

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 21, 2006

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor
Peter H. Hess, Environmental Specialist/Engineering, Team Lead

FROM: Jerriann Ernstsens, Ph. D., Environmental Specialist/Biologist

RE: Degasification Wells G-13 thru G-17, Canyon Fuel Company, LLC., Dugout Canyon Mine, C/007/039, Task ID #2456

SUMMARY:

The Division received an amendment that addresses the drilling of G13-G17 degasification wells at the Dugout Canyon Mine. This project would add to the G1-12 well series previously approved. The Division reviewed the submittal for the G1-G3 wells in 2003, G4-G6 wells in 2004, G7 and G8-G10 in 2005, G11-G12 in 2006. This memo reviews the biology and archeology information for this amendment. Direct references to figures, tables, or appendices apply to the MRP volume: *Degas Methane Amendment G1-G17*. References to records from the primary MRP are noted as such.

The Dugout Mine G13-G17 drill project is in Carbon County, Utah, (Pine Canyon 7.5 Minute Quadrangle map). The legal description is Township 13 South and Ranges 13 East Sections 17, 18, and 19.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

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Analysis:

The MRP meets the requirements of R645-301-121.100 and R645-301-121.200 for the biology chapter and archeology section because the information is generally current, clear, and concise.

The MRP includes many different volumes, including the following “stand-alone” volumes (as of September 2005):

- “Dugout Canon Mine – Leach Field Addendum A-1” (LFA, March 2001)
- “Refuse Pile Amendment – Dugout Canyon Mine” (RPA, January 2003)
- “Methane Degasification Amendment” (MDA, 2003/2004).

The “stand-alone” volumes provide exclusive information, supporting documents, and maps for each proposed project.

The current degas well amendment is an amendment for the stand-alone volume MDA 2003/2004.

Findings:

Information provided in the plan does not meet the Permit Application Format and Contents in General Contents requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-121.200, Although 42CB1595 is near the already approved G11 and G12 sites, the Permittee may want to include a clarifying statement on page 4-3 that this historic resource was not recommended as eligible for the NRHP. • It is not clear whether Senulis (2005) surveyed all the roads or just a single road, the Permittee needs to clarify this in the MRP. The survey map does not delineate the survey area – it only delineates the proposed project. The Methods explains that the “access road was surveyed...”. For this amendment, the Permittee must clarify whether the access road was surveyed for G14. • Remove the two paragraphs (pp. 3-6, 4-3, 4-4) discussing the applicability of biological and cultural information in previous EAs or apparently unrelated survey reports or clearly describe in these paragraphs that the impact analysis or surveys included the area and drilling of these specific degas holes. The Permittee must provide citations (including section and page numbers of the documents if the Permittee chooses to retain these two paragraphs. • Provide the correct date for the Senulis citation (p. 4-4). • Clarify the incomplete sentence concerning vegetation. • Table 3-1 provides a list of degas wells with their associated reference areas. The reference area titles in the table, however, do not match the reference area titles provided on Fig. 3-1. The Permittee must provide clarification so the table and map reference

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area titles match. Also, accurately assign the degas hole numbers to the correctly titled reference areas. • The Permittee included wording that implies that the company is not committed to the liability period for G11 and G12 based on the request of the landowner (March 16, 2006 submittal pp. 3-20, 4-3, 4-4, 5-15). The Permittee must clarify this assumption by either removing the inference or providing a postmine land use change that would allow the release of the liability obligation, such as changing to commercial. If the Permittee chooses to provide a PMLU change, as discussed in a previous meeting over this change (2006), the Permittee must include the following: 1) Provide a letter from the landowner clearly stating the intended PMLU for the G11 and G12 degas pads. 2) Provide a description in the plan clearly stating the intended PMLU for the G11 and G12 degas pads, including a discussion of the following: a) Size of disturbance including access, b) Proportion of area that was pre-disturbed, c) Size of the disturbance is approximately the same as need for the intended PMLU. 3) Provide a description of the liability period and obligations prior to release of the liability period for G11 and G12 including the following: a) Cover estimate of the native grasses (as reseeded), b) Sediment loss and stability estimates using the RUSLE equation (or other equivalent analysis), c) Pictures during growing seasons both prior to disturbance and following reclamation. Correspondingly, the Permittee must clarify the contradictions on the recontouring and reclamation of G11 and G12 that are on pages 5-15 with 5-13, Fig. 5-26, and Title page for Att. 5-1.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

The MRP meets the requirements of R645-301-130 because qualified professionals conducted or directed the surveys and analysis for the supporting biological and archeological resource-related documents submitted at this time.

Findings:

Information provided in the plan meets the Reporting of Technical Data in General Contents requirements of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

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HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION [Sheila Mo1]

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

The MRP does not meet the requirements of R645-301-411 that pertains to historic resources. The MRP (Confidential Binder, Ch. 4, Vols. MRP & Methane Degasification Amendment, App. 4-1) includes numerous evaluations of historic resources that focus on the permit area. It also includes narratives and maps of historic resources that may be included in or eligible for inclusion in the National Register. There is proof of previous coordination efforts with the SHPO. However, there is missing information for the G13-G17 amendment.

The MRP includes a Class III ground survey for the G1-G6 holes sites (Senulis 2003, Confidential Binder, Vol. MDA, App. 4-1). Mr. Senulis reported one eligible site (42CB292) and issued a “no effect” finding. The MRP includes a Class I survey (literature search) for the G7 and G8 drill sites (Senulis 2005, Confidential Binder, Vol. MDA, App. 4-1). The summary showed that none of the Class III surveys was positive for historic resources near the G7 or G8 sites.

The Permittee provided a Class III survey for the proposed degas wells G9 and G10 as well as for future wells G11-G14 (Senulis 2005, Confidential Binder, Vol. MDA, App. 4-1). The results showed that there was one historic resource (42CB2435) within or adjacent to the project area for G9 and G10. Senulis considered this site in poor condition and not eligible for the NRHP. The Division contacted the SHPO with the results of this survey, however, SHPO offered no reply for the G9 and G10 project. Previously, SHPO stated that agencies should assume SHPO's concurrence with an agency's determination if SHPO does not issue a reply (SHPO process presentation at DOGM 2/2006).

Although 42CB1595 is near the already approved G11 and G12 sites, the Permittee may want to include a clarifying statement on page 4-3 that this historic resources was not recommended as eligible for the NRHP (Senulis 2001; see deficiency R645-301-121.200).

The G13 and G14 holes would occupy 2.75 and 2 acres, respectively. G13 is in an undisturbed area, but there is an access road leading to the proposed site. G14 is in an area previously disturbed from other activities as well as the areas for G15 – G17. The G15-G17 holes would occupy 2.5, 2, and 1.25 acres, respectively. The Permittee will need to develop or alter roads for G-14 and G16. There are no known historic resources near the proposed G13-G14 holes (Senulis 2005).

It is not clear whether Senulis (2005) surveyed all the roads or just a single road. The survey map does not delineate the survey area – it only delineates the proposed project. The

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methods explains that the “access road was surveyed...”. For this amendment, the Permittee must clarify whether the access road was surveyed for G14 (see deficiency R645-301-121.200).

The 2001 EA information does not seem to apply to this amendment because the Division does not know what the analysis for this EA was covering. The Senulis 2001 or 2003 report (Confidential Binder, Vol. M&RP, Att. 4-1) reports also do not seem to apply to this amendment because none of the DT or exploration sites, respectively, are within the same area as the proposed drill sites. Remove the two paragraphs (pp. 3-6, 4-3, 4-4) discussing the applicability of biological and cultural information in previous EAs or apparently unrelated survey reports or clearly describe in these paragraphs that the impact analysis or surveys included the area and drilling of these specific degas holes. The Permittee must provide citations (including section and page numbers of the documents if the Permittee chooses to retain these two paragraphs. (see deficiency R645-301-121.200).

The Division can not make a determination of whether this drill project would have an effect to historic resources because the 2005 Class III survey did not show results for G-15 through G-17 drill sites and the associated roads. The Permittee must provide the baseline information (R645-301-411.140). The Division will consult with the SHPO after the Permittee submits additional information.

Findings:

Information provided in the plan does not meet the Environmental - Historic and Archeological Resource Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-411.140, The Division can not make a determination of whether this drill project would have an effect to historic resources because the 2005 Class III survey did not provide or clearly describe the results for G-15 through G-17 drill sites or the associated roads. The Permittee must provide the baseline information.

VEGETATION RESOURCE INFORMATION^[Sheila Mo2]

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The MRP meets the requirements of R645-301-321 because there is adequate discussion of plant communities observed within the project area. The MRP contains many supporting documents on vegetation for the project and permit area. The baseline vegetation information is adequate for assessing reclamation potential and success.

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The MRP includes vegetation surveys for the G1-G6, G8-10, and G11-G12 degas well projects (Collins 2003, 2005; Vol. Methane Degasification Amendment, Att. 3-1). The survey results cover the well sites (~200 x 300 feet) and associated reference sites. Dr. Collins repeatedly mentions that the reference areas that would be used for previously disturbed degas well sites are of higher standards than if “based on the existing conditions of the drill sites”. The Division reminds the Permittee that the regulation (refer to R645-301-356.250) pertaining to previously disturbed sites relates to coal mining disturbances not other development impacts.

Dr. Collins conducted a vegetation survey for the currently proposed G13-G17 degas well project (March 2006, Vol. Methane Degasification Amendment, Att. 3-1).

NRCS provides productivity values and condition evaluations for the degas well sites (Vol. Methane Degasification Amendment, Att. 3-1: G1-G6, 9/2003; G7, 8/2004;; G7-13, 6/2005). The MRP lists the production values in Table 3-1. The results reflect the estimates either for the actual sites (if previously undisturbed) or for surrounding undisturbed areas (if previously disturbed). NRCS assigned a high seral state in good condition for previously disturbed sites.

NRCS provided the productivity values and condition evaluations for the currently proposed degas well sites G13-17 (March 2006, Vol. Methane Degasification Amendment, Att. 3-1).

The reference areas for the degas program include: (see Methane Degasification Amendment, Fig. 3-1)

| | |
|-------------------------------------|--------------|
| 1. Aspen/Maple/Douglas fir | G1, G6, G8 |
| 2. Sagebrush/Snowberry/Grass | G2-G5, G7 |
| 3. Mt. Brush/Snowberry | |
| 4. Conifer/Aspen | |
| 5. Conifer/Mt. Brush/Pinyon-juniper | G12-G13, G15 |
| 6. Mt. Brush/Conifer | G9-G11 |

Table 3-1 provides a list of degas wells with their associated reference areas. The reference area titles in the table, however, do not match the reference area titles provided on Fig. 3-1. The Permittee must provide clarification so the table and map reference area titles match. Also, accurately assign the degas hole numbers to the correctly titled reference areas. For example, G16-G17 are assigned to a reference area titled “mountain brush/sagebrush/grass”, which there is no corresponding reference area shown on Fig. 1 (see deficiency R645-301-121.200).

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The areas of the proposed G1, G4, G6, G8-G12, G14-G17 well sites have been previously disturbed from historic logging and other development projects (refer to Table 3-1). The Permittee never constructed G1 or G8.

Findings:

Information provided in the plan meets the Environmental - Vegetation Resource Information requirements of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION[Sheila Mo3]

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

GENERAL WILDLIFE

The MRP meets the requirements of R645-301-322 because there is adequate narrative, supporting documentation, or maps on wildlife within or adjacent to the project area.

Ungulates

Plate 3-2 (Confidential Binder) illustrates that the G1-G17 degas wells are in elk high value yearlong range and deer critical summer range. The exclusionary periods for deer are December 1 through April 15 and May 15 through July 5.

Raptors

The Annual Reports (Confidential Incoming) or Confidential Binder (Ch. 3, Vol. MRP, Raptor Survey) provide the results and maps for the most current helicopter raptor surveys. The Permittee also provides results for tree-dwelling raptor species.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL/PLANT SPECIES

The MRP meets the requirements of R645-301-322 because there is adequate discussion, supporting documentation, or maps on threatened, endangered, and sensitive (TES) species that could occur within or adjacent to the project area. All supporting documents on TES plant and animal species show that there were no observations of threatened or endangered species.

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TES Plants

The Permittee provides the results of a literature search and survey results on TES plant species for the G1-G12 degas well project (Collins 2003, 2005, Vol. Methane Degasification Amendment, Att. 3-1). The results show that the area includes suitable habitat for canyon sweetvetch (*Hedysarum occidentale* var. *canone*). The Division knows that the permit area also provides suitable habitat for three other Carbon County listed species (Tufted cryptantha, *Helenium hymenoxys*, or Graham beardtongue; Environmental and Engineering Consultants 2002).

Dr. Collins ground-truthed for TES plant species and did not observe TES species growing within any of the degas well sites or reference areas for G13-G17 (July/September 2005, Vol. Methane Degasification Amendment, Att. 3-1).

TES Animals

The supporting documents in the MRP show there have been no observations of TE animal species, but there may be suitable habitat for the bald eagle, black-footed ferret, and MSO. The DWR overflight surveys have not shown bald eagle nests within or adjacent to the permit area. This species may use the area during the winter months, but the area is not considered critical habitat even as wintering range (DWR, 2005). For the black-footed ferret, there have been no confirmed sightings within or adjacent to the project area (DWR, 2005).

The supporting documents also show that there may be suitable habitat for the following sensitive animal species: peregrine falcon and loggerhead shrike. Supporting documentation shows no observations for these species.

Mexican Spotted Owl (MSO)

The Permittee conducted a two-year calling survey (Vol. 3, App. 3-3; EIS, 2003/2004) for drill holes G1-G6 as well as a short reach along Pace Creek. The results for both surveys were negative for MSO individuals, but show there were northern saw-whet and great horned owls.

For the 2006 drill hole project, the Division accepts the MSO calling surveys for the proposed G13-G17 degas wells and determines that the project would have no effect to this species or its habitat because:

- There were no observations of MSO during the G1-G6 or Pace Canyon surveys that the Permittee conducted near the currently proposed project.
- The community descriptions of the proposed degas sites do not include suitable nesting habitat for MSO.

Findings:

Information provided in the plan meets the Environmental - Fish and Wildlife Resource Information requirements of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION^[Sheila Mo4]

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Archeological Site Maps^[Sheila Mo5]

The MRP meets the requirements of R645-301-411.141 because there are archeological maps showing known resource locations within the project area. These maps are in the Confidential Binder.

Vegetation Reference Area Maps^[Sheila Mo6]

The MRP meets the requirements of R645-301-323.100 because the project vegetation maps illustrate community types within the disturbed area and the reference areas for the degas well project (Vol. Methane Degasification Amendment, Fig. 3-1 and 3-2; Vol. 2, Ch. 3, Fig. 3-1 and 3-1E).

Findings:

Information provided in the plan meets the Environmental - Maps, Plans, and Cross Section Resource Information requirements of the regulations.

OPERATION PLAN

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES^[Sheila Mo7]

Regulatory Reference: 30 CFR784.17; R645-301-411.

Analysis:

There are no known public parks or historic places within the project area.

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Findings:

Information provided in the plan meets the Operations - Protection of Public Parks and Historic Places requirements of the regulations.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

The MRP does not meet the requirements of R645-301-333, R645-301-342, or R645-301-358 because the MRP does not provide adequate information on TES or discussion concerning protection and enhancement during construction and reclamation phases.

Protection and Enhancement Plan [Sheila Mo8]

The Division, in consultation with DWR, considers that this drill project would not likely impact ungulates, raptors, or their habitat because:

- The Permittee would conduct raptor surveys every year the wells are in operation (Vol. 1, Sec. 322, p. 3-13)
- The Permittee would initiate projects outside of exclusionary periods for ungulates and raptors.

Ungulates

The G1-G17 degas wells are in elk high value yearlong range and deer critical summer range. The Permittee must comply with exclusionary periods during construction and reclamation phases. The general exclusionary periods are December 1 through April 15 and May 15 through July 5.

Raptors

The Permittee would conduct raptor fly-over surveys every year the wells are in operation (Vol. 1, Sec. 322, p. 3-13). Raptor reports are provided in Annual Reports or in the Confidential Binder, Ch. 3, Vol. MRP, Raptor Surveys.

The volume Methane Degasification Amendment refers the reader to Volume MRP, Section 333.330 for wildlife protection measures. The Permittee must comply with exclusionary periods during construction and reclamation phases. The general exclusionary period for raptors

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is February 1 through July 15, but may be waived or extended depending on species or evaluation/survey results.

Previous fly-over survey maps (e.g., 2005) show that the types of raptor nests (primarily only cliff-dwelling nests are observable from air craft) observed within or adjacent to the permit area are: golden eagle, red-tail hawk (or other buteo), falcon, and raven.

The Permittee probably has conducted the 2006 raptor survey. For the G13-G17, the Permittee must provide the summary of the 2006 raptor survey. The Division is concerned of whether nest 424 is active because one of the proposed drill sites is within the 0.5-mile buffer zone. This concern is more than likely a moot point if the Permittee plans to begin drilling after July 15th. R645-301-333).

The Permittee would conduct ground surveys for northern goshawk and northern saw-whet owl in areas with suitable habitat and areas planned for mining operations. Habitat descriptions include dense overstory with minimal understory for the goshawk and Douglas fir, mixed conifer habitat for the northern saw-whet owl (NSO).

The Permittee conducted a NSO mitigation nest project in 2004. DWR considers this mitigation project adequate for enhancing the area, at this time. This mitigation project, however, does not negate the requirement to survey and protect this species.

The 2006 proposed degas well project, especially G13 and possibly G14, is in an area that may include habitat for the NSO and northern goshawk. The USFWS requires a 0.25-mile (NSO) or 0.5-mile (goshawk) seasonal buffer from March 31 to August 31 for these species. Chris Colt (DWR) previously stated (for a different year's drill project) that the Permittee should conduct a one or two night survey within a 300-meter perimeter of drill pads prior to drilling. Limiting drilling to after August 31 or surveying to be sure no nests occur within 300 meters of the drill pad will ensure compliance with the Migratory Bird Treaty Act. The Permittee must either provide ground-truthing from DWR stating that this proposed project does not include NSO habitat, conduct a NSO calling survey by an approved surveyor prior to drilling, especially for G13-G14, or confirm that drilling will not begin during the exclusionary period (R645-301-333).

The Division reminds the Permittee to submit raptor results as confidential if the submittal includes a map or descriptions of raptor nest locations.

Endangered and Threatened Species [Sheila Mo9]

The Carbon County TES list includes Graham Beardtongue, Uinta Basin hookless cactus, bonytail chub, Colorado pikeminnow, humpback chub, razorback sucker, Mexican spotted owl (MSO), black-footed ferret, bald eagle, and western yellow-billed cuckoo (candidate).

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The Division determined that mining operations would have no effect on TE species or their habitat listed for Carbon county because:

- There have been no observations of TE plant species during vegetation surveys
- There were no MSO observed in the area during the calling surveys
- The bald eagle is an occasional user of the area, but typically only in the winter when there is no drilling construction
- There have been no recent sitings of prairie dog or black-footed ferret
- The water balance for mining operations is a net gain to the Colorado River drainage
- There is no habitat to support western yellow-billed cuckoo

The Division will no longer submit informal communications to the USFWS (as requested) because they will no longer provide concurrence letters for “no effect” determinations (January 2006). However, we will continue to maintain dialog with the USFWS concerning TE species.

Colorado River Fish

The Permittee provided water consumption values for the entire mining operation. The Division did not request OSM to initiate formal consultation with the USFWS because the water balance is a net contribution to not consumption of the Colorado River drainage.

The Division is currently developing a worksheet that Permittees may use to update water budget values. This worksheet will provide a process that will allow consistency of reported values between years and among mines. The Division will request that the Permittee to re-calculate the water balance once this worksheet is available by winter 2007.

Bald and Golden Eagles [Sheila Mo10]

As of 2005, there are no golden eagle nests within or adjacent to the 2006 drill hole project (R13E). If a project is within a raptor buffer zone, the Permittee would initiate drilling after the raptor exclusionary periods.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife[Sheila Mo11]

There are no wetlands near the G1-G17 degas wells.

Findings:

Information provided in the plan does not meet the Operations - Fish and Wildlife Information requirements of the regulations. Prior to approval, the Permittee must act in accordance with the following:

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R645-301-333, The Permittee probably has conducted the 2006 raptor survey. For the G13-G17, the Permittee must provide the summary of the 2006 raptor survey. The Division is concerned of whether nest 424 is active because one of the proposed drill sites is within the 0.5-mile buffer zone. This concern is more than likely a moot point if the Permittee plans to begin drilling after July 15th. • The 2006 proposed degas well project, especially G13 and possibly G14, is in an area that may include habitat for the northern saw-whet owl (NSO) and northern goshawk. The Permittee must either provide ground-truthing from DWR stating that this proposed project does not include NSO habitat, conduct a NSO calling survey by an approved surveyor prior to drilling, or confirm that drilling will not begin during the exclusionary period. • The Division reminds the Permittee to submit raptor results as confidential when submittals include maps or descriptions of raptor nest locations.

VEGETATION_[Sheila Mo12]

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

The MRP meets the requirements of R645-301-330, R645-301-331, and R645-301-332 because the Permittee would disturb the smallest area as possible and apply contemporaneous reclamation practices when applicable.

Findings:

Information provided in the plan meets the Operations - Vegetation requirements of the regulations.

RECLAMATION PLAN

GENERAL REQUIREMENTS_[Sheila Mo13]

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

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Analysis:

There are discussions throughout the MRP on ripping, gouging, and incorporating hay during gouging, or mulching. Areas recommended for fertilizer application would receive fertilizer by cyclone spreader, hydroseeded, or other equipment. The reclamation plan does not include irrigation. The Division does not anticipate the necessity to irrigate as long as the Permittee uses water-harvesting methods, such as gouging.

Findings:

Information provided in the plan meets the Reclamation - General Requirements of the regulations.

POSTMINING LAND USES^[Sheila Mo14]

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The postmining land uses are livestock and wildlife grazing and reestablishment of preexisting roads.

The Permittee included wording that implies that the company is not committed to the liability period for G11 and G12 based on the request of the landowner (March 16, 2006 submittal pp. 3-20, 4-3, 4-4, 5-15). The Permittee must clarify this assumption by either removing the inference or providing a postmine land use change that would allow the release of the liability obligation, such as changing to commercial. If the Permittee chooses to provide a PMLU change, as discussed in a previous meeting over this change (2006), the Permittee must include the following:

- Provide a letter from the landowner clearly stating the intended PMLU for the G11 and G12 degas pads.
- Provide a description in the plan clearly stating the intended PMLU for the G11 and G12 degas pads, including a discussion of the following:
 - ◆ Size of disturbance including access
 - ◆ Proportion of area that was pre-disturbed
 - ◆ Size of the disturbance is approximately the same as need for the intended PMLU
- Provide a description of the liability period and obligations prior to release of the liability period for G11 and G12 including the following:
 - ◆ Cover estimate of the native grasses (as reseeded)

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- ◆ Sediment loss and stability estimates using the RUSLE equation (or other equivalent analysis)
- ◆ Pictures during growing seasons both prior to disturbance and following reclamation.

Correspondingly, the Permittee must clarify the contradictions on the recontouring and reclamation of G11 and G12 that are on pages 5-15 with 5-13, Fig. 5-26, and Title page for Att. 5-1. (see deficiency R645-301-121.200)

Findings:

Information provided in the plan meets the Reclamation - Postmining Land Uses requirements of the regulations.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES[Sheila Mo15]

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

Analysis:

The MRP meets the requirements of R645-301-342 and R645-301-358 because there are adequate enhancement and protection measures for fish, wildlife, and habitat during the reclamation or postmine phases.

The Permittee considers that reclamation of the well sites would enhance wildlife habitat for the area because these sites have been previously disturbed. The seed mix would provide some of the same species as those in adjacent, undisturbed areas.

Findings:

Information provided in the plan meets the Reclamation - Protection of Fish, Wildlife, and Related Environmental Values requirements of the regulations.

CONTEMPORANEOUS RECLAMATION[Sheila Mo16]

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

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Analysis:

Within the constraints of seasonal weather, the Permittee would reclaim the well sites in two phases: Phase I - Contemporaneous reclamation (described in the reclamation section) and Phase II - Final reclamation.

Findings:

Information provided in the plan meets the Reclamation - Contemporaneous Reclamation requirements of the regulations.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: General Requirements^[Sheila Mo17]

The MRP meets the requirements of R645-301-330, R645-301-331, and R645-301-332 because there is adequate reclamation plan or discussion of how reclamation measures would meet the performance standards.

The Permittee would reclaim the well sites in two phases.

- Phase I - Contemporaneous reclamation:
Apply final reclamation procedures to site-specific areas no longer needed for operations.
 - ◆ Grade.
 - ◆ Rip to 18-24”.
 - ◆ Apply topsoil and leave in roughened state by gouging.
 - ◆ Hydroseed the final seed mix.
 - ◆ Apply wood fiber mulch.
- Phase II - Final reclamation:
Apply final reclamation procedures to the remaining disturbed areas no longer needed for operations.
 - ◆ Plug the wells.
 - ◆ Prepare the site.
 - ◆ Hydroseed.

TECHNICAL MEMO

Reclamation plan for the well sites includes hydroseeding with a slurry that contains a small amount of fiber. The seed mix (Vol. Methane Degasification Amendment, Table 3-2) is the same for both Phase I and II for the well site reclamation.

The seed mix provides a vegetative cover composed of native species (Welsh considers Kentucky Bluegrass a native). The goals are to quickly stabilize the disturbed site and provide compatible browsable and foragable habitat for the postmine land use. The Permittee would fence the well sites to prevent grazing until bond release.

Revegetation: Timing[Sheila Mo18]

The Permittee would seed the prepared areas most likely in the fall.

Revegetation: Mulching and Other Soil Stabilizing Practices[Sheila Mo19]

Reclamation plan includes ripping the area to a roughened state and applying wood fiber mulch at a rate of 2,000 pounds per acre and tackifier at a rate recommended by the manufacturer.

Revegetation: Standards For Success[Sheila Mo20]

The Permittee would follow the sampling requirements and analysis identified in the Division's "Vegetation Information And Monitoring Guidelines". The Permittee would use reference areas for the standards of success for the degas well sites.

The Permittee would use husbandry practices approved by the Division as needed.

Findings:

Information provided in the plan meets the Reclamation - Revegetation requirements of the regulations.

RECOMMENDATIONS:

Do not approve the amendment.