

**United States Department of the Interior
Bureau of Land Management**

RECORD OF DECISION

DOI-BLM-CO-S050-2016-0042-EIS

December 2017

**United States Forest Service Supplemental Final
Environmental Impact Statement (SFEIS) for Federal Coal
Lease Modifications COC-1362 & COC-67232 (including
on-lease exploration plan)**

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

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**Bureau of Land Management
Record of Decision
for the
Supplemental Final Environmental Impact Statement,
Federal Coal Lease Modifications COC-1362 & COC-67232**

1.0 Introduction

This Bureau of Land Management (BLM) Record of Decision (ROD) formally adopts the Supplemental Final Environmental Impact Statement (SFEIS) for Federal Coal Lease Modifications COC-1362 & COC-67232 that the U.S. Forest Service (USFS) Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG), Paonia Ranger District completed on August 31, 2017. I concur with the selection of Alternative 3 as described in the USFS ROD (December 11, 2017).

Under Title 40 of the Code of Federal Regulations (CFR), section 1506.3(a), “An agency may adopt a Federal draft or final environmental impact statement or portion thereof provided that the statement or portion thereof meets the standards for an adequate statement under these [the CEQ] regulations.” The BLM affirms that the SFEIS meets all requirements of the Council on Environmental Quality (CEQ), Department of the Interior (DOI), and BLM for preparation of an EIS. With the consent of the USFS, this decision will add the federal mineral estate underlying the National Forest System (NFS) lands included in the modifications to federal coal lease numbers COC-1362 and COC-67232. And this decision will authorize on-lease exploration consistent with lease terms..

The BLM served as a Cooperating Agency in the preparation of the SFEIS. Per 40 CFR 1506.3(c), the BLM has conducted an independent review of the SFEIS and concluded that its comments and suggestions were incorporated during the National Environmental Policy Act (NEPA) process. Therefore, the BLM adopts the SFEIS without recirculating.

2.0 Background

Grand Mesa, Uncompahgre and Gunnison National Forests (GMUG) prepared an SFEIS titled “Federal Coal Lease Modifications COC-1362 & COC-67232 (including on-lease exploration plan)” in cooperation with:

- BLM, Uncompahgre Field Office,
- BLM, Southwest District Office,
- BLM, Colorado State Office,
- Western Region of the Office of Surface Mining, Reclamation and Enforcement (OSM), and
- Colorado Division of Reclamation, Mining and Safety (DRMS).

The SFEIS supplements the final environmental impact statement (EIS) for the same coal lease modifications. The SFEIS also incorporates and updates analysis from the BLM

Environmental Assessment (EA) for the consideration of on-lease exploration. GMUG and the BLM prepared the original EA in 2011 and the original EIS in 2013. After an appeal, the Regional Forester, Resources, for Region 2 of the USFS vacated the EA in February 2012. And the EIS was vacated in Federal Court in September, 2014.

Public interest groups filed suit against the EIS and EA, as well as an EIS for the 2012 the Colorado Roadless Rule (CRR), which the USFS and State of Colorado developed. *See High Country Conservation Advocates et al. v U.S. Forest Service et al.*, 52 F. Supp. 3d 1174 (D. Colo. 2014) (*High Country I*) and *High Country Conservation Advocates v. United States Forest Service*, 67 F. Supp. 3d 1262 (D. Colo. 2014) (*High Country II*). The Court vacated the agency decisions because it determined that the 2012 EIS inadequately: (1) disclosed the economic effects of methane emissions that result from the lease modifications and (2) took a hard look at effects the lease modification would have on recreational interests. The Court also vacated an exception for temporary road building in the North Fork Coal Mining Area under the CRR because the EIS for the CRR failed to disclose and adequately discuss the impacts the West Elk Mine would have on greenhouse gas (GHG) emissions.

GMUG prepared this SFEIS to address Court-identified deficiencies and to incorporate new information and policies since 2012. The SFEIS incorporates analysis and disclosure of proposed on-lease exploration. The SFEIS also analyzes and discloses the impacts of modifying federal coal leases COC-1362 and COC-67232 in response to applications received by the BLM Colorado State Office.

In February 2015, the BLM requested that the USFS resume analysis of the proposed modifications and stipulations to COC-1362 containing about 800 acres, and COC-67232, containing about 920¹ acres. Ark Land LLC holds lease COC-67232 and Mountain Coal Company (MCC) holds lease COC-1362.

The lessees mine coal under the existing leases at the West Elk Mine near Somerset, Colorado. Under Section 3 of the Mineral Leasing Act, a lessee may apply for a modification of a lease to include coal lands or coal deposits contiguous to those embraced in a lease. However, the total area added by the modifications cannot exceed 960 acres or an acreage larger than the lease. The lessees applied for the lease modifications to continue mining in areas contiguous to the leases, which will ensure that compliant and super-compliant coal reserves (high-quality coal or coal characterized by a high BTU, low-ash, and low-moisture content) are recovered and not bypassed. The BLM processed these applications according to procedures set forth in 43 CFR 3432.

The lands subject to the coal lease modification areas lie in portions of sections 10, 11, 14, 15, 22 and 23 of T. 14S., R. 90W., 6th PM in Gunnison County, Colorado. The modification areas are within NFS lands managed by the GMUG. The BLM administers the coal estate.

¹ Certificates from Cadastral Land Description Reviews on 3/29/2012 and 5/10/2016 have revised this to 920 acres down from 921-922 acres.

The BLM is required by law to consider leasing federally-owned minerals for economic recovery. The BLM must get USFS consent prior to leasing or modifying existing coal leases underlying NFS lands. The USFS consent usually includes stipulations to protect non-mineral surface resources.

The lessees will use underground longwall mining methods to access and recover coal within the lease modification areas within the existing West Elk Mine. The lessees will transport the coal using the existing coal transportation system and surface facilities.

The SFEIS evaluates the effects of mining on non-mineral (surface) resources. This evaluation includes direct impacts resulting from expected subsidence (in which the elevation of the land surface over mined areas would be slightly reduced), and other foreseeable impacts to surface resources from mining-related activities. Under a foreseeable mine plan scenario, surface impacts within these modification areas would include those from constructing methane drainage wells (MDWs) and associated access routes required to safely mine the coal resources.

Methane gas is a byproduct of the process of mining coal using longwall systems. Because methane concentrations in excess of 5% can be explosive, it must be removed—most commonly through MDWs or methane vent bores—to keep concentrations below that dangerous level. At this stage, the specific locations of the MDWs and roads are not known. These locations will be known once DRMS, BLM, OSM and the Mine Safety and Health Administration approve the specific mine plans during the mine permitting process, which occurs after the BLM approves the lease modifications to include the additional lands. Based on similar impacts from recent mining, GMUG estimated the surface impacts associated with mining the additional lands in order to consider direct, indirect, and cumulative effects of leasing.

On July 3, 2012, the USFS promulgated the CRR and codified the rule in 36 CFR Part 294, which removed the 2001 Roadless Area Conservation Rule (RACR). The State of Colorado and the USFS developed the CRR in partnership to create a balance between conserving roadless area characteristics for future generations and allowing limited management activities within roadless areas. The CRR includes an exception for temporary road construction within an area on the GMUG defined as the North Fork Coal Mining Area (NFCMA). The NFCMA totals approximately 19,700 acres and allows for the continued operation of coal mines. The USFS crafted this exemption to allow temporary roads needed for coal mining activities. The RACR did not allow these temporary roads and the project proponent has said that absent these roads, coal mining would not occur.

Although portions of the lease modification areas are within the Sunset Colorado Roadless Area, a 5800 acre area managed by the GMUG and located in Gunnison County, they are also located within the NFCMA and subject to the exception for temporary road construction. However, the Court vacated the NFCMA exception in 2014, as part of the *High Country* cases described above. In response, the USFS prepared and published the SFEIS to address the deficiencies identified by the Court. The USFS also engaged in a rulemaking that

reinstated the NFCMA exception to the CRR which became effective April 17, 2017.²

About 915 of the approximately 920 acres of the proposed modification to federal coal lease COC-67232, and about 786 of the approximately 800 acres of the proposed modification to federal coal lease COC-1362 are within the Sunset Colorado Roadless Area. Once BLM approves the lease modifications and DRMS permits coal mining, the lessees will likely use temporary roads and cut trees, as allowed by the CRR, to construct, operate and maintain MDWs necessary for safety and incidental to underground mining.

All coal leases that underlie NFS lands, including any respective subsequent lease modifications, must contain language stating that “the permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the [NFS] when not inconsistent with the rights granted by the Secretary of the Interior in the permit.”³ To comply with these requirements, these modifications include lease stipulations that specifically reflect requirements of the CRR. (SFEIS, Table 2-1).

On December 11, 2017, the Forest Supervisor signed the USFS ROD that gave consent to the BLM to modify coal leases underlying NFS land and prescribed stipulations to protect non-mineral surface resources. The USFS implemented its consent decision on December 11, 2017 following resolution of an administrative appeal of the USFS SFEIS and ROD.

The regulations that pertain to leasing federal lands administered by a surface management agency outside of the DOI require that the leases be subject to conditions the surface management agency may prescribe to ensure the use and protection of the lands for the primary purpose for which they are being administered.⁴ The purpose of this ROD is for the BLM, as a Cooperating Agency, to formally adopt the GMUG SFEIS to comply with NEPA requirements for the BLM to accept, reject, or modify the coal lease modifications and approve the on-lease exploration plan. This BLM ROD also documents the suitability of the SFEIS for this purpose.

3.0 Purpose of and Need for Action

The purpose of the USFS and BLM’s actions is to respond to the lessees’ applications to lease and develop federal coal through modifying existing leases including an on-lease exploration plan. *See* 43 C.F.R. Subparts 3432 and 3480. The BLM must also respond to the lessees’ request for on-lease exploration.

The proposed action complies with the overall guidance given in the GMUG Land and Resource Management Plan as amended (USFS, 1991), which encourages environmentally sound energy and mineral development. The proposed action also complies with the BLM

² 36 CFR 294.43, “Roadless Area Conservation; National Forest System Lands in Colorado,” 81 FR 91811 (December 19, 2016).

³ Forest Service Manual (FSM) 2820, SFEIS, Table 2-1.

⁴ 43 CFR 3400.3-1

Uncompahgre Basin Resource Management Plan (BLM, 1989), which states that the BLM will identify federal coal resources that are acceptable for further leasing consideration.

In response to the applications, the GMUG identified the need to consider consenting to two coal lease modifications for federal coal lands immediately adjacent to existing federal coal leases COC-1362 and COC-67232. The BLM must decide whether to accept the coal lease modification proposals, reject the applications, or modify the proposed lease modifications in accordance with NEPA, the Mineral Leasing Act of 1920, as amended, and the Federal Land Policy and Management Act of 1976. Also, the BLM is responsible for analyzing any on-lease exploration plans. The BLM must decide whether to (1) approve the exploration plan and allow the activities to occur on the coal leases, consistent with any rights and obligations under the leases, (2) approve the exploration plan with additional conditions as provided under 43 CFR 3482.2(a)(1), if needed, to minimize impacts, or (3) not approve the exploration plan. Also, under 43 CFR 3432.3(d) the Authorized Officer must have the surface management agency's (USFS's) concurrence to approve the exploration plan which BLM has received. The BLM has also received the USFS's consent to modify the leases. Note concurrence is not a "decision" subject to the USFS objection process.

The purpose of the federal agencies' actions is to respond to applications to modify two existing coal leases, whether to approve an on-lease exploration plan and to facilitate the recovery of federal coal resources in an environmentally sound manner. Further, the purpose includes ensuring that compliant and super-compliant (high quality or characterized by a high BTU, low-ash, and low-moisture content) coal reserves are recovered and not bypassed. The proposed action responds to the federal government's overall policy to foster and encourage private enterprise in the development of economically sound and stable industries, to help assure satisfaction of industrial, security and environmental needs (Mining and Minerals Policy Act of 1970).

4.0 Decision

It is my decision to adopt the USFS GMUG "Federal Coal Lease Modifications COC-1362 & COC-67232 (including on-lease exploration plan)" SFEIS (2017), as allowed under 40 CFR 1506.3. Based on USFS recommendation, I have determined that there are no significant recreation, timber, economic, or other values that may be incompatible with leasing the lands in question.⁵ Consistent with the USFS decision, I am selecting Alternative 3, as described in the SFEIS. Stipulations described in Appendix A of this ROD will apply. Additionally, pursuant to lease addenda attached to the coal leases COC-1362 and COC-67232 executed on January 14, 2009 it is my decision to apply methane gas mitigation measures, as this decision describes in Section 9.0 below.

The BLM is required by law to consider the leasing of federally owned minerals for economic recovery. In accordance with 43 CFR 3432.2 as described in Alternative 3 of the SFEIS, I have determined that: (1) Modifying the leases serve the interests of the United

⁵ See 30 U.S.C. § 1272(e)(2); 43 CFR 3461.5(a)(2)(i).

States; (2) There is no competitive interest in the lands or deposits; and (3) The additional lands or deposits cannot be developed as part of another potential or existing independent operation.

The SFEIS meets the standards for an adequate EIS under the CEQ regulations. The BLM has independently evaluated the SFEIS and has determined that the USFS satisfactorily considered the BLM's concerns, comments, and suggestions as a Cooperating Agency during the NEPA process. The SFEIS forms a sound basis for NEPA compliance related to BLM's responsibilities for coal leasing on NFS lands.

The BLM concurs with the USFS' findings of consistency with laws, regulations, and policy in the GMUG National Forest's SFEIS and ROD.

5.0 Overview of the Alternatives

5.1 Alternative 1 (No Action)

Leasing:

The USFS would not grant consent to modify the leases and mining would not occur in the areas proposed for modification. Impacts from mining coal under the proposed modification areas would not occur and the effects from on-going land uses could continue, including coal mining activities such as exploration and monitoring related to mine activities on existing leases, and continued recreation and grazing. The USFS would continue to manage the land according to Forest Plan standards, goals and guidelines.

Exploration:

Under the No Action Alternative, the BLM would not approve on-lease exploration. Based on MCC's assessment, without an exploration plan, MCC would be unable to acquire the information necessary to develop a sufficient mine plan for the additional leased area. Without exploration plan and a mine plan, it would be highly unlikely that mining would occur in the lease modification areas. For the purposes of the analysis, no action would result in no mining on the lease modification areas.

5.2 Alternative 2 – 2001 Roadless Conservation Rule

Alternative 2 was moved to Section 2.3 of the SFEIS, **Alternatives Considered, but Eliminated from Detailed Study**, due to the high likelihood of decreased operating periods, increased erosion potential, and safety concerns of cross country travel with no roads. Moreover, the 2001 Roadless Area Conservation Rule, which prevented road construction in Inventoried Roadless Areas has been replaced with the CRR.

5.3 Alternative 3 – Consent to and modification of the leases (Agencies' Preferred Alternative and Proposed Action)

Leasing:

Under alternative 3, the BLM would modify existing federal coal leases COC-1362 and COC-67232 by adding 800 and 920 additional acres (respectively). The USFS would consent to the lease modifications with all stipulations/notices/addenda in Tables 2.1a and 2.1b of the SFEIS. Under the CRR, post-lease temporary road building could be permitted in the lease modifications because it is in the area known as the “North Fork Coal Mining Area” in the Rule. This would allow for MDW drilling and temporary road access, which would enable MCC to mine the coal under the Reasonable Foreseeable Mining Plan (RFMP) (described in Section 3.2 of the SFEIS). Because a leasing decision itself does not involve any mineral development or surface disturbance, it is necessary to project the amount of surface use or activity that will likely result during lease development in order to disclose potential effects and inform decision making. The RFMP describes the likely post-lease activity for this alternative, which is outlined in Section 3.2 of the SFEIS. A full description of this alternative can be found in Section 2.2.3 of the SFEIS.

Alternative 3 is similar to Alternative 2 except that it is analyzed under the framework of the CRR. This rule went into effect on July 3, 2012. The CRR contains an exception to the prohibitions for road construction and reconstruction in a geographic area known as the NFCMA. The exception facilitates access to federal coal resources in the NFCMA by allowing for the construction or reconstruction of temporary roads for coal exploration and development activities such as installation of MDWs, monitoring locations or other purposes. The USFS reinstated the NFCMA exemption to the CRR on December 19, 2016, and the exception became effective on April 18, 2017. Just over 1,700 acres of the NFS lands in the lease modifications are within the NFCMA.

Exploration:

If the BLM issues the lease modifications under the proposed action (Alternative 3), BLM would likely approve the exploration plan to conduct on-lease coal exploration activities. Ark submitted the exploration plan on behalf of MCC. Exploration consists of drilling, obtaining e-logs down-hole, and collecting core samples for testing. Full description of Alternative 3 – Exploration can be found in Section 2.2.3.2 of the SFEIS.

5.4 Alternative 4 – COC-1362 only (Environmentally Preferable Alternative)

Leasing:

Many commenters expressed concerns regarding roadless area effects due to post-lease development. Similarly, in the original DEIS, some commenters suggested an Alternative requesting the USFS consent, and the BLM modify, only the COC-1362 lease and not consent to or modify lease COC-67232. In response to those comments, Alternative 4 was brought forward for further analysis from Alternatives Considered but Eliminated from Detailed Study in the DEIS. Like it did for Alternative 3, GMUG developed an RFMP to analyze the effects of post-lease surface activities of Alternative 4 under the CRR and resultant NFCMA (Section 3.3.3). The RFMP allowed GMUG to address indirect and cumulative effects specific to only the COC-1362 modification.

Exploration:

The on-lease exploration activities would remain similar to Alternative 3, except the estimated surface impact would be reduced. When compared to the exploration component of Alternative 3, this alternative may result in at least two fewer exploration drill holes and a reduction of approximately one mile of temporary road compared. Because an exploration plan specific to this alternative has not been submitted, the maps in this section reflect the USFS's projection of roads and pads based on topography and other local knowledge. It is estimated that approximately 18 acres (where 0.15 acres would be on private land and 0.32 acres on parent leases) of disturbance may occur with exploration under this alternative.

5.5 Alternatives Considered But Eliminated From Detailed Analysis

Section 2.3 of the SFEIS thoroughly describes twelve alternatives and the reasons for not carrying each forward for detailed analysis. All of these alternatives related to surface disturbance and/or the release of ventilation air methane from MDWs. They were eliminated for one or more of the following reasons: (1) Not considered reasonable; (2) Would hinder safe and efficient recovery of the coal resource; (3) Presented unviable mitigations; (4) Advocated stipulations and/or mitigations already in use or provided under the preferred alternative 3; (5) Were equivalent to the "No Action" alternative 1; and, (6) Would not meet the purpose and need.

6.0 Management Considerations and Rationale for the Decision

The BLM concurs with the rationale ("Reasons for the Decision") presented in the USFS ROD that selecting Alternative 3 best meets the Purpose and Need, while also responding to public concerns and providing protection to important forest resources. Alternative 3 is also consistent with the applicable laws, regulations, and policy described in the SFEIS.

The SFEIS addresses and analyzes a wide range of surface resources managed by the USFS

and applies necessary mitigation measures, expressed as stipulations, to protect those resources (Tables 2-1, and 2-2). The SFEIS includes information and analysis relative to the subsurface resources that BLM is responsible for managing.

The decision to modify the leases consistent with Alternative 3 in the SFEIS meets the BLM purpose and need by responding to the application for modification and ensuring that compliant and super-compliant coal reserves are recovered. Consistent with 43 CFR 3432.2 and through the NEPA analysis of the potential impacts of the lease modification, the BLM has determined that the modifications serve the interest of the United States. The BLM considered both the economic and environmental impacts resulting from the modification of the leases. Before examining the lease through the NEPA process, the BLM determined that the proposed modification areas did not have competitive interest and could not be developed as part of another potential or existing independent operation.⁶

Approving the exploration plan within the coal lease modification area meets the purpose and need for this action; to respond to an application to explore the coal deposits in accordance with the federal lease agreements, NEPA; the Mineral Leasing Act, as amended by the Federal Coal Leasing Amendments Act of 1976; and the Federal Land Policy and Management Act of 1976. The BLM also fulfills management obligations regarding the federal coal resource by obtaining information which allows the BLM to verify the recoverable reserves. As the surface management agency, the GMUG has to review the adequacy of the bond and has to concur with the approval terms of the exploration plan.

7.0 Consultation and Consistency Review

7.1 Endangered Species Act Section 7 Consultation

The USFS prepared a Biological Assessment (BA) for the SFEIS (Sections 3.9-3.10, Project File and Internet). All known endangered or threatened species in the area were considered. Due to “may affect, likely to adversely affect” determinations for Canada Lynx and water depletions related to the four endangered Colorado River fish, formal consultation with the USFWS was completed on June 16, 2010⁷ and the USFWS concurred with the BA’s findings.

The vegetation removal in the area of the 2010 consultation was also included in 2016 in the GMUG forest-wide Programmatic Biological Opinion.⁸ This consultation set acreage limits for surface disturbance within the Lynx Analysis Units before consultation would again be required. There are over 6,000 additional acres beyond this project and previous disturbances of habitat in the Mount Gunnison Lynx Analysis Unit that may be removed

⁶ See Combined Geologic & Engineering Report and Maximum Economic Recovery Report for Coal Lease Modifications (COC1362 & COC67232), March 2016.

⁷ ES/CO: FS/GMUG/Paonia RD; Tails 65413-2010-F-0109.

⁸ BO ES/LK-6-CO-08-F-024-GJ0t 6 and TAILS 06824t00-201 6-F -0132.

before approaching a conservation limit in compliance with the Southern Rockies Lynx Amendment. Depletions are covered under the GMUG's Programmatic Biological Opinion.⁹ These are further included in the Gunnison Basin Programmatic Biological opinion¹⁰ and the USFWS's Sufficient Progress Memo dated December 20, 2016. If additional findings regarding threatened or endangered, proposed, or sensitive species are discovered, a new biological assessment or evaluation will be written, and formal consultation reinitiated.

Appropriate stipulations specific to Lynx and related to Threatened and Endangered species are in Alternatives 3. Lynx stipulations included are consistent with the GMUG Forest Plan 2008 amendment, Southern Rockies Lynx Amendment, and the Endangered Species Act. Further, the Forest Service has consulted with the USFWS regarding Canada lynx.

Compliance with terms and conditions of the Biological Opinion are addressed in lease stipulations for threatened and endangered species, which can be found in Tables 2-1 and 2-2 of Appendix B of the SFEIS. Therefore, my decision is consistent with the Endangered Species Act.

7.2 National Historic Preservation Act Section 106 Consultation

Three cultural resource inventories have occurred within the project area and no heritage resources were located. GMUG found the lease modifications have no potential to affect cultural resources, as defined in regulations 36 CFR 800.

The addition of the standard cultural resources lease clause will protect currently undiscovered sites (SFEIS Section 3.31 and Project File). Site specific resource surveys have been completed for exploration disturbance, and must be conducted prior to any post-lease ground disturbing activities (Appendix B, SFEIS Table 2-1). Therefore, at this time, no additional inventories need to be completed, and consultation with the State Historic Preservation Office (SHPO) is not required. My decision is consistent with this and other acts protecting heritage resources.

7.3 Tribal Consultation

Tribal consultation is required by Executive Order 13175, which states that "Each agency shall have an accountable process to ensure meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications." The following affected tribes were contacted during the scoping period that occurred prior to the initiation of the preparation of the DEIS and again when the USFS engaged in a rulemaking that reinstated the NFCMA exception to the CRR: Ute Mountain Utes, Southern Utes, and (Northern) Utes. The Tribes provided no formal comments and did

⁹ ES/GJ-6-CO-F-033-CP062.

¹⁰ ES/GJ-6-CO-09-F-0001; TAILS 65413-2009-F-0044.

not request any meetings.

8.0 Public Involvement and NEPA Process

7.1 2012 NEPA Process

There have been extensive public outreach efforts associated with this project. Initially, the GMUG and BLM prepared a preliminary EA for this project. The BLM published the Notice of Opportunity to Comment on the preliminary EA in the *Grand Junction Daily Sentinel* (newspaper of record) and in the *Delta County Independent* on April 21, 2010. The Notice of Opportunity to Comment asked for public comment on the proposed lease modifications from April 21-May 21, 2010. In addition, as part of the public involvement process, the agencies sent out approximately 120 letters to state, federal, local agencies, tribes, environmental groups, and interested individuals; posted scoping materials to the GMUG's website; and posted to the Forest Service's Schedule of Proposed Actions.

During that initial comment period, approximately 684 versions of email form letters were received from WildEarth Guardians supporters; 1900 versions of email form letters were received from Defenders of Wildlife supporters; 23,771 versions of email form letters were received from supporters of Natural Resources Defense Council; 5647 versions of email form letters were received from supporters of Earth Justice; 576 hardcopy/faxed various form letters were received from local community members in four counties in support of mining in this area; 74 original or somewhat original comments were received; and 4 original comments with attachments were received in response to this scoping effort. Using the comments from the public, environmental groups, other agencies, and those developed internally, the interdisciplinary team developed a list of issues to address (see *Issues* section of SFEIS). Other comments were responded to in the EA. GMUG issued its decision on that EA in November 2011. That decision was appealed to the USFS Regional Forester, Resources, for Region 2 December 2011. The Regional Forester reversed the decision in February 2012.

Subsequently, a Notice of Intent (NOI) to prepare an Environmental Impact Statement was published in the *Federal Register* on April 25, 2012. Approximately 830 copies of letters/emails informing interested parties (including state, federal, local agencies, tribes, environmental groups, and individuals expressing desire to remain on mailing lists) of this intent were also sent out on April 25, 2012, inviting additional comments throughout the process but reminding them that to be eligible for appeal they must comment on the DEIS when it became available. Additional notification was not sent out to those who submitted form letters through other groups' clearinghouse websites on the previously prepared EA except for those who submitted original or somewhat original comments. USFS's Schedule of Proposed Actions was also updated. Additional notification was sent out with the DEIS to approximately 768 individuals, additional legal notices were published in the *Grand Junction Daily Sentinel* and *Delta County Independent*.

Approximately 24,680 comment letters were received on the DEIS. Of those, 67 were original or somewhat original comments. Responses to comments received during the 30 day period

following the printing of the NOI and the 45 day comment period on the DEIS and other comments specifically included by reference can be found in Appendix I. Comments received during this time can be viewed in entirety in Appendix I (Volume II) of the FEIS or at: <https://cara.ecosystem-management.org/Public/ReadingRoom?Project=32459>

8.2 Supplemental Environmental Impact Statement

To correct Court-identified deficiencies and to update analysis as needed, a Notice of Intent to Prepare a Supplemental EIS was published February 2016, and a Supplemental EIS was prepared. The leasing and exploration analyses were combined into a single document for agency and public convenience.

Over 9,800 additional submissions (primarily form letters, groups of form letters and petitions) were received on the Notice of Intent to Prepare a Supplemental Environmental Impact Statement in 2016-2017 which was not an official comment period. Comments and responses can be found in Appendix J.

During the official comment period (June 2, 2017-July 24, 2017) on the Supplemental Draft Environmental Impact Statement the agencies received approximately 127, 250 expressions of interest or comment letters. Issue topics are consistent with those raised in previous comment periods. Summarized substantive comments and responses are included in Appendix K of the SFEIS.

9.0 Mitigation Measures

Mitigation for potential impacts to surface resources will take the form of USFS stipulations applied to lease modifications issued pursuant to this decision. The stipulations are described in detail in Appendix A of this ROD.

In addition to the USFS stipulations that apply to the potential surface impacts associated with these lease modifications, on January 14, 2009, the BLM and MCC executed lease addenda on COC-1362 and COC- 67232 that included mitigation measures associated with the release of methane gas from the mine identified in the lease's addendum, discussed below. The lease addenda grant the following authority:

Sec. 3. Notwithstanding the language in Section 2 of this lease and subject to the terms and conditions below, lessee is authorized to drill for, extract, remove, develop, produce and capture for use or sale any or all of the coal mine methane from the above described lands that it would otherwise be required to vent or discharge for safety purposes by applicable laws and regulations. For purposes of this lease,

"coalmine methane" means any combustible gas located in, over, under, or adjacent to the coal resources subject to this

lease, that will or may infiltrate underground mining operations.

Sec. 4. Notwithstanding any other provision of this lease, nothing herein shall, nor shall it be interpreted to, waive, alter or amend lessee's right to vent, discharge or otherwise dispose of coal mine methane as necessary for mine safety or to mine the coal deposits consistent with permitted underground mining operations and federal and state law and regulation. Lessee shall not be obligated or required to capture for use or sale coal mine methane that would otherwise be vented or discharged if the capture of coal mine methane, independent of activities related to mining coal, is not economically feasible or if the coal mine methane must be vented in order to abate the potential hazard to the health or safety of the coal mines or coal mining activities. In the event of a dispute between lessor and lessee as to the economic or other feasibility of capturing for use or sale the coal mine methane, lessor's remedy as a prevailing party shall be limited to recovery of compensatory royalties on coal mine methane not captured for use or sale by lessee. Lessee shall have the right to continue all mining activities under this lease, including venting coal mine methane, pending resolution of any dispute regarding the application of the terms of Sections 3 and 4.

Under the lease addenda and subsequent BLM request, West Elk contracted with third-parties to evaluate various methane uses and their technological and economic feasibility at the mine. The result is the 2009 West Elk Mine E-Seam Gas Economic Evaluation Report (2009 Report).

The 2009 Report analyzes methane capture for pipeline sale, capture for onsite electric generation, and flaring. The 2009 Report showed that, at the time, there were no economically feasible uses of the methane emitted from the mine. The BLM evaluated this report and found it to be credible based on relevant economics and technology.

As a part of the 2009 Report, MCC proposed that annual evaluations of new technology, coupled with economic trigger values, will determine when MCC will analyze the viability of methane capture in the future. The economic trigger values are: (1) natural gas price of \$18.66MM/Btu; (2) price per Megawatt/Hour (MWh) for electricity paid by the mine of \$114/MWh; and (3) carbon offset price of \$19.25/ton.

The BLM also evaluated a report related to the lease addenda that Power Consulting prepared and provided the BLM in January 2010. This report indicated that methane capture was economically viable at the West Elk Mine. The BLM determined that Power Consulting's

report was unpersuasive because it relied on a carbon credit market that did not support economic methane use at the West Elk Mine in 2009 and 2010. Since then, the carbon credit market has been significantly devalued.

MCC provided the BLM with updated information pursuant to Section VII of the Resource, Recovery, and Protection Plan (R2P2) report in April, 2012. The information showed that none of MCC's stated economic trigger values have occurred. MCC concluded that any additional analysis is not necessary. The BLM reviewed MCC's R2P2 report and agrees with MCC's conclusions based on the updated information. The BLM approved MCC's proposed economic trigger values and MCC's commitment to continually evaluate new methane use technology.

10.0 Adaptive Management

The unique geologic, terrain, and economic conditions at each coal mine determine whether, when, and how methane use mitigation options are feasible. Additionally, if coal leases are overlaid with oil and gas leases, the coal and oil and gas operators must reach an agreement with regard to any potential methane use and/or liberation.

The West Elk Mine's lease addenda (described above in Section 7.0) allow for methane use when economically feasible. Based on the BLM's approval of MCC's economic trigger values, the BLM requires MCC to perform additional analysis when those trigger values are reached. Pursuant to these lease addenda on leases COC-1362 and COC-67232 if determined to be economically feasible, the BLM will require the lessee to capture the methane for use or sale.

Currently, based on the analysis in the 2009 Report, the conditions at the West Elk Mine are not conducive to any of the methane use options. The geology of the current mining area is not resulting in high methane liberation. The terrain is very rugged, and as such, placing pipelines through the area to the MDWs is geographically, technically, and economically infeasible. The MDWs used at the West Elk Mine are temporary and those used to liberate methane from the E-Seam mine workings are in service for an average of 12 weeks per MDW as underground mining progresses. There can be a range of 1 to 5 E-Seam MDWs draining at any given time while methane content of the exhausted gases can range from 20% - 95%. This temporary and fluctuating nature of the MDWs drainage decreases the reliability of a consistent methane flow. This is a major contributor to the infeasibility of economic methane use.

Additionally, to make a methane flaring option economically feasible, a robust carbon credit market is necessary. Such a market does not currently exist, but as described above in Section 7.0, a future increase in carbon credit price is one of the economic trigger values that will prompt further review of methane use at the West Elk Mine.

While the 2009 Report concluded that methane use options are not currently economically feasible, the West Elk Mine is able to use liberated methane to heat the mine when outside

temperatures so require. Such use is economically feasible and the BLM supports this methane use. Therefore, when methane liberation concentrations in the mine and outside temperatures allow West Elk to use methane to heat the mine, the BLM will require the West Elk Mine to do so, which is within the purview of the lease addenda.

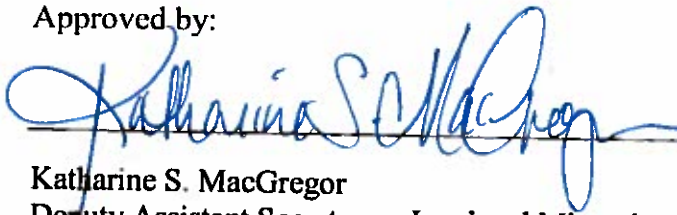
The lease addenda on COC-1362 and COC-67232, coupled with the accepted economic trigger values described above in Section 7.0, require additional potential future analysis by MCC. If such analysis shows that methane capture and use or sale is economically feasible, under the lease addenda, the lessee must capture the methane for use or sale.

11.0 Approval

In consideration of the information presented above, I approve this BLM ROD adopting the USFS GMUG SFEIS and concur with the USFS's selection of Alternative 3 (Consent to and Modification of the Leases) as described in the SFEIS (Section 2.2.3). Accordingly, I approve the lease modifications and approve the on-lease exploration plan detailed in the SFEIS (Section 2.2.3.2).

My approval of these decisions constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 C.F.R. § 4.410(a)(3), is not subject to appeal to the Office of Hearings and Appeals under Departmental regulations at 43 CFR Part 4.

Approved by:



12.15.2017

Katharine S. MacGregor
Deputy Assistant Secretary – Land and Minerals Management, Exercising the Authority of the
Assistant Secretary – Land and Minerals Management
U.S. Department of the Interior

Attachment:

1 - Appendix A - USFS Stipulations

Appendix A

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
Cultural and Paleontological Resources	<p>The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:</p> <ul style="list-style-type: none"> • Contact the FS to determine if a site specific cultural resource inventory is required. If a survey is required then: • Engage the services of a cultural resource specialist acceptable to the FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the FS for review and approval at the time a surface disturbing plan of operation is submitted. • Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. <p>Mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.</p>	<p>The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:</p> <ul style="list-style-type: none"> • Contact the FS to determine if a site specific cultural resource inventory is required. If a survey is required then: • Engage the services of a cultural resource specialist acceptable to the FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the FS for review and approval at the time a surface disturbing plan of operation is submitted. • Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. <p>Mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.</p>	Use language from parent leases (required Standard Notice for Lands under the Jurisdiction of the Department of Agriculture.)
	<ul style="list-style-type: none"> • The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or paleontological resources or any other objects of scientific interest 	<ul style="list-style-type: none"> • The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or paleontological resources or any other objects of scientific interest 	

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
Endangered or Threatened Species	<p>discovered as a result of surface operations under this license, and shall leave such discoveries intact until directed to proceed by FS and BLM.</p> <p>The FS is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.</p>	<p>discovered as a result of surface operations under this license, and shall leave such discoveries intact until directed to proceed by FS and BLM.</p> <p>The FS is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.</p>	<p>Use language from parent leases, required Standard Notice for Lands under the Jurisdiction of the Department of Agriculture.</p>
	<p>The lessee/operator may, unless notified by the FS that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resource specialist approved by the FS. An acceptable report must be provided to the FS identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.</p> <p>If there is reason to believe that Forest Service Sensitive species, 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 include species or groups of species identified by the FS, and will be conducted to by a qualified specialist. A report of findings will be prepared and provided to the FS. A plan will be made that recommends protection for these species or action necessary to mitigate the disturbance consistent with the Forest Plan. The cost of conducting such inventory, preparing reports and carrying out mitigation measures shall be borne by the</p>	<p>The lessee/operator may, unless notified by the FS that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resource specialist approved by the FS. An acceptable report must be provided to the FS identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.</p> <p>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.</p>	

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
Canada Lynx	<p>Lessee/Operator.</p> <p>To comply with the USDA Forest Service Conservation Agreement with Fish and Wildlife Service, to follow the conservation measures in the Canada Lynx Conservation Assessment and Strategy (Ruediger et al. 2000), the following special constraints will apply if surface use on the lease is proposed in lynx habitat:</p> <ul style="list-style-type: none"> • Winter access will be limited to designated routes. • Further, should surface disturbing operations be proposed on the lease in lynx habitat, the following special constraints may apply, depending on site-specific circumstances: • Remote monitoring of the development sites and facilities may be required to reduce snow compaction. • A reclamation plan (e.g. road reclamation and vegetation rehabilitation) for sites and facilities that promotes the restoration of lynx habitat may be required. • Public motorized use on new roads constructed for project-specific purposes will be restricted. • 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. • 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. 	<p>To comply with the Canada Lynx Assessment and Strategy (Ruediger et al. 2000), the following special constraints will apply if post-lease surface use is proposed in lynx habitat:</p> <ul style="list-style-type: none"> • Winter access will be limited to designated routes. • Further, should post-lease operations be proposed on the lease in lynx habitat, the following special constraints may apply, depending on site-specific circumstances: • Remote monitoring of the development sites and facilities may be required to reduce snow compaction. • A reclamation plan (e.g. road reclamation and vegetation rehabilitation) for sites and facilities that promotes the restoration of lynx habitat may be required. • Public motorized use on new roads constructed for project-specific purposes will be restricted. • 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. • 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. • If post lease surface use occurs 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. 	<p>To comply with the GMUG Forest Plan 2008 amendment, the following special constraints will apply if surface use on the lease is proposed in lynx habitat:</p> <ul style="list-style-type: none"> • Winter access will be limited to designated routes. • Further, should surface disturbing operations be proposed on the lease in lynx habitat, the following special constraints will apply: • Remote monitoring of the development sites and facilities will be required to reduce snow compaction. • A reclamation plan (e.g. road reclamation and vegetation rehabilitation) for sites and facilities that promotes the restoration of lynx habitat will be required. • Public motorized use on new roads constructed for project-specific purposes will be restricted. • 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. • New permanent roads will not be built on ridge tops or in saddles, if possible, or in areas identified as important for lynx habitat connectivity. New roads will be situated away from forested stringers, if possible.

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
Raptors	<p>For raptors (except American kestrel) the Lessee will be required to:</p> <ul style="list-style-type: none"> • Conduct surveys for nesting raptors on the lease prior to development of any surface facilities, and • No surface activities will be allowed within ¼ mile radius of active nest sites between the dates of February 1 and August 15, unless authorized by the Forest Service on a site-specific basis. • No surface activities will be allowed within 1-mile radius of active bald eagle or peregrine falcon nest sites between the dates of February 1 and August 15, unless authorized by the Forest Service on a site-specific basis. 	<p>For raptors (except American kestrel) the Lessee will be required to:</p> <ul style="list-style-type: none"> • Conduct surveys for nesting raptors on the lease prior to development of any surface facilities, and • No surface activities will be allowed within ½-mile radius of active nest sites between the dates of February 1 and August 15, unless authorized by the Forest Service on a site-specific basis. 	<p>Use combined language from COC-67232 and COC-1362 which reflects Forest Plan standards as well as guidelines from the Biological Evaluation for this project:</p> <ul style="list-style-type: none"> • Conduct surveys for nesting raptors on the lease prior to development of any surface facilities, and • No surface activities will be allowed within ½-mile radius of active nest sites between the dates of February 1 and August 15, unless authorized by the Forest Service on a site-specific basis. • No surface activities will be allowed within 1-mile radius of active bald eagle or peregrine falcon nest sites * between the dates of February 1 and August 15, unless authorized by the Forest Service on a site-specific basis. <p>(* No bald eagle or peregrine falcon nest site habitat has been identified within the lease modifications as indicated in the Biological Evaluation prepared for this analysis.)</p> <p>Use language from parent leases.</p>
Big game winter range	<p>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.</p>	<p>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.</p>	
Water depletions	<p>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 appropriate conservation measures to offset effects to listed fish and critical habitat in the upper Colorado River Basin.</p>	<p>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 appropriate conservation measures to offset effects to listed fish and critical habitat in the upper Colorado River Basin.</p>	<p>Based on the CRR Section 7 consultation effort for the CRR's NRCMA in 2016, the Forest Service took on the responsibility for reintiating consultation if minor water depletion caps were exceeded. The Forest Service wants to ensure the lessee provides the necessary information from monitoring and reporting to determine if minor water depletion caps are exceeded, and, in the highly unlikely event that the depletion caps were exceeded, the lessee would</p>

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
<p>meet any additional conservation measures the USFWS might require. This updated stipulation provides clarification to the process that has been occurring on the parent leases regarding water depletion. Changes to stipulation are in <i>italics</i>.</p> <p>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, <i>the surface management agency must enter into consultation with the U.S. Fish and Wildlife Service to determine appropriate conservation measures to offset effects to listed fish and critical habitat in the upper Colorado River Basin. The lessee shall monitor and report all depletions to the Forest Service. Notwithstanding the fact that the surface management agency has the obligation to consult, the Lessee has the obligation to comply with all appropriate conservation measures to offset effects to listed fish and critical habitat in the upper Colorado River Basin in the event the depletion threshold is exceeded and additional reasonable and prudent actions are required.</i></p>			
Breeding birds	If surface disturbance is proposed on the lease, the lessee/operators will be required to conduct breeding bird surveys prior to surface disturbance as prescribed by the Forest Service.	If surface disturbance is proposed on the lease, the lessee/operators will be required to conduct breeding bird surveys prior to surface disturbance.	Use language from COC-1362 parent lease on both modifications.
Geologic hazards	No surface occupancy would be allowed in areas of high geologic hazard or high erosion potential, or on slopes which exceed 60%.	No surface occupancy would be allowed in areas of high geologic hazard or high erosion potential.	Use language from parent lease COC-1362 on both modifications.
Special interdisciplinary team analysis and mitigation plans detailing construction and mitigation techniques would be required on areas where slopes range from 40-60 percent. The interdisciplinary team could	Special interdisciplinary team analysis and mitigation plans detailing construction and mitigation techniques would be required on areas where slopes range from 40-60 percent. The interdisciplinary team could	Use language from parent leases.	

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
Baseline Information	include engineers, soil scientist, hydrologist, landscape architect, reclamation specialist and mining engineer.	include engineers, soil scientist, hydrologist, landscape architect, reclamation specialist and mining engineer.	
Baseline Information	The operator/lessee would be required to perform adequate baseline studies to quantify existing surface and subsurface resources. Existing data can be used for baseline analyses provided that the data is adequate to locate, quantify, and demonstrate interrelationships between geology, topography, hydrogeology, and hydrology. Baseline studies are critical to the success of future observation and assessment of mining related effects on resources.	The operator/lessee would be required to perform adequate baseline studies to quantify existing surface and subsurface resources. Existing data can be used for baseline analyses provided that the data is adequate to locate, quantify, and demonstrate interrelationships between geology, topography, hydrogeology, and hydrology. Baseline studies are critical to the success of future observation and assessment of mining related effects on resources in the Dry Fork lease tract.	Use language from parent leases.
Monitoring Program	The operator/lessee would be required to establish or amend a monitoring program to be used as a continuing record of change over time of area resources in order to assess mining induced impacts. The monitoring program shall provide the procedures and methodologies to adequately assess interrelationships between geology, topography, hydrogeology, and hydrology identified in the baseline assessment to mining activities on the lease area. The monitoring program shall incorporate baseline data so as to provide a continuing record over time.	The operator/lessee of the lease tract would be required to establish or amend a monitoring program to be used as a continuing record of change over time of area resources in order to assess mining induced impacts. The monitoring program shall provide the procedures and methodologies to adequately assess interrelationships between geology, topography, hydrogeology, and hydrology identified in the baseline assessment to mining activities in the lease tract area. The monitoring program shall incorporate baseline data so as to provide a continuing record over time.	Use language from parent leases.
Riparian, wetland or floodplain	Surface use or disturbances (except for surface subsidence and resource monitoring purposes defined in the approved mining permit) will avoid riparian, wetland or floodplain areas, and 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. Wetland definition will follow Army Corps of Engineers guidelines) unless no practical alternatives exist.	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. Wetland definition will follow Army Corps of Engineers guidelines) unless no practical alternatives exist.	Use language from parent leases.
Subsidence	If subsidence adversely affects surface resources in any way (including, but not limited to a documented water loss), the Lessee, at their expense will be responsible	If subsidence adversely affects surface resources in any way (including, but not limited to a documented water loss), the Lessee, at their expense will be responsible	Use language from parent leases.

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
	<p>to: restore stream channels, stock ponds, protect stream flow with earthwork or temporary culverts, restore affected roads, or provide other measures to repair damage or replace any surface water and/or developed ground water source, stock pond, water conveyance facilities, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, livestock and wildlife use, or other land uses as authorized by 36 CFR 251.</p> <p>The Lessee/Operator shall be responsible for monitoring, repairing and/or mitigating subsidence effects on existing facilities under Special Use Permit with the Forest Service. Monitoring, repair and/or mitigation, if needed, would be performed at the Lessee's expense. These requirements will be coordinated with the District Ranger and the Special Use Permittee.</p>	<p>to: restore stream channels, stock ponds, protect stream flow with earthwork or temporary culverts, restore affected roads, or provide other measures to repair damage or replace any surface water and/or developed ground water source, stock pond, water conveyance facilities, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, livestock and wildlife use, or other land uses as authorized by 36 CFR 251.</p> <p>The Lessee/Operator shall be required to perform the following with respect to monitoring, repairing and/or mitigating subsidence effects on existing facilities under Special Use Permit with the Forest Service. Monitoring, repair and/or mitigation will be performed at the Lessee's expense. The Lessee may request variations on timing for surveys, monitoring and reporting. Approving such requests would be at the discretion of the District Ranger.</p> <p>a. Baseline condition surveys of existing facilities will be completed the Fall following award of lease. Reports of this survey will be deliverable to the Forest Service by December 1 of that same year.</p> <p>b. In consultation with the Special Use Permittee and the Forest Service, install equipment to monitor flow on water conveyance facilities during the Fall following award of lease. Flow monitoring shall commence the following spring and continue until one year post mining. Flow data shall be provided to the Forest Service annually by December 1.</p> <p>c. A Surface Facility Monitoring and Mitigation Plan (Plan) will be submitted to the Forest Service for review and approval not later than 12 months prior to scheduled undermining. The Plan will detail measures to be taken to monitor, repair and mitigate subsidence effects of the facilities during actual mining and for one year.</p>	<p>As parent lease for COC-67232 deals specifically with an irrigation ditch on that lease, use language from COC-1362 on both lease modifications.</p>
Roadless	<p>The permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations</p>	<p>All or parts of the following lands encompassed in this lease are in the West Elk Inventoried Roadless Area and may be subject to restrictions on road-building</p>	<p>On the following lands within the Sunset Colorado Roadless Area, surface operations incident to underground coal mining are subject to regulations in 36</p>

Resource Area	Stipulations Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Stipulations Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Stipulations Specific to Lease Modifications
	<p>governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of Interior in the permit. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of an exploration plan by the Secretary of the Interior, (2) uses of all existing improvements, such as forest development roads, within and outside the area permitted by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by the permit/operation approved by the Secretary of the Interior.</p> <p>Federal Coal Lease C-1362, as modified October 2001.</p> <p>All or parts of the following lands encompassed in this lease are in the West Elk Inventoried Roadless Area and may be subject to restrictions on road-building pursuant to rules and regulations of the Secretary of Agriculture applicable at the time any roads may be proposed on the lease.</p> <p>Legal descriptions are approximate. Locations of any proposed surface use would be verified for relationship to 1RA boundaries using site-specific maps if/when surface operations are proposed.</p>	<p>pursuant to rules and regulations of the Secretary of Agriculture applicable at the time any roads may be proposed on the lease.</p> <p>All or parts of the following lands encompassed in this lease are in the West Elk Inventoried Roadless Area and may be subject to restrictions on road-building pursuant to rules and regulations of the Secretary of Agriculture applicable at the time any roads may be proposed on the lease.</p>	<p>CFR 294, subpart D:</p> <ul style="list-style-type: none">• All roads that may be constructed must be temporary.• All temporary road construction must be consistent with applicable land management plan direction• Road construction may only occur if motorized access has been deemed infeasible by the responsible official; unless a temporary road is needed to protect public health and safety in cases of an imminent threat of flood, fire or other catastrophic event that, without intervention, would cause the loss of life or property• Temporary road construction must be completed in a manner that reduces effects on surface resources, and prevents unnecessary or unreasonable surface disturbance• All temporary roads must be decommissioned and affected landscapes restored when it is determined that the road is no longer needed for the established purpose• All temporary roads must prohibit public motorized vehicles (including off-highway vehicles) except:<ul style="list-style-type: none">I. Where specifically used for the purpose for which the road was established; orII. Motor vehicle use that is specifically authorized under a Federal law or regulation. <p>For any linear construction zone (LCZ) over 50 inches wide used to install pipelines, the Regional Forester must determine that they are needed, and the responsible official must determine that motorized access without a linear</p>

			over the long-term. Upon completion of the installation of a linear facility via the use of a linear construction zone, all areas of surface disturbance shall be reclaimed as prescribed in the authorization and the approved reclamation plan and may not be waived.
Visuals	n/a	n/a	Within the lease modification areas, the lessee will work with the District Ranger and his/her representative to see that all mine operations are situated on the ground in such a manner that reasonably minimizes impacts to the scenic integrity of that landscape as prescribed in the Forest Plan.
Methane use	n/a	n/a	If flaring or other combustion is prescribed as part of any future mitigation measure, lessee will be required to submit a fire prevention and protection plan subject to responsible Forest Service official for approval.

BLM-specific Lease Stipulations for Protection of Non-Mineral (Surface) Resources

Resource Area	Addendum Carried Forward from Parent Lease COC-1362 Specific to Forest Service Lands	Addendum Carried Forward from Parent Lease COC-67232 Specific to Forest Service Lands	Revised Addendum per BLM IM 2017-037 (January 20, 2017)
Methane Flaring, Capture/Use or other alternatives to venting	<p>Sec. 3. Notwithstanding the language in Sec. 2 of this lease and subject to the terms and conditions below, lessee is authorized to drill for, extract, remove, develop, produce and capture for use or sale any or all of the coal mine methane from the above described lands that it would otherwise be required to vent or discharge for safety purposes by applicable laws and regulations. For purposes of this lease, "coal mine methane" means any combustible gas located in, over, under, or adjacent to the coal resources subject to this lease, that will or may infiltrate underground mining operations.</p> <p>Sec. 4. Notwithstanding any other provision of this lease, nothing herein shall, nor shall it be interpreted to, waive, alter or amend lessee's right to vent, discharge or otherwise dispose of coal mine methane as necessary for mine safety or to mine the coal deposits consistent with permitted underground mining operations and federal and state law and regulation. Lessee shall not be obligated or required to capture for use or sale coal mine methane that would otherwise be vented or discharged if the capture of coal mine methane, independent of activities related to mining coal, is not economically feasible or if the coal mine methane must be vented in order to abate the potential hazard to the health or safety of the coal miners or coal mining activities. In the event of a dispute between lessor and lessee as to the economic or other feasibility of capturing for use or sale the coal mine methane, lessor's remedy as a prevailing party shall be limited to recovery of the compensatory royalties on coal mine methane not captured for use or sale by lessee. Lessee shall have the right to continue all mining activities under the lease, including venting coal mine methane, pending resolution of any dispute regarding the application of the terms of Sections 3 and 4.</p> <p>Sec. 2 (c) COAL MINE METHANE OPERATIONS AND ROYALTIES- Notwithstanding the language in Part II, Section 2 (a) of this lease, the royalty shall be 12.5 percent of the value of any coal mine methane that is captured for use or sale from this lease. For purposes of this lease, the term "capture for use or sale" shall not include and</p>	<p>Sec. 3. Notwithstanding the language in Sec. 2 of this lease and subject to the terms and conditions below, lessee is authorized to drill for, extract, remove, develop, produce and capture for use or sale any or all of the coal mine methane from the above described lands that it would otherwise be required to vent or discharge for safety purposes by applicable laws and regulations. For purposes of this lease, "coal mine methane" means any combustible gas located in, over, under, or adjacent to the coal resources subject to this lease, that will or may infiltrate underground mining operations.</p> <p>Sec. 4. Notwithstanding any other provision of this lease, nothing herein shall, nor shall it be interpreted to, waive, alter or amend lessee's right to vent, discharge or otherwise dispose of coal mine methane as necessary for mine safety or to mine the coal deposits consistent with permitted underground mining operations and federal and state law and regulation. Lessee shall not be obligated or required to capture for use or sale coal mine methane that would otherwise be vented or discharged if the capture of coal mine methane, independent of activities related to mining coal, is not economically feasible or if the coal mine methane must be vented in order to abate the potential hazard to the health or safety of the coal miners or coal mining activities. In the event of a dispute between lessor and lessee as to the economic or other feasibility of capturing for use or sale the coal mine methane, lessor's remedy as a prevailing party shall be limited to recovery of the compensatory royalties on coal mine methane not captured for use or sale by lessee. Lessee shall have the right to continue all mining activities under the lease, including venting coal mine methane, pending resolution of any dispute regarding the application of the terms of Sections 3 and 4.</p> <p>Sec. 2 (c) COAL MINE METHANE OPERATIONS AND ROYALTIES- Notwithstanding the language in Part II, Section 2 (a) of this lease, the royalty shall be 12.5 percent of the value of any coal mine methane that is captured for use or sale from this lease. For purposes of this lease, the term "capture for use or sale" shall not include and</p>	<p>Section 3. Notwithstanding the language in Section 2 of the lease and subject to the terms and conditions below, lessee is authorized to drill for, extract, remove, develop, produce and capture for use or sale any or all of the waste mine methane for the above described lands that it would otherwise be required to vent or discharge for safety purposes by applicable laws and regulations. For purposes of this lease, "waste mine methane" means any combustible methane gas located in, over, under, or adjacent to the coal resources subject to this lease, that will or may infiltrate underground mining operations and that must be vented to protect the health and safety of the mine workers.</p> <p>Section 4. Notwithstanding any other provision of this lease, nothing herein waives, alters, or amends lessee's right to vent, discharge or otherwise dispose of waste mine methane as necessary for mine safety or lessee's obligation to mine the coal deposits consistent with Federal and state law and regulation and with safety requirements contained in permits applicable to underground mining operations subject to this lease. Lessee is not obligated or required to capture for use or sale waste mine methane that would otherwise be vented or discharged if the capture of waste mine methane, independent of the activities related to mining coal, is not economically feasible, or if the waste mine methane must be vented in order to abate the potential hazard to the health or safety of the miners or mining activities. In the event of a dispute between the lessor and the lessee as to the economic or technical feasibility of capturing the waste mine methane for use or sale, lessor's remedy as a prevailing party is limited to recovery of compensatory royalties on the waste mine methane not captured for use or sale by the lessee. Lessee retains the right to continue all mining activities under the lease, including venting waste mine methane, pending resolution of any dispute regarding the application of the terms of Sections 3 and 4.</p> <p>PART II. TERMS AND CONDITIONS (c) WASTE MINE METHANE OPERATIONS AND ROYALTY – Notwithstanding the language in Part II, Sec. 2(a) of this lease, the</p>

	<p>the royalty shall not apply to coal mine methane that is vented or discharged and not captured for the economic or safety reasons described in Part I, Section 4 of this lease. Lessee shall have no obligation to pay royalties on any coal mine methane that is used on or for the benefit of mineral extraction at the West Elk coal mine. When not inconsistent with any express provision of this lease, the lease is subject to all rules and regulations related to Federal gas royalty collection in Title 30 of the Code of Federal Regulations now or hereinafter in effect and lessor's rules and regulations related to applicable reporting and gas measurement now or hereinafter in effect.</p>	<p>the royalty shall not apply to coal mine methane that is vented or discharged and not captured for the economic or safety reasons described in Part I, Section 4 of this lease. Lessee shall have no obligation to pay royalties on any coal mine methane that is used on or for the benefit of mineral extraction at the West Elk coal mine. When not inconsistent with any express provision of this lease, the lease is subject to all rules and regulations related to Federal gas royalty collection in Title 30 of the Code of Federal Regulations now or hereinafter in effect and lessor's rules and regulations related to applicable reporting and gas measurement now or hereinafter in effect.</p>	<p>royalty will be 12.5 percent of the value of any waste mine methane that is captured for use or sale from this lease. For purposes of this lease, the term "capture for use or sale" does not include, and the royalty will not apply to, waste mine methane that is vented, or otherwise discharged and not captured, for the economic feasibility or safety reasons described in Part I, Section 4 of this lease. Lessee will have no obligation to pay royalties on any waste mine methane that is used on or for the benefit of mineral extraction at the (insert mine name here) coal mine. When not inconsistent with any express provision of this lease, this lease is subject to all the rules and regulations related to Federal gas royalty collection in Title 30 of the Code of Federal Regulations now or hereinafter in effect and the lessor's rules, regulations, notices, and orders related to applicable reporting and gas measurement now or hereinafter in effect.</p> <p>SEVERABILITY – In the event any provision of this addendum is subject to a legal challenge or is held to be invalid, unenforceable, or illegal in any respect, the validity, legality, and enforceability of this lease will not in any way be affected or impaired thereby and lessee will retain, in accordance with the terms of this lease, the exclusive right and privilege to drill for, mine, extract, remove or otherwise process and dispose of the coal deposits upon, or under the lands described in this lease, including the right to vent or discharge coal mine methane for safety purposes as required by applicable laws and regulation.</p>
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