistent with Forest Plan goals and desired future conditions for transportation.
- The selected alternative is consistent with visual quality direction regarding roads and trails under the GMUG Forest Plan, Gunnison National Forest Interim Travel Restrictions, and Forest Service Handbook (FSH) 7700.
- The proposed action is consistent with range management direction under the GMUG Forest Plan and Forest Service Manual 2200-Range Management.
- The supporting analysis in the EIS has incorporated the best available science.

Mining and Minerals Policy Act of 1970. This Act declared it would be the continuing policy of the Federal government and in the national interest to foster and encourage private enterprise in the development of economically sound and stable domestic mining industries, and the orderly and economic development of domestic mineral resources (EIS, Chapter 1). This decision is consistent with this Act.

Mineral Leasing Act of 1920, as Amended by the Federal Coal Leasing Amendments Act of 1975. These Acts authorize the federal agencies to lease coal reserves (EIS, Chapter 1). The federal coal leases involved with this action C-1362, COC-56447 and COC-67232 were issued, readjusted and/or modified in compliance with this Act. This Act also recognized the surface managing agency’s role in coal leasing actions, and operating and reclamation plan actions. This decision is consistent with these Acts.

Surface Mining Control and Reclamation Act, and the Colorado Surface Coal Mining Reclamation Act. This Act established the framework for regulating coal mining activities in the US. The Office of Surface Mining oversees implementation of this Act under approved State programs. The Act and the Colorado rules recognize a specific role for the federal land management agency to participate in the permitting process for coal mines as applicable, and provide the agency a concurrence role for coal mining related activities on federal lands. The Acts also identify the federal land management agency role in prescribing protections for non-coal resources, and identifying the post-mining land use.

The decision framework for this action involves the Forest Service serving its role as the federal land management agency in the State DRMS and OSM permitting process by identifying protections for non-coal resources and the post-mining land use. My decision complies with these Acts.

National Historic Preservation Act: This decision complies with the provisions of this Act and the American Indian Religious Freedom Act. Native American interests were consulted during this project (EIS, Table 2-2 and Chapter 3). The project record and field reviews support that no cultural or historic sites would be affected by this decision (EIS, Chapter 3, and project file). When implementing the decision, any previously unidentified sites inadvertently discovered would be avoided or mitigated so there would be no effect upon them per stipulations on federal coal leases C-1362, COC-56447 and COC-67232 (see Appendix C of this ROD).

Endangered Species Act: The US Fish and Wildlife Service was consulted in this environmental analysis process. A Biological Assessment (BA) was prepared for this decision (EIS, Chapter 3, Wildlife, and Project File). All known endangered or threatened species were considered in the BA. The BA was submitted to FWS for concurrence on Canada lynx, bald eagle winter foraging habitat (now delisted) and water depletions as they relate to the four big river fishes. In their concurrence letter, the FWS stated they concurred with our findings on “may affect, not likely to adversely affect” bald eagle, “may affect, not likely to adversely affect” Canada Lynx, and confirmed earlier programmatic consultation on water depletion quantities associated with the big river fish. The Design Criteria (Appendix C) bring forward needed protections for lynx habitat consistent with stipulations on the federal coal leases that resulted from consultations acquired at the leasing stage.

If additional findings regarding threatened or endangered, proposed or sensitive species are discovered, a new biological assessment or evaluation will be written, and any mitigation incorporated into Design Criteria.

National Environmental Policy Act: The documentation for this project supports compliance with this Act.

Executive Order 11990 of May 1977: This order requires the Forest Service to take action to minimize destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. In compliance with this order, Forest Service direction requires that an analysis be completed to determine whether adverse impacts would result (EIS, Chapter 3, Vegetation). Design Criteria included in this decision ensure that loss, degradation or destruction of wetlands will be minimized (Appendix C of this document).

Clean Air Act: The selected alternative would be consistent with air quality and fugitive dust provisions required by the Colorado and National Ambient Air Quality Standards and PSD increments as well as alternative gaseous emissions regulated by the Mine Safety and Health Administration.

Roadless Area Conservation Rule of 2001: The rule’s purpose is to provide, within the context of multiple-use management, lasting protection for inventoried roadless areas within the National Forest System. The selected alternative activities, together with use of design criteria, are consistent with exception 7 of the rule.

Prime Farmland, Rangeland, and Forest Land: Adverse effects on prime farmland, rangeland and forestland not already identified in the Forest Plan EIS are not expected from implementing the selected alternative. There are no prime farmlands, rangeland or forest land within the project area.

Environmental Justice: With the implementation of any of the alternatives, there would be no disproportionate adverse human health or environmental effects on minority or low income populations. The actions would occur in a remote area and nearby communities would mainly be affected by economic impacts related to not implementing an action alternative or contractors implementing the project (EIS, Chapter 3, Socio-economics).

Consumers, Civil Rights, Minority Groups, and Women: The proposed alternatives would not adversely affect consumers, civil rights, minority groups, or women. The proposed alternatives would not have a disproportionately high or adverse human health effect on any identifiable low income or minority population.

## **Implementation Date**

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

In relation to the Forest Service role in this project as the federal surface land management agency in the State coal program, the agency will be able to provide the required formal concurrence to the DRMS or OSM as applicable, no sooner than 5 days after the appeal filing period closes. If an appeal is filed, formal concurrence would not occur until after the appeal resolution period described above.

## **Administrative Review or Appeal Opportunities**

This decision is subject to administrative review (appeal). Parties who have participated in the analysis process by commenting on the DEIS are eligible to appeal pursuant to appeal regulations at 36 CFR Part 215. In accordance with 36 CFR 215.11(d), the operators may appeal this decision, pursuant to appeal regulations at 36 CFR 215 or appeal regulations at 36 CFR 251 Subpart C, but not both.

The appeal must be filed (regular mail, fax, e-mail, hand-delivery, or express delivery) with the Appeal Deciding Officer at:

<b>For delivery services to a physical street address</b>	<b>For U.S. Postal Service delivery</b>
Appeals Deciding Officer U.S.D.A. Forest Service Rocky Mountain Region 740 Simms Street Golden, CO 80401	Appeals Deciding Officer Forest Service Region 2, Regional Office 740 Simms Street Golden, Colorado 80401

The office business hours for those submitting hand-delivered appeals are 8:00 AM to 4:30 PM Monday through Friday, excluding federal holidays. Electronic appeals must be submitted in a format such as an e-mail message, plain text (.txt), rich text format (.rtf), or MSWord (.doc) to [appeals-rocky-mountain-regional-office@fs.fed.us](mailto:appeals-rocky-mountain-regional-office@fs.fed.us). In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

Appeals, including attachments, must be filed within 45 days from the publication date of this notice in the *Grand Junction Daily Sentinel*. Attachments received after the 45 day appeal period will not be considered. The publication date in the *Grand Junction Daily Sentinel* is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Individuals or organizations who expressed interest during the comment period specified at 36 CFR 215.6 may appeal this decision. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

### **Contact Person**

For more information about this project, contact Niccole Mortenson, 2250 Highway 50, Delta, CO 81416, phone 970-874-6616, or at [nmortenson@fs.fed.us](mailto:nmortenson@fs.fed.us).

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## Appendix A-Errata

### **Use Horizontal Boreholes or Longhole Horizontal Boreholes**

Mine Ventilation Plans including design of ventilation system are approved by MSHA from submittals and measurements made by MCC.

MCC expended a tremendous effort over a three-year period in an attempt to find a means to successfully accomplish degas drainage using the in-mine horizontal drilling system. These holes were drilled in the gateroads of the 14-17 panels and connected to a massive collection system to exhaust the gases from the mine. The conclusion of this effort was that the holes could not be drilled large enough, or stay open long enough, to allow safe mining of the coal (due to resulting high methane concentrations). They were simply very inefficient collectors of minimal quality gas, due to the limits of the drilling equipment in this application and the location of the gas producing zones within the overlying strata.

In MCC's previous experience in the B Seam approximately 13 percent of total mine methane was able to be vented horizontally (extracted from BLM analysis, 2007). Any attempt to degas the E seam via the horizontal drilling system would have the same issues and possibly more due to constraints of the overlying strata.

Based on preliminary plans these types of boreholes alone are inadequate for proper ventilation and efficient mine operations. These methods are already used by MCC where possible.

### **Directionally Drill MDWs from Outside IRAs**

MCC has analyzed the use of directional drilling to achieve degasification goals from sites outside the IRA and has noted the following:

- Directional drilling is limited by the thickness of overburden (or amount of rock) overlying the coal E seam. This limited thickness of overburden precludes the ability to drill exclusively from outside the IRA boundaries and hit the MDW targets needed in the ventilation plan.

- It has been MCC's experience drilling directionally in the B seam that directional holes must be drilled such that the producing part of the well above the seam is vertical. This distance was approximately 250 feet in the B seam methane drainage wells and is projected to be 150 feet minimum in the E seam methane drainage wells. If such holes fail to achieve vertical in this portion of the well, they are subject to collapse and ineffective as degas holes.

- The maximum safe angle of drilling (above this minimum vertical section) that can be achieved by the drilling equipment available is 45 degrees.

- The drill mast is set at 45 degrees to begin the holes. This angle must be gradually corrected to vertical during the drilling process.

- The maximum allowable dog-leg in directional drilling is 4 percent, in order to be able to successfully install casing in the hole.

- Given the parameters of overburden depth, as it relates to physical constraints of directional drilling, MCC is unable to reach the required methane drainage targets from outside the roadless boundary.

Therefore, use of directional drilling opportunities has been used as much as possible, however because in places the overburden is not thick enough that directional drilling either from outside the IRA is practical or possible, therefore some of the operations must be placed in the IRA

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## Appendix C-Design Criteria

Design Criteria		
Topic	Design Criteria for the Proposed Action	
<b>TRANSPORTATION SYSTEM</b>		
Existing Roads	<ol style="list-style-type: none"> <li>1. Existing roads would be left in a condition equal to or better than that observed on MCC's entry into the area or to the satisfaction of the USFS engineer or permit administrator. At the completion of mining operations MCC will blade and crown all roads; shape and repair shoulders; clean all culverts and drainage ditches; and perform all other road maintenance work necessary to insure satisfactory functioning of the road drainage system.</li> <li>2. FS Roads 710, 711, Horse Gulch Road (711.2b) and Sylvester Gulch Roads would be used to access area. Access to the area would primarily be on the Sylvester Gulch Road. Periodically, oversized and full-sized vehicles may need to mobilize via the county portion Minnesota Creek Road, however use will be minimized.</li> <li>3. Roads will be kept clear of slides, fallen timber, and overhanging brush which obstructs visibility.*</li> <li>4. Gravel or other selected surfacing material will not be bladed off of roads.</li> <li>5. Two segments of existing full-size road upgrades (totaling approximately ½ mile) in Poison Gulch connecting to Elijah Park will remain open after project completion to allow public hunting access as recommended by Colorado Division of Wildlife to Elijah Park (January 2007). The remainder of Poison Gulch will be decommissioned to a System ATV trail at the end of project use (primary current use).</li> <li>6. Existing "loop" road in T 13S, R 90W Section 33 and T 14S, R 90W Section 4 will be decommissioned by obliteration at the end of the project, but existing spurs in T 14S, R 90W, W1/2 Section 4 connecting Deer Creek Road to private land will remain open to allow public hunting and private access without duplication of routes as recommended by Colorado Division of Wildlife.</li> <li>7. MCC must provide specific improvement and use parameters using the AASHTO design criteria (Guideline for geometric design of very low volume roads (2001 edition) and Design guide for pavement structures (1993 edition)) for public roads (Service Levels 3, 4 and 5) or as approved by Forest Engineer, to be designed by a</li> </ol>	<p>Road Use Permit</p> <p>MCC Project Plan, County Road Use Agreement</p> <p>Federal Coal Lease Stipulation</p> <p>Road Use Permit</p> <p>Colorado Division of Wildlife, BMP, Paonia Ranger District</p> <p>Colorado Division of Wildlife, BMP</p> <p>Forest Plan, AASHTO Design Standard, Road Use</p>

Design Criteria		
Topic	Design Criteria for the Proposed Action	
	Colorado Registered	Permit (FSM 2733.04b and FSM 7730), 36 CFR 228 E
	8. Professional Engineer, and submitted for USFS approval for each road segment. The Engineer's recommendations must be approved and implemented before any project related traffic may use that part of the NFSR system. During the course of the project the Forest Service will provide oversight of road improvement activities and continued FS Engineering/FS designee monitoring of road conditions resulting from project related traffic. Temporary roads that are not open to the public are not subject to AASHTO engineering standards for low volume roads.	Forest Plan, AASHTO Design Standard, Road Use Permit (FSM 2733.04b and FSM 7730), 36 CFR 228 E
	9. For roadway section with 6 inches OR LESS of new structural surfacing section or existing surfacing sections with any aggregate segregation or contamination by intruding fine materials, no rutting, pumping or plastic deformation of the roadway surface will be allowed. Rutting, plastic deformation, or pumping of the surface will result in the proponent's operations, on that road, ceasing immediately and remaining shutdown until repairs and improvements are made to prevent additional damage to the structural section. For surfacing sections with GREATER THAN 6 inches of new structural surfacing section any rutting, pumping or plastic deformation in excess of structural section thickness (T) divided by 3 (T/3) will not be allowed and will result in proponent's operations, on that road, ceasing immediately and remaining shutdown until repairs and improvements are made to prevent additional rutting.	Road Use Permit (FSM 2733.04b and FSM 7730) , BMP, GMUG Forest Standard
	10. This T/3 limitation applies to any forest road utilized by the proponent, even if it is not part of the project area or transportation plan. Once shutdown, operations will not resume until approved repairs or improvements are made to resolve the problem. These limitations apply to any NFSR even if it is not included in the project area or transportation plan.	Road Use Permit (FSM 2733.04b and FSM 7730) , BMP, GMUG Forest

Design Criteria		
Topic	Design Criteria for the Proposed Action	
	11. Previously approved ATV trails upgraded for project use would remain open following project completion and would be decommissioned to ATV trails.	Standard Previous NEPA decision
New roads	12. Light-use or low-volume (Service Level 3, 4 & 5) public roads (designed to applicable design standards based on American Association of State Highway and Transportation Officials (AASHTO) "Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT<400) Low Volume Road Standards) and pads will be graveled. Surfacing access roads, including open channel crossings of minor tributaries should utilize gravel or crushed rock on the running surface of the road to reduce ongoing erosion of the channels by vehicle traffic.	Road Use Permit (FSM 2733.04b and FSM 7730) , AASHTO Design Standard
	13. Although somewhat conflicting with direction regarding Lynx (LCAS), based on geologic instability and wet areas warrant that new project specific roads will be laid out on top of ridges (or the top one-third of hillside).	Water Conservation Practices Handbook (WCPH) (FSH 2509.25)
	14. Stream crossings will be minimized in number and engineered to protect streams from sedimentation and erosion and will additionally be laid out at right angles to flow.	Federal Coal Lease Stipulation
	15. Cross slopes will be maintained on access roads to promote removal of water from the road surface. Surface drainage structures shall be constructed at appropriate intervals to divert water from roadway surface. . . . Relief ditches at regular intervals to direct drainage off of the road grade and into vegetated areas.	Road Use Permit(FSM 2733.04b and FSM 7730) , WCPH(FSH 2509.25)
	16. Ditches would be allowed to vegetate or include large rocks or stones to slow the velocity of drainage and allow sediment to settle out.	WCPH (FSH 2509.25)
	17. Where drainage ditches are installed to direct runoff away from the road, water bars or hay bale dikes would be installed perpendicular to the flow direction of the ditch to reduce runoff velocity and settle out sediment on steeper grades.	Project Plan, WCPH (FSH 2509.25)

Design Criteria		
Topic	Design Criteria for the Proposed Action	
	18. Road construction plans would identify specific locations of drainage features and BMPs for approval by the FS engineer/permit administrator prior to construction.	Road Use Permit (FSM 2733.04b and FSM 7730) , Forest Service Roads Policy
	19. Road design packages will be submitted to the FS for approval prior to any construction activity. Roads open to the public (Levels 3, 4 & 5) will require written approval prior to any construction activity.	Forest Plan
	20. Project access roads will be gated and closed year-round to the general public. Personnel with access will be monitored to insure such access is not abused; i.e., no access during non-working hours for purposes unrelated to the project such as hunting or off-roading.	RACR
	21. All new access roads constructed for the sole use of this project will be decommissioned by full obliteration when no longer needed for the project and reclaimed.	RACR, 36 CFR 228 E, Road Use Permit (FSM 2733.04b and FSM 7730)
	22. Road work will be performed only upon authorization of the District Ranger and comply with the terms of MCC's Road Use Permit. Roads will be designed and constructed to provide maximum stability and protect the surface resource. Best Management Practices will be used in designing the roads and during construction. All roads will be upgraded or constructed to USFS specified standards for either temporary or classified roads, as appropriate and approved by the USFS, with a design speed of 15 miles per hour.	Road Use Permit (FSM 2733.04b and FSM 7730), MCC Project Plan
	23. Surface disturbance will be minimized to the extent reasonably feasible in order to limit potential impacts. Soil that is removed from all new disturbance areas will be windrowed or stockpiled for use in reclamation. Topsoil will be segregated from subsoil and stored at a depth no greater than that prescribed by the Paonia District Ranger. No soil generated from excavation, slide removal or other operations shall be deposited within the WIZ of any drainage with flowing water.	Forest Plan, 36 CFR 228 E, MCC Project Plan, Road Use Permit(FSM 2733.04b and FSM 7730) , WCPH (FSH



Design Criteria		
Topic	Design Criteria for the Proposed Action	
		2509.25)
	24. All disturbed and inactive areas (cut/fill slopes) and soil stockpiles shall be seeded with a USFS approved temporary seed mixture within 7 days following disturbance to prevent noxious weed infestation and minimize erosion	BMP, WCPH (FSH 2509.25)
	25. All construction, reconstruction, and improvements will be stabilized by installation of drainage structures, where determined appropriate by the responsible USFS official, concurrently with construction or maintenance activities. These structures shall be maintained for the duration of the project and shall not be removed, without approval, prior to reclamation of the disturbance. Any culverts will be sized to safely pass the runoff from a 25-year event and to withstand flows from a 50-year event. The USFS will approve culvert sizes and lengths. Filter material will be installed below drainage outlets and down slope from rolling dips. Riprap will be installed below culvert outlets when directed by the USFS.	WCPH(FSH 2509.25) , Road Use Permit (FSM 2733.04b and FSM 7730)
	26. At road intersections with existing drainages, which cannot be easily carried by use of a temporary culvert, crossings will be established. The approaches to any crossing shall be armored by placing a minimum 8-inch depth of 1- to 3-inch clean crushed rock, 14 feet wide for a distance of 20 feet on each side of the drainage to minimize siltation, bank rutting, and erosion. Crossings will be constructed perpendicular to the flow line. When access is no longer needed, any temporary culverts, associated fill, and crushed rock shall be removed. Silt fences or appropriate sediment control devices shall be utilized to prevent siltation into existing drainages, ponds, or associated riparian areas.	Road Use Permit (FSM 2733.04b and FSM 7730) , WCPH (FSH 2509.25),
	27. The road surface will be constructed with an in-slope of 2 percent and the surface width shall not exceed 14 feet except in locations that require curve widening, or those designated for turnouts. These locations must be identified on the ground and approved by the responsible USFS official. Side-casting will not be permitted where side slopes exceed 40 percent.	Road Use Permit (FSM 2733.04b and FSM 7730)

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	28. Sections of temporary roads with roadway gradient in excess of 12 percent or soft areas, which exhibit rutting in excess of 3 inches, shall be stabilized by placing an adequate depth of 3-inch minus clean crushed rock. The surface of the road shall be maintained to minimize ruts and provide for sheet drainage across the roadway.	Road Use Permit (FSM 2733.04b and FSM 7730)
	29. The USFS officer may require surfacing of temporary roads where justified by conditions or traffic volumes. Roads constructed within 660 feet of a riparian area will be surfaced with 3-inch minus clean crushed rock.	Road Use Permit (FSM 2733.04b and FSM 7730), WCPH (FSH 2509.25)
	30. To minimize resource impacts, road design and location	Forest Plan, MCC Project Plan, WCPH (FSH 2509.25)
	31. Should avoid wetlands, moist sites; avoid construction in saddles and low divides; maintain frequent dense cover areas next to roads; construct roads to minimum road standard that will meet management objectives (without large cut slopes, fills, or straight stretches); and facilitate eventual closure (especially where roads enter drainage headwaters areas).	Road Use Permit (FSM 2733.04b and FSM 7730), WCPH
	32. Road construction, drilling, and MDW installation activities are not allowed from December 1 to April 30 to protect big game winter range. Federal Coal Lease Stipulation	Federal Coal Lease Stipulation
	33. Special design, construction, and mitigation measures jointly developed by a USFS Interdisciplinary Team and MCC will be applied to project construction activities proposed in steep slope, moderate slope, or geologic hazard areas to minimize and control the potential for slope de-stabilization and erosion. These measures may include but will not be limited to site-specific drainage measures, limitations on slope cut/fill angles, slope construction measures (benching or slope reinforcement such as temporary gabions or barricades), and slope stabilization measures (such as geotextile or jute matting or hydromulching).	Forest Plan

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	<p>34. Where construction in or immediately adjacent to WIZ cannot be avoided, specific protection and mitigation measures designed to protect or restore riparian values will be implemented. These may include, but would not be limited to: use of silt fence, berms, straw bales, or other measures to minimize sediment contributions to the riparian area; use of geotextiles as a base for road fills to avoid disturbance of riparian soils; placement of appropriate drainage structures to maintain effective flows through the riparian area, stabilize slopes, and minimize erosion; recovery, stockpiling, and replacement of riparian soils by horizon where soil disturbance is unavoidable; and use of a USFS approved riparian seed mix and riparian plantings. Sediment filters and traps must be used, unless waived in writing by a USFS representative. Silt fencing alone will generally not be considered adequate. All sediment control structures must be routinely inspected and maintained until their function has been replaced by adequate reclamation practices.</p>	BMP
Road Operations	<p>35. Minnesota Creek, Dry Fork, and Horse Gulch roads will continue to be open for public full size vehicle and ATV use throughout the project. MCC will sign roads warning the public of heavy truck traffic during the active drilling season.</p> <p>36. All project temporary roads will be closed to public motorized vehicle use during the active drilling season and during the winter months. Motorized will be restricted to administratively approved traffic during this closure period. Locked gates and signs meeting USFS MUTCD requirements will be provided, installed, and maintained by MCC at the intersections of the Horse Gulch and West Flatiron roads, the Dry Fork Road and Long Draw Saddle ATV Trail, the Dry Fork and Upper Deep Creek roads, and any other locations designated by the USFS official. The drilling season is expected to end each year in September, at which time certain temporary roads will be open for public motorized use until snow conditions preclude use. The roads that will be open to public motorized use in the fall include West Flatiron, Long Draw Saddle, and West Bench Roads.</p>	<p>BMP</p> <p>BMP</p>

Design Criteria		
Topic	Design Criteria for the Proposed Action	
	<p>37. By September 1, MCC will post warning signs, at locations designated by the USFS, to warn hunters of dangers associated with increased traffic on roads resulting from project activities, drilling operations, and methane-venting. Depending on the location of drill rigs during the big game seasons (typically only during early seasons), additional temporary gates may need to be installed to prevent public ATV access to active drill sites. Roads closed to public motorized use due to drilling or methane-venting operations shall be clearly posted as “closed” using signs with maps of the closure area and the reasons for closure. At each closure location Manual of Uniform Traffic Control Devices (MUTCD) approved road closure devices must be used. To minimize conflicts with hunters, project traffic will not be allowed on the Minnesota Creek, Horse Gulch, and Dry Fork roads (except for emergency use) during the periods of one hour before sunrise and two hours after sunset during the big game rifle hunting seasons. Additional security and public safety measures may be considered and approved or directed by the District Ranger.</p>	BMP
	<p>38. Cross country motorized vehicle travel is prohibited. Mine related traffic is permitted on approved roads and designated trails only.</p>	Road Use Permit (FSM 2733.04b and FSM 7730), Gunnison Interim Travel Restrictions
	<p>39. If snow is removed from the Minnesota Creek and Dry Fork Roads, removal must be performed in compliance with MCC’s Road Use Permit, and must be pre-approved by the District Ranger. If snow is plowed, public snowmobile traffic will not be permitted on this road. Snow shall be compacted to 4 inches, and then allowed to freeze before hauling loads where GVW would exceed 10,000 pounds. MCC will be responsible for erecting a temporary closure device on snowplowed roads to prevent public motorized access on the road. This closure must meet MUTCD requirements.</p>	Road Use Permit (FSM 2733.04b and FSM 7730)

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	40. On all roads used for project activities, road maintenance activities will be performed by MCC as directed by the responsible USFS official, and shall consist of maintenance needed to preserve, repair and protect the roadbed, surface, and all structures and appurtenances including but not limited to periodic grading, and inspection, clean-out, and repair of any drainage structures, as appropriate. Dust suppression would be used, as necessary, to control dust emissions from project construction and reclamation activities, as well as project roads. Use of anything other than water for dust suppression in any WIZ will not be allowed.	Road Use Permit (FSM 2733.04b and FSM 7730) , WCPH
	41. Silt fences or appropriate sediment control devices shall be utilized to prevent sedimentation into the existing willow riparian area adjacent to Dry Fork Minnesota Creek Road 711 from the junction with Horse Gulch Road to the lower Cow Camp. Dust control measures will be applied to reduce dust along this section of road.	WCPH (FSH 2509.25), Road Use Permit (FSM 2733.04b and FSM 7730)
	42. Drainage maintenance on roads will be critical for the duration of use. Existing rolling dips shall be maintained and may need to be hardened. The USFS representative will inspect roads used for project activities to identify any additional drainage structures to be constructed prior to or during use.	BMP
	43. MCC is responsible for using appropriate MUTCD traffic control devices when any heavy equipment is moved on Forest Roads.	Road Use Permit (FSM 2733.04b and FSM 7730)
	44. Traffic counters will be provided and installed by MCC, at designated locations to record vehicle and ATV passes. The counters will be monitored and data recorded on a monthly basis. The counter totals will be submitted to the District Ranger monthly in both tabular form and graph form. The USFS Engineering Staff will provide specifications to MCC on installation of the traffic counters.	Road Use Permit (FSM 2733.04b and FSM 7730)
	45. Harassment of livestock is prohibited. While stock is in the project area, extra precautions must be taken by MCC and their contractors to ensure that stock are not pushed out of the currently occupied grazing unit.	BMP

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	46. Livestock access will be maintained during active operations. Cattleguards and access gates to the side of each cattleguard will be installed in a timely fashion at any place where MCC uses or builds roads as directed by the District Range Management Specialist. Project personnel will cooperate with the grazing permit holders to avoid or minimize conflicts with grazing operations.	BMP
	47. MCC would be required to maintain stock ponds adjacent to project roads to assure their continued effective use. This would involve pond clean out on an as-needed basis	BMP
Roads in Inventoried Roadless	48. Any approved road construction or reconstruction in Roadless that are excepted by RACR must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbance, and complies with all applicable lease requirements, land and resource management plan direction, regulation, and laws.  49. Roads constructed or reconstructed must be obliterated when no longer needed for the purposes of the lease or upon termination of expiration of the lease, whichever is sooner.	BMP, RACR  Road Use Permit (FSM 2733.04b and FSM 7730) , RACR
Staging Areas	50. Staging areas will be used in a manner to minimize damage to vegetation. Any surface disturbances to these sites would be re-graded and seeded.	BMP
Maintenance	51. Roads will be maintained with water bars and appropriate sedimentation controls. Water bar placement and design will be approved by the authorized FS Officer.  52. All use and maintenance of existing NFSRs will be authorized by and be consistent with a FS Road Use Permit. A performance bond will be required per the terms of the road use permit.	Road Use Permit(FSM 2733.04b and FSM 7730) , BMP  FSM 2733.04b and FSM 7730
<b>WATER RESOURCES</b>		
Ground Water	53. Each drill or borehole, well, or other exposed underground opening sealed, or otherwise managed to prevent acid or other toxic drainage from entering ground or surface waters and minimize disturbance to the prevailing hydrologic balance.	BMP

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
Surface Water	<p>54. Lease stipulations limit occupancy in riparian areas, wetlands and floodplains. Surface use in wetlands, floodplains or riparian areas will be avoided unless specially authorized.</p> <p>55. Streams will not be paralleled by roads other than that needed for crossings.</p> <p>56. Wetland areas would be avoided wherever possible and BMPs would be implemented for all activities to occur adjacent to or within these aquatic features.</p>	<p>Federal Coal Lease Stipulation</p> <p>Federal Coal Lease Stipulation</p> <p>WCPH (FSH 2509.25) , Federal Coal Lease Stipulation</p>
Water Quality	<p>57. Material from slides or other sources on roads will not be deposited in streams or other locations where it will wash into streams.</p> <p>58. Disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface and groundwater systems both during and after the mining operation and during reclamation shall be minimized by measures, including, but not limited to:</p> <ul style="list-style-type: none"> <li>• compliance with applicable Colorado water laws and regulations governing injury to existing water rights;</li> <li>• compliance with applicable federal and Colorado water quality laws and regulations, including statewide water quality standards and site-specific classifications and standards adopted by the Water Quality Control Commission;</li> <li>• compliance with applicable federal and Colorado dredge and fill requirements; and</li> <li>• removing temporary or large siltation structures from drainways after disturbed areas are revegetated and stabilized, if required by the Reclamation Plan.</li> </ul>	<p>WCPH (FSH 2509.25) , Federal Coal Lease Stipulation</p> <p>State Law</p> <p>State and Federal Law (33 U.S.C.A §§ 1251 to 1387)</p> <p>State and Federal Law</p> <p>MCC Project Plan, BMP</p>
Drilling Water	<p>59. Drilling water (&lt; 10 acre-feet per year for shaft and MDW) will be obtained from MCC's non-tributary water in the mine or Minnesota Creek. This quantity of water is within the GMUG's blanket consultation with USFWS for depletion associated with the Upper Colorado River System.</p>	<p>US Fish and Wildlife Service (USFWS), Forest Plan</p>

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	60. Water will be pumped from portable tanks using a high-pressure hose or transported to the site with mobile water carriers.	BMP, MCC Project Plan
Water Influence Zone (WIZ)	61. Within WIZ, an adequate vegetative buffer or filter strip would be maintained to filter runoff from the road before it reaches the creek, wherever possible.  62. All disturbed areas within 100 feet of a WIZ would be protected with sediment control materials specified by the FS.	WCPH (FSH 2509.25), BMP  WCPH (FSH 2509.25), BMP
Drill Holes as Water Monitoring Wells	63. MCC does not anticipate encountering any significant aquifers during drilling. However, if it is decided that groundwater monitoring is required by the State permit, drill holes may be used as monitoring wells.	MCC Project Plan
<b>WETLANDS</b>		
	64. Surface use or disturbances (except for surface subsidence and resource monitoring purposes defined in the approved mining permit) will not be permitted in riparian, wetland or floodplain areas, or within a buffer zone surrounding these areas (the definition of riparian areas and appropriate buffer zone will be consistent with that defined in the Forest Service Manual and Water Conservation Practices Handbook, unless specifically approved by the Authorized Officer. Wetland definition will follow Army Corps of Engineers guidelines) unless no practical alternatives exist.	Forest Service Manual, Lease Stipulation and WCPH (FSH 2509.25)
<b>WILDLIFE</b>		
Threatened, Endangered and Sensitive Faunal Species	65. Appropriate populations or habitats will be surveyed on a site-specific basis prior to any ground disturbing activities and appropriate avoidance, buffering or other restrictions will be applied if threatened or endangered faunal species or their habitats are present.  66. Water depletions of the Colorado River System as they pertain to the four endangered fishes (associated with MDW drilling and shaft construction) have previously been consulted upon with the US Fish and Wildlife Service in a programmatic biological opinion.  67. Avoid or minimize impacts to lynx habitat.	Federal Coal Lease Stipulation  USFWS  Canada Lynx Conservation Assessment and Strategy (LCAS)



Design Criteria		
Topic	Design Criteria for the Proposed Action	
	68. Restrict use to designated routes where over-snow access is required to protect lynx.	LCAS
	69. Minimize snow compaction during MDW monitoring to protect lynx. Use remote monitoring of sites if possible.	LCAS
	70. Restore suitable lynx habitat during reclamation activities.	LCAS
	71. Reclaim and obliterate temporary roads at project completion.	LCAS, 36 CFR 228 E, Road Use Permit (FSM 2733.04b and FSM 7730) , WCPH (FSH 2509.25), GMUG Coal Lease EIS
	72. Close project-created roads to public access in lynx habitat.	LCAS
	73. Pre-disturbance surveys would be completed within the potentially impacted delineated wetland and two intermittent lakes, as specified by the Forest Service, to ensure that northern leopard frog populations are not adversely impacted. In the event that breeding northern leopard frog populations are documented within the surveyed wetlands, disturbances to these wetland areas would be postponed until early June and the completion of the breeding season (CDOW 2003).	MCC Project Plan, Forest Plan
	74. For the Dry Fork Lease area, include the following for lynx (Dry Fork Federal Coal Lease-by-Application (COC-67232) Record of Decision): <ul style="list-style-type: none"> <li>• Winter Access will be limited to designated routes</li> <li>• Establish an education program for MCC's employees about presence of lynx and safe driving practices;</li> <li>• Report lynx sightings or lynx carcass findings to the USFWS within 24 hours; and,</li> <li>• Provide an annual report of all activities which may affect lynx to the USDA-FS and USFWS.</li> </ul>	Dry Fork Federal Coal Lease (COC-67232) using USFWS language
	75. Further, for the Dry Fork Lease area, should post-lease operations be proposed on the lease in lynx habitat, the following special constraints may apply, depending on site-specific circumstances:	Dry Fork Federal Coal Lease (COC-67232) using

Design Criteria		
Topic	Design Criteria for the Proposed Action	
	<ul style="list-style-type: none"> <li>• Remote monitoring of the development sites and facilities may be required to reduce snow compaction.</li> <li>• A reclamation plan (e.g. road reclamation and vegetation rehabilitation) for sites and facilities that promotes the restoration of lynx habitat may be required.</li> <li>• Public motorized use on new roads constructed for project-specific purposes will be restricted.</li> <li>• Access roads will be designed to provide for effective closures and will be reclaimed or decommissioned at project completion if they are no longer needed for other management objectives.</li> <li>• New permanent roads will not be built on ridge tops or in saddles, or in areas identified as important for lynx habitat connectivity. New roads will be situated away from forested stringers.</li> </ul>	USFWS language
	76. For surface use occurring in lynx habitat, the Lessee will be required to submit an annual report to the USDA-FS and USFWS of all activities having occurred in lynx habitat.	Dry Fork Federal Coal Lease (COC-67232)
	77. If there is reason to believe that Sensitive, Threatened or Endangered species of plants or animals, or migratory bird species of high Federal interest are present, or become present in the lease area, the Lessee/Operator shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist, and a report of findings prepared. A plan will be made that recommends protection for these species or action necessary to mitigate the disturbance. The cost of conducting such inventory, preparing reports and carrying out mitigation measures shall be borne by the Lessee/Operator.	Dry Fork Federal Coal Lease (COC-67232)
	78. In order to protect big game wintering areas, elk calving areas, and other key wildlife habitat and/or activities, specific surface use may be curtailed during specific times of year. Specific time restrictions for specific species will be evaluated by the Forest Service at the individual project stage, and any additional site specific conditions of use developed at that time.	Dry Fork Federal Coal Lease (COC-67232)
	79. In the future, if water to be used for mine related activities is taken from a source that is not considered to be non-tributary waters by the U.S. Fish and Wildlife Service, or which exceeds a depletion amount previously consulted upon, the permitting agency must enter into consultation with the U.S. Fish and Wildlife Service to determine	Dry Fork Federal Coal Lease (COC-67232)

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	appropriate conservation measures to offset effects to listed fish and critical habitat in the upper Colorado River Basin.	
Deer & Elk Winter Range	80. Irregular-shaped pads will be used to increase effectiveness of reclamation and natural seed establishment.	BMP
	81. Minimize disturbance and access during crucial winter months to avoid stressing animals.	BMP
	82. Exploration, drilling and development will not occur between December 1 and April 30, unless specifically approved.*	Federal Coal Lease Stipulation
	83. Habitat management and creation, if part of the Reclamation Plan, shall be directed toward encouraging the diversity of both game and non-game species, and shall provide protection, rehabilitation or improvement of wildlife habitat.	Forest Plan
	84. To avoid collisions with game, MCC is encouraged to consider shift changes outside of dawn/dusk.	BMP
Raptors (including Goshawks)	85. Surveys will be conducted in appropriate habitats prior to construction activities. If nests are discovered, they will be appropriately buffered depending on species and/or will have timing restrictions placed on activities.	Forest Plan
	86. In the event that a northern goshawk nest is identified during pre-disturbance surveys, nests would be protected by implementing a no-disturbance buffer of ¼ mile radius around the active nest site between the dates of March 1 and July 31.	Forest Plan
Breeding/Migratory Birds	87. MCC will walk all areas to be disturbed during the breeding/nesting seasons to determine if there are nests (especially ground nests) present. If nests are occupied operations may be modified to avoid disturbance to the nesting birds.	FS
	88. If surface disturbance is proposed on the lease, the lessee/operators will be required to conduct breeding bird surveys prior to surface disturbance.	FS
<b>VEGETATION RESOURCES</b>		
Threatened, Endangered and Sensitive Plant Species	89. Appropriate populations or habitats will be surveyed on a site-specific basis prior to any ground disturbing activities and appropriate avoidance and buffering or other restrictions will be applied if threatened or endangered plant species are present.	Federal Coal Lease Stipulation

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
Brush Removal/Tree Removal	90. Payment will be made to the Forest Service for any merchantable trees removed under a timber contract.	FSH 2409
Fire Prevention	91. All equipment, including welding trucks, would be equipped with fire extinguishers and other fire fighting equipment as required by the Forest Service.	R2 RFO #R2-2007-01
	92. Operating or using any internal or external combustion engine without a spark arresting device properly installed, maintained, and in effective working order, meeting either: (1) Department of Agriculture, Forest Service Standard 5100-1a (as amended); or (2) Appropriate Society of Automotive Engineers (SAE) recommended practice J335(b) and J350(a). 36 CFR 261.52(j) (Order # R2-2007-01)	R2 RFO #R2-2007-01
Noxious weeds	93. Power-wash all construction equipment and vehicles prior to the start of construction off-forest at a privately owned or commercial facility.	BMP, FS
	94. Any construction or operational vehicles traveling between the Project Area and outside areas would be power-washed on a weekly basis.	BMP
	95. Weed control would be conducted through an Approved Pesticide Use and Weed Control Plan approved by the Authorized Officer.	FS Weed Maintenance Agreement with Counties, DRMS
	96. Weed and reclamation monitoring would be continued on an annual basis (or as frequently as the Authorized Officer determines) throughout the life of the project.	FS Weed Maintenance Agreement with Counties, DRMS
	97. During sensitive plant surveys, any occurrence of Rocky Mountain thistle should be flagged and mapped to avoid inadvertent herbicide application during weed treatments. Species identification information should also be provided to the weed control agent to further decrease the likelihood of species misidentification.	FS
<b>VISUALS</b>		

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
Visuals	98. Long-term surface facilities would be painted a standard environmental color selected by the Forest Service to better blend the facilities with their surroundings and thereby reduce visual impacts.	BLM/FS
	99. Contours will be followed during construction, to the extent possible, so visual line and form is undisturbed.	Forest Plan
	100. Vegetation removal will be minimized to prevent disruption of color.	Forest Plan
	101. Irregular shaped pads will be used to minimize visual disturbance.	FS
<b>GEOLOGY, SOILS, MINERALS</b>		
Topsoil	102. Where it is necessary to remove topsoil in order to construct MDW pads or access roads, topsoil shall be removed and segregated from other soil. If such topsoil is not replaced within a time short enough to avoid deterioration of the topsoil, vegetative cover or other means shall be employed so that the topsoil is protected from erosion, remains free of any contamination by toxic or acid-forming material, and is in a usable condition for reclamation.	DRMS, FS
	103. Where practicable, woody vegetation present at the site shall be removed from or appropriately incorporated into the existing topsoil prior to excavation within the affected areas.	Reclamation Plan, FS
	104. Topsoil stockpiles shall be stored and configured to minimize erosion and located in areas where disturbance by ongoing mining operations will be minimized. Such stockpile areas must be included in the affected areas and subject to all reclamation requirements.	DRMS, FS
	105. Immediate seeding of topsoil stockpiles for the purpose of stabilization may be required.	Reclamation Plan, FS, BMP
	106. Once stockpiled, the topsoil shall be handled as little as possible until replacement on the regraded, disturbed area.	Reclamation Plan, FS
	107. The Operator shall take measures necessary to assure the stability of replaced topsoil on graded slopes such as roughening in final grading to eliminate slippage zones that may develop between the deposited topsoil and heavy textured spoil surfaces.	Reclamation Plan, FS
	108. When growth media is replaced, it shall be done in as even a manner as possible. Fertilizer or other soil	Reclamation Plan

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	amendments shall be added, if required in the Reclamation Plan.	
Subsoil	109. Minimize footprint of stockpile to limit disturbance. Use for regrading and contouring.	FS
Erosion & Sediment Control	110. Erosion will be minimized through interim reclamation including, but not limited to, contouring, seeding and mulching.	BMP
	111. Sediment control measures such as, but not limited to, silt fence, straw mulch, site containment and sediment control ponds will be utilized as needed.	BMP
	112. Construction on steep slopes (>60%) would be fully designed and engineered according to Forest Service standards and design criteria and should include an erosion control and maintenance plan.	Forest Plan
Geologic Hazard	113. Leases contain stipulations restricting surface occupancy in areas of geologic hazards: Avoid areas with high geologic hazards to prevent mass slope failure in Section 32, T13S, R90W, 6th P.M. unless specifically approved by authorized officer.	Federal Coal Lease Stipulation
	114. Controlled Surface Occupancy Stipulation. Areas with moderate geological hazards will require analysis and mitigation plans detailing construction and mitigation techniques to ensure stability of facilities in portions of Sections 27-29 and 32-34, T13S, R90W, 6th P.M. and Sections 3-4, 9-10, T14S, R90W, 6th P.M. unless specifically approved by authorized officer.	Federal Coal Lease Stipulation
	115. No Surface Occupancy Stipulation- No operating on slopes greater than or equal to 60% or areas surrounded by slopes greater than or equal to 60% to prevent erosion, mass failure and loss of productivity in portions of Sections 27-29 and 32-34, T13S, R90W, 6th P.M. and Sections 3-4, 9-10 T14S, R90W, 6th P.M. unless specifically approved by authorized officer.	Federal Coal Lease Stipulation
	116. Controlled Surface Use Stipulation Surface use on slopes 40-60% will be subject to analysis and mitigation plans detailing construction and mitigation techniques to minimize potential for soil loss, mass land movement, revegetation failure and unacceptable visual impairment except as otherwise approved by authorized officer. This may apply to lands in portions of Sections 27-29, 32-34 T13S, R90W, 6th P.M. and Sections 3-4, 9-10, T14S, R90W, 6th P.M.	Federal Coal Lease Stipulation
Incidental Coal	117. Any coal recovered incidental to project will be taken	MCC Project

<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
Recovery	back to the mine site or disposed of in the mud pits.	Plan
<b>AIR QUALITY</b>		
Surface Air Quality	118. Road watering and/or treatment with dust suppressant on the access road during the short-term construction and development activities will minimize vehicle-related fugitive dust emissions.  119. To the extent feasible, project workers would car pool to and from the project area to minimize vehicle-related emissions and fugitive dust emissions.	BMP  BMP
<b>RECREATION</b>		
Recreation	120. To avoid near-miss accidents between hunters and drillers, MCC will be encouraged to avoid operations on Minnesota Creek Road from the Thursday before the second hunting season opener (mid-October) to the Wednesday after the second hunting season opener. If use is required for operations using over-sized vehicles during any period of public use, then MCC will use appropriate active traffic control measures.	CDOW suggestion
<b>CULTURAL RESOURCES</b>		
Cultural Surveys/ Paleontological Resources	121. Prior to the construction process, an intensive cultural resources survey would be completed by the Proponent, at their expense, on all areas proposed for surface disturbance if it has not already been inventoried per requirements of the Standard Notice for Lands Under Jurisdiction of the USDA attached to the leases.  122. During project implementation, in the event of an inadvertent discovery of any other cultural resources not covered under NAGPRA (above), work should cease and an archaeologist should be notified to investigate the resource. Any cultural resources located will be brought to the immediate attention of the Forest Service and will be left intact until directed to proceed. All data and materials recovered will remain under the jurisdiction of the U.S. Government	43 CFR 7 Subtitle A and 36 CFR Part 296  43 CFR 7 and 36 CFR Part 296
<b>CONSTRUCTION ACTIVITIES</b>		
Interim reclamation	123. Interim reclamation will be done through seeding of ungraveled areas.  124. Stabilization of steep cut slopes that will remain unreclaimed over a winter or longer will be stabilized through placement of native boulders or other reclamation.	BMP, State  BMP

<b>Design Criteria</b>		
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	<p>125. Armor well pad fill slopes with excavated rock and/or slash vegetation (brush, branches, and other slash vegetation) to reduce the velocity of rain drops and subsequent erosion.</p> <p>126. All areas not necessary for the continued operation of the wells would be reclaimed after drilling is complete.</p> <p>127. All cut slopes would be aggressively re-vegetated (hydro-mulch seeded and fertilized, if necessary) following the completion of construction to help stabilize these disturbed sites.</p> <p>128. Post-construction seeding applications would continue until determined successful by the Forest Service.</p>	<p>BMP</p> <p>MCC Project Plan, FS</p> <p>BMP, State</p> <p>Forest Plan, CO DRMS</p>
Onsite Inspections	129. Prior to any construction, onsite inspections with appropriate regulatory agencies will be held to discuss site-specific concerns.	36 CFR 228 E
<b>DRILLING &amp; COMPLETION OF MDWS</b>		
Mud Pits	130. When the mud pits are sufficiently dry they will be filled with stored sub-soil material and compacted to minimize any settling.	36 CFR 228 E
Water use	131. Drilling water will be reused as available.	MCC Project Plan
<b>OPERATIONS &amp; MAINTENANCE ACTIVITIES</b>		
De-gas installation	<p>132. Degassing trailer will be enclosed with a fence with a locking gate to preclude public, livestock, and wildlife entry.</p> <p>133. Equipment will be inspected by MSHA prior to installation.</p>	MCC Project Plan
Monitoring of MDWs	134. Twice daily initial inspections of active de-gas installation then decreasing to weekly.	MCC Project Plan
<b>RECLAMATION ACTIVITIES</b>		
Revegetation	<p>135. Subsurface ripping would be used to reduce compaction prior to replacement of the topsoil and seeding.</p> <p>136. Successful revegetation (measured by 75 percent cover of adjacent undisturbed ground after 2 growing seasons in upland areas and 80 percent ground cover in riparian areas) of disturbed ground with native vegetation.</p>	<p>BMP</p> <p>Forest Plan</p>



<b>Design Criteria</b>		
<b>Topic</b>	<b>Design Criteria for the Proposed Action</b>	
	<p>137. Surface will be left roughened (“pocking”) as part of the seed bed preparation.</p> <p>138. Revegetation of all reclaimed areas would include reapplication of seed (and a Forest Service recommended fertilizer if necessary) and periodic watering by the operator if revegetation is unsuccessful within two growing seasons after construction is completed.</p> <p>139. A seed mix palatable for both wildlife and livestock would be used for revegetation to support the post-mining land uses.</p>	FS
Reclamation Plan	140. A Reclamation Plan (reviewed by the Forest Service), submitted as part of a DRMS mine permit revision, prior to any construction activities, will include, but not limited to, methods, seeding species and seeding rates.	DRMS
<b>COMPLIANCE REQUIREMENTS</b>		
SMA Requirements	141. Operator shall comply with applicable requirements of surface management agency (30 CFR 815.15) or approved State program.	30 CFR 815.15
Plugging Requirements	<p>142. Bottom 50-feet of the continuously cored hole would be plugged with cementitious grout to prevent water from entering the mine following Deer Creek Shaft Construction.</p> <p>143. When no longer needed for its intended use each drilled hole or borehole, wells, or other exposed underground opening shall be capped, sealed, backfilled, or otherwise properly managed, as required by the Division and consistent with 30 CFR 75.1711. Permanent closure measures shall be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery and to keep acid or other toxic drainage from entering ground or surface waters.</p> <p>144. Exploration holes, drill holes or boreholes, wells or other exposed underground openings not completed to aquifers shall be sealed by replacing cuttings or other suitable media in the hole and placing a suitable plug 10 feet below the ground surface to support a cement plug or other media to within 3 feet of the ground surface. The hole will be marked.</p> <p>145. A surface plug shall be placed in accordance with 4.07.3(1) and the hole shall be marked.</p>	30 CFR 75.1711

<sup>1</sup>Canada Lynx Conservation Assessment and Strategy