0015

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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June 11, 2001

TO: Internal File

THRU: Priscilla W. Burton, Team Lead

FROM: Wayne H. Western, Reclamation Specialist III WHW

RE: Surface Mining of Barrier Coal, Lodestar Energy, Inc., White Oak Mine, ~~C/001/007-S~~R01A

C/007/001

SUMMARY:

The Permittee submitted a significant revision to the Division for the purpose of allowing the permittee to mine coal by surface methods. The Division reviewed the amendment and found that it contained several deficiencies.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

The permittee sometimes refers to the surface mining operation as reclamation. The Division does not consider surface mining to be a reclamation activity because:

- The approved reclamation plan does not require the coal to be removed.
- The site can be reclaimed without surface mining.
- Surface mining will result in disturbing undisturbed areas within the White Oak mine site.

- The permittee did not show that removing the barrier coal would significantly increase reclamation results.

In order to avoid confusion the permittee must refer to the recovery of coal by surface methods are mining and not reclamation. Also, the permittee should place information about surface mining in the operation sections of the MRP instead of the reclamation sections.

Findings:

R645-301-121.200, The permittee must refer to the recovery of coal by surface mining methods as mining not as reclamation. Information about the operational phase of surface mining should be included in the operation sections instead of the reclamation sections of the MRP.

ENVIRONMENTAL RESOURCE INFORMATION

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

Drawing R645-301-100 is entitled Permit Area Base Map. The map's scale is 1" = 2,000' and shows the permit boundaries and appears to be drawn on a USGS topographic base map. The permit boundaries are mark and most of the permit area is hatched. The map is stamped received on August 20, 1993 and incorporated April 16, 1993.

On Page 1-9, section 114 of the MRP, the permittee lists the legal description for the permit area. The permit area description was incorporated March 3, 2000. The legal description in section 114 does not match the permit boundary map on Drawing R645-301-100, Permit Area Base Map. For example Drawing R645-301-100 does not show the 160-acre lease addition that occurred in 2000. The permittee needs to update Drawing R645-301-100. If they permittee has that map in an AutoCAD format they must send a copy to the Division.

The permittee does not propose to change the permit boundaries in connection with the surface mining. However, the permit map must be updated.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-521.162 and R645-301- 521.190, The permittee must show the correct permit boundaries on Drawing R645-301-100, Permit Area Base Map. If the permittee has that map in an AutoCAD format they must give the Division a copy.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

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

Analysis:

Affected Area Boundary Maps

The Division usually considers the affected area to be within the permit area. The affected area usually consists of the surface facilities and underground working. For the White Oak mine the affected area will also include the surface mine. In the environmental resource section of the TA the Division is concerned with acquiring information about the pre-mining site.

Drawing R645-301-100 shows the permit area. Map R645-301-521.150 sheets 1-4 received on August 5, 1993 show the disturbed areas at the mine site, load out, haul road and office. Plate 5-1C shows the area that will be surfaced mined. All surface mining will be done within the outside disturbed area perimeter. However, the permittee proposes to disturb undisturbed islands within the mine site. The permittee needs to update the disturbed area boundaries listed as islands. Therefore, the permittee must update the disturbed area in section 114 of the MRP.

Map R645-301-521.150 received on August 5, 1993 shows the as built Belina Mine site. Map 645-301-521.150 received on February 2, 2001 was so labeled an "as built" and showed significantly different disturbed areas. Since the Division has not approved any changes in the disturbed area boundaries since August 5, 1993 the disturbed area boundaries for all "as built" maps should be the same. Therefore the permittee must remove the term "as built" from Map 645-301-521.150.

Existing Structures and Facilities Maps

"Existing Structure" means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction began prior to January 21, 1981. Most of the structures were constructed in 1974 or 1975 with some structures being constructed in the 1980s. The permittee did not include an existing structures and facilities map in the MRP.

The mine, haul road, loadout and office are shown on Maps 521.150 "As Built" Sheets 1 through 4. In section 526 of the MRP the permittee lists each structure by map identification number and name along with a brief description that includes approximate date that the structures were constructed. The information in the MRP is adequate to show what structures

and facilities existed prior to surface mining.

In Section 521.121 of the MRP the permittee states that maps showing all buildings within 1,000 feet of the mine permit area are shown on Map 521.124 sheets 1 through 4. Map 521.124 only shows the areas near the disturbed area boundaries not the permit boundaries. The permittee must update Section 521.121 in the MRP by stating what maps show the location of all existing buildings within 1,000 feet the permit area.

Existing Surface Configuration Maps

Surface Facilities Associated with Underground Mining

The permittee did not include maps and cross sections of the pre-disturbed areas. Because most of the mine site existed prior to August 3, 1977, the permittee may not have pre-mining topographic maps. The Division is not concerned with having existing surface configuration maps at this time because the operational and reclamation plans were approved without those maps.

In section 521.152 of the MRP the permittee states that the "adjacent to" previously mined areas shown on mine maps are based on historic data and were not certified by today's standards. While R645-301-521.152 requires the existing surface configurations maps to be certified the Division understands that if such maps exist they were not produced by the current permittee, who may be unable to certify the accuracy of such maps. The Division considers the existing surface facilities maps adequate.

Surface Mining

There are several maps in the MRP that show the pre-surface mining contours. The maps are either at a scale of 1" = 200' or 1" = 100'. Map R645-301-521.150 was received on August 5, 1993 and incorporated into MRP. The map is at a scale of 1" = 200' and show the entire mine site. Figure R-11 in Appendix R2 shows the existing (pre-surface mining contours) and cross sections. The cross sections are on centers that range from 350' to 550'.

The surface contour maps should be at a scale of 1" = 100' and the cross sections are on 100' centers. The pre-mining, operational, and reclamation maps should be at the same scales and the cross sections on the same centerlines the permittee.

The permittee has maps that show the contours with the north arrow oriented at different directions relative to the paper. Map R645-301-527 shows the entire mine site while other maps only show part of the disturbed area. The Division needs to see the entire disturbed area; therefore the permittee should orient the map so that the entire disturbed area is shown

The permittee must state on the map that the contours and cross sections represent the pre-surface mining topography and cross sections. The contour must extend a minimum of 100 feet from the disturbed area boundaries. The map must also have a coordinate system such as the

state plane, which is used on other surface facilities maps. The pre-disturbed location of Whiskey Creek must also be shown along with other pertinent features on the pre-surface mining topographic maps.

Mine Workings Maps

If the permittee has mine working maps that show the location of the mine works on or near being conducted on August 3, 1977 they should be included in the MRP. If such maps do not exist then the permittee should state so in the MRP.

Map 645-301-521.111 shows mine workings for the Pleasant Valley Mining District. However, the map does not state which mine workings are Pre-SMCRA or Post-SMCRA. Map 645-301-521.111 was not certified as required by R645-301-512.110. In section 521,111 of the MRP the permittee states that map is not certified because the information is incomplete. The Division realizes that the information on the Pleasant Valley Mining District map is old and the current permittee has no way of verifying the information. Therefore, the Division will not require the map to be certified.

The Division needs mine working maps for both White Oak mines that are within the disturbed area boundaries at a scale of 1" = 100'. The Division needs maps at that scale to determine when the mining working will intersect the surface mine. The map should have a reference system such as the state plane coordinate system.

Permit Area Boundary Maps

Since the permit area map (Drawing R645-301-100, Permit Area Base Map) does not show the correct permit area the permittee must make the changes outlined in the permit area section of this TA.

Surface and Subsurface Ownership Maps

Map R645-301-112.500, Surface Ownership, and Map R645-301-112.600, Coal Ownership, show the surface and subsurface ownership for the areas in and around the permit boundaries. The maps were incorporated into the MRP on Nov. 15, 1994. The permittee has not indicated that any information on the maps has changed since then.

Surface and subsurface manmade features maps

In Section 521.122 of the MRP, the permittee state the following:

Location of surface and subsurface man-made features within, passing through, or passing over the mine permit area are depicted on Map 521.150 sheets 1 through 4.

Map 521.150 sheets 1 through 4 only show the disturbed areas and do not show the location of the natural gas pipelines, power lines, and water lines as shown on R645-301-521.122. R645-301-521.122 requires the permittee to show the location of surface and subsurface man-made features within, passing through, or passing over the proposed permit area, including, but not limited to, major electric transmission lines, pipelines, and agricultural drainage tile fields. Map R645-301-521.122 shows the location of surface and subsurface manmade features in and around the permit boundaries. Therefore, the permittee must modify the MRP to state what maps so the location of surface and subsurface features in the entire permit area.

Map R645-301-521.122 shows a road labeled as Reclamation Access Road going up Boarding House Canyon to the mine site. The reclamation access road does not appear on other maps. The permittee needs to clarify if the reclamation access road shown on map R645-301-521.122 exists.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

Affected Area Boundary Maps

R645-301-121.200, The permittee must be consistent when showing the disturbed area boundary for the pre-surface mining maps. For example the disturbed area boundaries on Map R645-301-521.150, Belina Mine Site Surface Facilities "As Built" that was received on August 5, 1993 is much different that the disturbed area boundaries shown on Map R645-301-521.150, Belina Mine Site Surface Facilities "As Built" received on February 2, 2001 yet the Division did not authorize a change in the disturbed area boundaries. The permittee must show the undisturbed area boundaries for the pre-surface mine site and remove the term "as built" from Map 645-301-521.150 that was received on February 2, 2001.

Existing Structures and Facilities Maps

R645-301-121.200, The permittee list in section 521.121 or other relevant section the maps that show the location of all existing structures that are within 1,000 feet of the permit boundaries.

Existing Surface Configuration Maps

R645-301-521.151 and R645-301-521.190, The permittee must give the Division a pre-surface mining contour map and cross sections for the White Oak mine site that shows the following: 1) The pre-surface mining contour map and cross sections should be at a scale of 1" = 100'. 2) The contours for the entire disturbed area as well as the contours extending a minimum of 100 feet from the disturbed area boundaries must be shown. 3) Cross section for the White Oak mine site on 100' centers. 4) The map must also have a coordinate system such as the State Plane, which is used on the surface facilities maps. 5) The pre-surface mining location of Whiskey Creek must be shown along with other pertinent features.

Mine Workings Maps

R645-301-521.111, The permittee must give the Division a map that shows the location of the underground mine workings the area that overlies the surface mine and shows the following: 1) The map should be at a scale of 1" = 100'. 2) The map must also have a coordinate system such as the State Plane, which is used on the surface facilities maps.

Surface and subsurface manmade features maps

R645-301-521.122, The permittee give the Division a map that show the surface and subsurface facilities that existed on the site as of August 3, 1977. If such maps do not exist then the permittee must states so in the MRP.

R645-301-521.190 and R645-301-121.200, The permittee clarify if the reclamation access road shown on Map 645-301-521.122 exists.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

General

The permittee has nearly exhausted the coal reserves that can be recovered by underground mining and know wants to recover the barrier coal by surface mining.

In section 523.200 of the MRP the permittee states:

The reclamation coal in the barriers in the White Oak mine site will not be removed until the underground mining activity is completed at the White Oak No. 2 mine. The removal of coal by surface means will be completed prior to the permanent sealing of the mine portal openings. Access to the underground portion of the mines will be restricted during the surface mining process.

The permittee needs to show the Division how MSHA will classify the underground mines during surface mining and when the permittee goes underground permanently seal underground workings. Will the underground mines be classified as active or inactive. The Division needs that information because certain rules apply when surface mining occurs within 500 feet of an active underground coal mine. If surface mining will occur within 500 feet of active underground workings then the permittee must show the MSHA has approved the surface mine plan.

The permittee is required to disturb the smallest practical area at any one time during mining operations through progressive backfilling, grading and prompt revegetation. However, the permittee did not state in the engineering or operations section how that will be accomplished.

Type and Method of Mining Operations

In the past, the permittee recovered coal by room and pillar methods. The reserves that can be recovered by underground methods have nearly been exhausted. The permittee wants to recover some of the barrier coal by surface mining. The calls type of surface mining to be done as contour mining.

The permittee plans to begin mining coal in the lower O'Connor seam along the bench where the current facilities are located. As mining progresses the permittee will move into areas where the upper O'Connor and lower O'Connor seams exist. In those areas the permittee plans to mine both seams.

The permittee states in Section 523 the following:

The surface mining mine plan of the barrier coal is planned to recover a large portion of the coal adjacent to the portal access during the reclamation process of the White Oak Mine site. This mining area will be contained within the currently permitted disturbed area. The mining plan will recover the Lower O'Connor Seam along the bench where the current facilities are located by moving the rock material that covers this seam. The rock material will be stored adjacent to this area on the coal storage pad and truck loadout area. This rock material will then be used to reclaim the final pit generated during surface mining process. The areas that had not been previously disturbed will have the topsoil removed and stored.

The Upper O'Connor seam overburden and the interburben over the second pass in the

Lower O'Connor will be used to fill the pits behind the coal removal process. The rock material in this process will be rough graded for stability and erosion resistance. The topsoil will then be replaced on the graded areas when it is seasonally preferred to do the re-seeding.

The upper portion of Whiskey Creek is planned to be disturbed during this process. A stream alteration permit has been applied for and approved.

The method to be utilized is referred to as contour mining. This method develops a pit along the lower contour. Once the coal has been removed, this pit is used for the placement of material from the upper contour. The material is pushed by tracked dozers as much as possible, hauled by rock trucks when necessary, and placed when required by wheel loaders and an excavator. Pushed material is rough graded when it is not longer required to be moved or re-handled.

The production level of the surface mining process is expected to be 600,000 tons per year. The coal removal process is expected to be completed in 12 to 14 months.

The permittee plans on mining 665,200 tons of coal as indicated in the schedule on Plate 5-1C. Coal extracted from the Upper O'Connor seam is 330,800 tons with the extraction from the Lower O'Connor is 334,400 tons.

The amount of spoil to be removed is listed on Plate 5-1C is 2,626,000 bank cubic yards. In Chapter 9 the permittee lists capacity of the temporary spoil storage area as 305,049 cubic yards and shows the supporting calculations.

In Chapter 9 the permittee shows stability analysis for the temporary spoil area. The temporary spoil storage area will have a static safety factor of 1.3 or greater.

The permittee proposes to mine coal within 500 feet of an underground mine. R645-301-523.200 through 523.220 prohibits surface mining of coal within 500 feet of an underground coal mine unless the following occurs:

- The surface mining of coal will result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.

- The Division and MSHA jointly approve the nature, timing, and sequence of the activities that propose to mine closer than 500 feet to an active underground mine.

The permittee did not provided sufficient justification for why surface mining should be conducted within 500 feet of a coal mine. The Division cannot approve surface mining within 500 feet of an underground mine unless the Division can make a finding about 1) improved resource recovery, 2) abatement of water pollution, or 3) elimination of hazards to the health and safety of the public.

On Plate 5-1C the permittee shows the sequence of mining operations. Section 523 tells the general mining sequence. However, that information does not give the Division detailed information about the mining process. To understand the mining sequence the Division needs the following information:

- Topsoil
  - Where will the topsoil for each phase be sent?
  - What is the greatest area that would be without topsoil at any time?
  - What is the greatest volume of topsoil that will be stored at any given time?

- Spoil (Overburden)
  - Where will the spoil be sent during each phase? (Will the spoil be sent to the spoil storage area or used directly as backfill?)
  - When will the spoil pile have the greatest volume

- What will occur during sequences 12 and 13 listed on Plate 5-1C?

Facilities and Structures

The permittee proposes to construct a new sediment pond Dugout D-1 in connection with the surface mining operation. For more information on existing facilities and structures see the *Existing Structures* section of this TA. Information about the new sediment pond Dugout D-1and the hydrologic section

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

General

R645-301-532.100, The permittee must give the Division a detailed backfilling and grading schedule to insure that the smallest practical area is disturbed at any one time.

R645-301-523.220, The permittee must show if MSHA will classify the underground workings, during surface mining and later final sealing of underground mines, as active or inactive. The Division needs that information since certain rules apply to surface mines that operate within 500 feet of an active coal mine.

Type and Method of Mining Operations

R645-301-523.210, The permittee must give the Division more information on why mining within 500 feet of a mine would result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public.

R645-301-523, The permittee must give the Division a detailed description of the timing and sequence of mining as follows **Topsoil** 1)Where will the topsoil for each phase be sent?, 2) What is the greatest area that would be without topsoil at any time?, 3)What is the greatest volume of topsoil that will be stored at any given time? **Spoil (Overburden)** 1) Where will the spoil be sent during each phase?, 2) (Will the spoil be sent to the spoil storage area or used directly as backfill?), 3) When will the spoil pile have the greatest volume, and 4)What will occur during sequences 12 and 13 listed on Plate 5-1C?

EXISTING STRUCTURES:

Regulatory Reference: 30 CFR 784.12; R645-301-526.

Analysis:

"Existing Structure" means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction began prior to January 21, 1981. Most of the structures were constructed in 1974 or 1975 with some structures being constructed in the 1980s.

The mine structures are shown on Maps 521.150 "As Built" Sheets 1 through 4. In section 526 of the MRP the permittee lists each structure by map ID number and name along with a brief description. The approximate date that the structures were constructed is listed next to the name in section 536 of the MRP.

The Division does not require any specific monitoring program for the structures. The Division does not have specific performance standards for existing structures listed in the R645 regulations. The general performance standards are that protection of the environment and public safety. The Division conducts monthly inspections at the mine site. If problems are found the inspector will take action to insure that the problem is corrected.

The Division finds that all structures classified as existing structures meet the minimum standards of R645-301-526.110. Most of the existing structures in the White Oak mine site are scheduled to be demolished before or during surface mining.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

The permittee has facilities at the mine loadout that are within 100 feet of a public road. Concerns about public safety were subject to public comment during the initial review. The haul road to the mine site is a private and permitted. Since all new surface disturbance will be done at the mine site the regulation regarding relocation of use of a public road is not relevant to surface mining.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

In Section 522 of the MRP the permittee states the following:

The surface mining plan at the White Oak Mine is part of the reclamation plan to recover the barrier coal in the Carbon County lease. The process of reclaiming the underground mine portal side of the site within the disturbed area boundary by using surface mining techniques will allow coal to be recovered that could not have been mined by underground means. The surface mining will be conducted within the disturbed area boundary due to it being a reclamation project.

The permittee proposes conducting surface mining within 500 feet of an underground mine. R645-301-523.200 prohibits mining within 500 feet to any point of either an active or abandoned underground mine, except that the operations results in improved resource recovery. The permittee does not give detailed information about how surface mining will increase coal recovery. If the permittee wants to conduct mining within 500 feet a mine then they must demonstrate that the proposed operation will improve resource recovery.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-523.200 through 532.220, The current coal recovery plan does not give enough details about 1) how coal recovery will be maximized and 2) why surface coal mining will result in enough resource recovery to justify allowing surface mining within 500 feet of an abandoned or active coal mine.

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Renewable Resources Survey

The forestland in and around the White Oak mine is classified as a renewable resource. Since renewable resources exist within the permit boundary the permittee will be required to develop a subsidence control plan.

Subsidence Control Plan

The mining plan analyzed refers to three monitoring plans that will be used to control the underground mining activities in the upper and lower O'Connor coal seams. Those plans provide accurate monitoring which in turn will effectively minimize or negate surface impacts due to mining of the two-seam Federal lease. The plans are as follows:

Subsidence Control Plan

The revision received February 17, 2000 includes two map revisions, Plates 5-1A, which is the five year mine plan for the White Oak #2 Mine (lower O'Connor seam) and Plate 5-1B, which is the five year mine plan for the #1 Mine in the upper O'Connor. Four subsidence monitoring points are indicated, one for each panel to be developed during 2000 through 2003. The monitoring points will be installed prior to

development of the top seam for the establishment of baseline elevation data, and will be monitored throughout the mining of the bottom seam, until subsidence monitoring of the area is no longer deemed necessary by the UDNR/OGM and the surface management agency.

The subsidence monitoring points will be differentially surveyed twice during the first year of mining in the lease modification area. Pedestrian surface walk-overs will be conducted post-snow melt and pre-snow fall annually to inspect for mining related surface impacts in lease modification area U-017354. If no subsidence is detected during the first and second differential level survey, then the frequency for conducting it will be reduced to once a year. The frequency for conducting the pedestrian surface walkovers may also be reduced to an annual inspection. The information which is compiled, will be analyzed and submitted to the UDNR/OGM not more than 45 days after collection of the field data, when such data is gathered more than once a year. When data is only collected annually, it may be submitted as part of the permittee's annual report.

Monitoring of the subsidence control points by differential level survey and the overlying surface will continue until no longer deemed necessary by the UDNR/OGM and the concerned surface management agency.

Monitoring of Extraction Ratio

The "approved" maximum of fifty percent extraction of coal by plan view area will be monitored by the permittee by comparing daily/monthly production records against mine maps. Mine maps showing where bottom coal has been extracted, and where slabbing or pocket and wing extraction methods have been utilized will be marked on a shift by shift basis and will be maintained by the Mine's engineer. Calculations comparing daily/monthly production records to the aforementioned maps will be forwarded quarterly to the USBLM and the UDNR/OGM for confirmation.

Monitoring of Pillar Stacking

Coordination of Pillar Sizes in the Upper and Lower O'Connor Coal Seams.

Primary development mining of coal support pillars (seventy foot centers, minimum) and secondary extraction of bottom coal, as well as some pillar size reduction will be practiced in both the upper and lower O'Connor coal seams, (White Oak #1 and #2 Mines). The top seam will be mined first, as depicted on Plate 5-1B from 2001 through 2003. Frequent engineering check surveys will be conducted to ensure that the mine plan developed by the permittee is conducted according to projection, (Plate 5-1B). This information will be used to correlate the stacking of identically sized pillars in the #2 Mine, (Plate 5-1A).

The stacking of pillars will be monitored by the Mine's engineer to ensure that a success ratio of better than 90% is occurring in the two coal seams. A report, which is P.E. certified by the engineer monitoring the pillar stacking, will be forwarded to the Division and the concerned surface management agency on a quarterly basis.

Surface Mining

The proposed surface mining is not expected to result in any additional subsidence.

Performance Standards for Subsidence control

The permittee adopted standard room and pillar mining method, which is commonly used in the area. Room and pillar mining usually prevents subsidence from causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of surface lands.

The operator shall correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence, and, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the diminution in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities.

Underground mining activities shall not be conducted beneath or adjacent to: public buildings and facilities; churches, schools, and hospitals; or, impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more, unless the subsidence control plan demonstrates that subsidence will not cause material damage to, or reduce the reasonably foreseeable use of, such features or facilities. If the Division determines that it is necessary in order to minimize the potential for material damage to the features or facilities described above or to any aquifer or body of water that serves as a significant water source for any public water supply system, it may limit the percentage of coal extracted under or adjacent thereto.

If subsidence causes material damage to any of the features or facilities, the Division may suspend mining under or adjacent to such features or facilities until the subsidence control plan is modified to ensure prevention of further material damage to such features or facilities.

The Division shall suspend underground mining activities under urbanized areas, cities, towns, and communities, and adjacent to industrial or commercial buildings, major impoundments, or perennial streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities.

Within a schedule approved by the Division, the operator shall submit a detailed plan of the underground workings. The detailed plan shall include maps and descriptions, as appropriate, of significant features of the underground mine, including the size, configuration, and approximate location of pillars and entries, extraction ratios, measures taken to prevent or minimize subsidence and related damage, areas of full extraction, and other information required by the Division. Upon request of the operator, information submitted with the detailed plan may be held as confidential

Notification

At least 6 months prior to mining, or within that period if approved by the Division, the underground mine operator shall mail a notification to all owners and occupants of surface property and structures above the underground workings. The notification shall include, at a minimum, identification of specific areas in which mining will take place, dates that specific areas will be undermined, and the location or locations where the operator's subsidence control plan may be examined.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

SLIDES AND OTHER DAMAGE

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

Analysis:

In Section 515.100 of the MRP the permittee commits to the following:

> At any time a slide occurs which may have a potential adverse effect on public health, safety or the environment, Lodestar will notify the Division as soon as possible and will comply with the remedial measures required to stabilize the slide.

R645-301-515.100 requires the permittee to make a commitment to notify the Division in case of slides and what remedial action should be taken. The Division found that the permittee has made that commitment.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

Road classification system

The permittee does not propose to construct any roads that need to be permitted or designed under R645-301-534 or R645-301-537. Such roads do not require to be permitted or have engineering designs for the following reasons:

- All surface water runoff reports to a sediment pond and is treated before discharge so water quality is not an issue.
- No permanent or designed structure such as culverts, bridges and ditches area associated with the pit roads.
- The pit roads will be used for any short time periods
- The pit roads will be reclaimed.
- The public will not have access to the pit roads.
- Safety issues will be overseen by MSHA.
- The Division has not required engineering designs for roads on the pad areas of other mines.
- Other states such as Colorado, Wyoming and Montana do not require designs for pit roads.

Plans and drawings

No engineered or certified plans or drawings are required for the proposed pit roads.

Performance standards

No specific performance standards are associated with the proposed pit roads. Safety issues will be the primary responsibility of MSHA.

Primary road certification

No engineered or certified plans or drawings are required for the proposed pit roads.

Other Transportation Facilities

The permittee does not propose to construct or modify any other transportation facilities in association with surface mining.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal of noncoal waste

Noncoal mine waste is described in R645-301- 542.741 as including, but not limited to grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustible materials generated during mining activities will be placed and stored in a controlled manner in a designated portion of the permit area. Noncoal mine waste can also be classified as hazardous and non-hazardous waste according to RCRA.

The permittee state in the reclamation plan of the MRP that any non-coal waste material, which is considered to be toxic or hazardous materials, will be disposed of in accordance with federal, state and local regulations. Proper disposal of non-coal waste is usually done at a permitted waste disposal facility.

In the reclamation section of the MRP (pages 9 and 10 of 37) the permittee state that all mining related structures located within the disturbed areas will be demolished, salvaged or otherwise removed with the exception of concrete foundations buries 18" below final grade. All asphalt will be hauled to a state approved disposal facility or reprocessed and donated to UDOT for road construction. Concrete not buried in place will be crushed and use to backfill portals, or aggregate or a backfill. When crushed concrete is used a fill it will be place against the toe of existing slope that will be backfilled.

In Appendix 527 Belina Haul Road Reclamation Plan Morrison-Knudsen (1987), section 4.1 the report states that during reclamation asphalt will be broken by ripping up and then place along the toe of the cut slope. See Figure 4-1 for details. To avoid confusion the permittee must state in the MRP that the asphalt reclamation plan in the reclamation section of the MRP supersedes the asphalt disposal plan in Appendix 527.

The permittee did not address how non-hazardous noncoal mine waste will be disposed in the text of the MRP. However, information in the bond calculation show that all noncoal waste will be sent to ECDC, a licensed landfill, with the exception of steel, which will be sent to a recycle facility. The Division considers the information in the bond calculations adequate.

Coal mine waste

The permittee claims that no coal mine waste will be generated. The term coal mine waste and related terms are defined in R645-100-200 as follows:

- "Coal Mine Waste" means coal processing waste and underground development waste.
- "Coal Processing Waste" means earth materials which are separated from the product coal during cleaning, concentrating, or the processing or preparation of coal.
- "Underground Development Waste" means waste-rock mixtures of coal, shale, claystone, siltstone, sandstone, limestone, or related materials that are excavated, moved, and disposed of from underground workings in connection with UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES.

The permittee is scheduled to cease underground coal mining prior to surface mining and no coal processing will occur during surface mining. Therefore, the permittee is not scheduled to produce any underground development waste.

In section 521.143 of the MRP the permittee states the following:

The only disposal site(s) to date are garbage hoppers within the mine permit area.

R645-301-521.143 refers to disposal sites for underground mine development waste and excess spoil not noncoal waste. The permittee needs to clarify that section of the MRP.

Refuse piles

The permittee states that no refuse piles are or will be generated at the mine. A refuse pile is defined by R645-100-200 as the following:

> "Refuse Pile," means a surface deposit of coal mine waste that does not impound water, slurry, or other liquid or semiliquid material.

Since the permittee is not scheduled to produce coal mine waste in connection with surface mining the Division does not anticipate that any slurry piles will be created.

Impounding structures

The permittee does not propose to construct any impounding structures from coal mine waste. No impounding structures constructed from coal mine waste are at the site.

Burning and burned waste utilization

The permittee will extinguish all coal mine waste fires in accordance with plans that have been approved by MSHA and the Division.

Return of coal processing waste to abandoned underground workings

No underground development waste will disposed in underground workings.

Excess spoil

Excess spoil and related terms are defined in R645-100-200 as follows:

- "Spoil" means overburden that has been removed during coal mining and reclamation operations.
- "Excess Spoil" means spoil material disposed of in a location other than the mined-out area, provided that the spoil material used to achieve the approximate original contour or to blend the mined-out area with the surrounding terrain in accordance with R645-301-553.220 in nonsteep slope areas will not be considered excess spoil.

On page 500-31 of chapter 5, the permittee states the following:

As per the UDOGM definition, there are no excess spoil disposal areas within the mine permit area. However, should it become necessary to create a waste disposal area, it will be accomplished in accordance with the requirements of the regulations, and other federal, state and local regulations.

Information in MRP supports the claim that no excess spoil will be generated during surface mining. All overburden will be disposed of in the mine pits.

Another source of spoil is listed on page O-14 of 14 in the Operation Plan section of the MRP. Under the heading of disturbed area spoil management the permittee states the following:

For the purpose of this section, the following terms have the specified meanings.

"Spoil" means, sediment from sediment pond 004A, dugout D-1 ditch sediment, material from sediment traps, embankment slough material, coal laden soils, and materials gathered from general maintenance cleanup.

"Temporary" means, interval until cured or sampled and analyzed for stability and/or contaminates.

Spoils generated within the disturbed area will be taken to the upper pad area east of S-25, which is labeled "Spoil Management Area" on Map R645-301-231.300, Sheet 4 of 4 on the MRP.

Spoil taken to the spoil management area will be used as fill material during final reclamation or for routine maintenance. The permittee estimates that the spoil storage area has a capacity of 22,500 cubic yards.

The term mined-out area is not defined in the R645 regulations. The Division will consider the disturbed areas to be mined-out areas. Therefore, the Division does not consider material that scheduled to be placed in the spoil storage area to be excess spoil.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645--301-521.143 and R645-301-121.200, The permittee must state in section 521.143 of the MRP what disposal sites if any exist for underground development waste and excess spoil not noncoal waste as is implied by dumpsters.

R645--301-121.200, The permittee must state in the reclamation section of the MRP that the asphalt disposal plan in that section supersedes the asphalt disposal plan in Appendix 527.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Discharges into an underground mine

The permittee must address the issue of water discharges into underground mine workings when they are exposed during surface mining.

Gravity discharges

The permittee must address the issue of water discharges from underground mine workings when they are exposed during surface mining. On page R6 of 37 the permittee states that the portal closure plan will utilize french drains. The permittee describe how french drains will be installed after surface mining.

Sedimentation ponds.

The permittee proposes to construct on new sediment pond in connection with surface mining. In Section 533 of the MRP the permittee states sediment pond design information is listed in sections 733, 742.221 and 742.222. Design information in those section for pond dugout D-1 are listed below:

Section 733.130

- All five sediment ponds have been constructed with 18-inch diameter vertical standpipes for both the principal and emergency spillway except for … Dugout D-1 that has an open channel design spill way.

- Sediment pond Dugout D-1 is a small rectangular shaped sediment pond that will be located at the Southern end of the mine area. The Dugout D-1 will be built once the surface mining has advanced to the location where the pond is to be located (refer to Map 731.720d.) Dugout D-1 collects surface runoff from all disturbed and undisturbed area upstream of its location. The dugout D-1 will be built according to designs submitted in this revision and will be certified by a licensed professional engineer of the State of Utah.

Section 742.221

- Dugout D-1 has only an overflow open spillway.

- Note: under pond stability analysis the permittee did not include any information on pond Dugout D-1. The permittee needs to show how the stability requirements listed in R645-301-533 will be met. Embankment stability must be 1.3 and the pond protected from rapid drawdown.

Section 742.223

- Dugout D-1 does not meet the requirements for being classified as a non-MSHA pond.

The permittee did not address the design requirements for pond Dugout D-1 as listed in section R645-301-533. Those deficiencies are outlined in the findings section.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-533.100, The permittee must show that the embankments of pond Dugout D-1 have a static safety factor of at least 1.3.

R645-301-533.200, The permittee must address foundation stability during construction.

R645-301-533.300, The permittee must show that the pond will be protected from sudden drawdown.

R645-301-533.400, The permittee must address the relationship between the pond and any highwall remnants.

R645-301-513.600 and R645-301-731.521, The permittee must address this issue of water being discharged into underground workings as a result of those workings being exposed during surface mining.

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

R645-301-526.210 requires the permittee to include the following statement in the MRP:

All coal mining and reclamation operations will be conducted in a manner which minimizes damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines, railroads; electric and telephone lines; and water and sewage lines which pass over, under, or through the permit area, unless otherwise approved by the owner of those facilities and the Division.

R645-301-526.220 requires the permittee to include the following statement in the MRP:

Support facilities will be operated in accordance with a permit issued for the mine or coal preparation plant to which it is incident or from which its operation results.

The permittee made those statements in section 526.200 and 526.200.

The permittee is also required to give the Division plans and drawing for each support facility within the permit area. In addition the permittee must include maps, cross sections, design drawings, and specifications sufficient to demonstrate how each facility will comply with applicable performance standards.

The Division does not have specific performance standards for support facilities and utility installation. The standards that are listed in R645-301-526.221 and R645-301-526.222 deal with the following:

- Prevents or controls erosion and siltation, water pollution, and damage to public or private property.

- To the extent possible using the best technology currently available - minimizes damage to fish, wildlife, and related environmental values; and minimizes additional contributions of suspended solids to stream flow or runoff outside the permit area. Any such contributions will not be in excess of limitations of Utah or Federal law.

The permittee proposes to construct a new sediment pond in conjunction with the surface mining operation. The pond is named Dugout D-1 and is shown on several maps including R645-301-731.720. Detailed designs for the pond are shown on drawing Dugout D-1. The Division evaluated the designs for Dugout D-1 in other sections.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

SIGNS AND MARKERS

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

Analysis:

R645-301-521.200 through R645-301-521.230 list the design requirements and information that must be list on mine identification signs. R645-301-521-241 (underground mine requirement) requires that **signs be posted at all access point from a public road to the surface operations areas and mine facilities areas**. R645-301-521.242 (surface mine requirement) requires that mine identification **signs be place at all access point to the permit area from public roads**.

The permittee committed in Section 521.240 through 521.244 of the MRP to place mine identification signs at each point of access to the mine permit area from public roads. The commitment will require the permittee to change the location of mine identification signs.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

USE OF EXPLOSIVES

Regulatory Reference: 30 CFR Sec. 817.61, 817.62, 817.64, 817.66, 817.67, 817.68; R645-301-524.

Analysis:

General

OSM has reviewed the blasting plan submitted by Lodestar Energy, Inc. for the Whisky Creek Mine near Scofield, Utah.

OSM has a general concern that mining near an abandoned old underground coal mine my result in the dangerous release of water or mine gases. This has happened in the past and particularly a concern where the mine maps may not be accurate. The permittee must address those concerns.

There appears to be a misunderstanding concerning the five pounds of explosives or blasting agent on page 500-17. Many people believe that when using less than five pounds of explosives, the blast is not regulated. This is just not true. The only blasting performance standard that does not apply when using five pounds or less is blasting at times published in the blasting schedule. All other performance standards apply.

On page two of the Blasting Plan Lodestar says under Maximum Pounds Per Delay "The maximum pounds per delay will not exceed the total amount of explosives as determined by the scaled distance factor to the nearest dwelling **and what would be a safe level for structures in the surrounding area"**. (Emphasis added) This is a bit confusing and needs to be clarified. They also make a similar statement in the next paragraph.

> Lodestar will not be using monitoring as their selected method of compliance with ground vibration and air blast standards. That being the case the use of the scaled distance is what they have selected. That means that the scaled distance factor will be 55 because the closest structures is a gas pipeline located 960 feet from the closest point of the proposed blasting operation. The additional statement that the pounds per delay will be limited by what would be a safe level for the nearest control structure is misplaced. Lodestar has it wrong. The pounds per delay must be limited by the scaled distance factor (absent monitoring) and not what might be a safe level for the control structure.

This is just a comment. The U. S. Bureau of Mines conducted a study into the level of acceptable vibration for high-pressure gas transmission lines. That research resulted in a recommendation level of 5.0 ips.

The permittee should review and respond to OSM comments.

Findings:

The Division will rely on technical expertise from OSM on blasting. The Division will not have time to review and evaluate OSM comments before the TA is sent to the permittee. The Division encourages the permittee to respond the OSM's comments.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Affected area maps

The Division usually considers that the permit boundaries to be the maximum extent of the affected areas. Therefore, the Division will accept a permit boundary map in place of an affected area map. The mine facilities and mine workings maps show the areas within the permit area that are affected by mining. Map R645-301-521.124 sheet 4 of 4 shows the proposed changes to the disturbed area boundaries.

Mining facilities maps

Map 645-301-521.150 sheet 4 of 4 received on February 2, 2001; show the Belina Mine site surface facilities. The updated map shows the location of sediment pond Dugout D-1, which will be built as part of the surface mining operation. The map's scale is 1" = 200'.

The Division usually requires that the mine facilities maps have a scale of 1" = 100' and show the location of cross sections that are on 100' centers. Since the pre-mining, operational, and reclamation maps should be at the same scales and the cross sections on the same center lines the permittee should give the Division operational contour maps and cross sections that meet the requirements of the bond release directive.

The permittee has maps that show the contours with the north arrow oriented at different relative to the paper. Map R645-301-527 shows the entire mine site while other maps only show part of the disturbed area. The Division needs to see the entire disturbed area; therefore the permittee should orient the map so that the entire disturbed area is shown.

The permittee must label the map as showing the operational contours. The contour must extend a minimum of 100 feet from the disturbed area boundaries. The map must also have a coordinate system such as the state plane, which is used on the surface facilities maps. The operational map must show location of Whiskey Creek must also be shown along with other pertinent features on the operational topographic maps.

In Section 521.161 through 521.169 of the MRP the permittee refers to Plate 5-1C for how those requirements will be met. Those regulations list the structures that must be shown on an operations map. However, Plate 5-1C does not show coal storage and loading areas or the topsoil storage areas and explosive storage areas.

Mine workings maps

Plate 5-1 A, White Oak Mine No. 2 and Plate 5-1 B, White Oak Mine No. 1 shows the location of the underground workings. The maps are dated as being updated on February 4, 2000 and were incorporated in the MRP on March 3, 2000.

Because the Division is concerned about underground mine workings that will be encountered during surface mining the permittee needs to give the Division mine workings maps the underlie the surface mine area at a scale of 1" = 100' and have reference system such as state plane coordinate system.

Monitoring and sample location maps

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in

accordance with:

Mining facilities maps

R645-301-521.160, The permittee include the following on the surface facilities maps as follows: 1) Coal storage areas, 2) Topsoil and spoil storage areas and 3) Explosive storage areas.

Mine workings maps

R645-301-521.140 and R645-301-521.190, The permittee must give the Division underground mine workings that show the following information: 1) The underground working that underlie surface mining areas, 2) The maps must be at a scale of 1" = 100' and 3) The maps must have a coordinate system such as state planes.

R645-301-521.151 and R645-301-521.190, The permittee must give the Division a surface mining operations contour map that shows the following: 1) The pre-surface contours at a scale of 1" = 100', 2) The contours for the entire disturbed area and the contours must extend a minimum of 100 feet from the disturbed area boundaries, 3) Cross section for the White Oak mine site on 100' centers, 4) The map must also have a coordinate system such as the State Plane, which is used on the surface facilities maps and 5) The pre-disturbed location of Whiskey Creek must be shown along with other pertinent features.

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The requirements for restoring a site to the approximate original contour (AOC) are couched in the backfilling and grading regulations. The only regulation that specially mentions AOC requirements is R645-301-553.110 that states the following:

> Achieve the approximate original contour (AOC), except as provided in R645-301-553.500 through R645-301-553.540 (previously mined areas (PMA's), continuously mined areas (CMA's) and areas subject to the AOC provisions), R645-301-553.600 through R645-301-553.612 (PMA's and CMA's), R645-302-270 (non-mountaintop

removal on steep slopes), R645-302-220 (mountaintop removal mining), R645-301-553.700 (thin overburden) and R645-301-553.800 (thick overburden);

Since the White Oak mine site is a blend of pre and post SMCRA disturbances the permittee must identify the following areas:

- All pre-SMCRA sites that have not been used for coal mining activities since August 3, 1977.
- All continuously used areas (areas originally disturbed before after August 3, 1977 but have been used for coal mining activities since that date.)
- All post-SMCRA areas first disturbed by coal mining activities after August 3, 1977.

The Division needs that information to determine what regulations apply to what areas.

The Division's technical memo Tech-002 give additional AOC guidelines. That guideline was also used to evaluate the White Oak mine site for AOC compliance.

Except as specifically exempted all disturbed areas shall be returned to the approximate original contour. The final surface configuration shall closely resemble the general surface configuration of the land prior to mining. To evaluate compliance with this requirement, the term "Surface configuration" must be clarified. Surface configuration refers to the premining and postmining topography of the mine site and surrounding area.

The term AOC does not mean that the land is restored to the original contours. Elevation of the premining and postmining site should only play a minor role if any in evaluating AOC.

The main criteria should be, does the postmining topography, excluding elevation closely resemble the premining configuration? The Division evaluates premining and postmining topography on slope length and angle, and whether restoring the site to the original contours would violate other rules. In some cases the permittee cannot restore the site to the premining contours without violating other regulations, such as slope stability and erosion.

The premining and postmining topography and cross sections for the White Oak mine site are shown on Figure R-11 in Appendix R2. The contour maps are at a scale of 1" = 200' with 5 foot contours and the cross sections are spaced 350 feet to 550 feet apart. The cross sections only show those areas of the mine site that will be disturbed by surface mining. The Division needs cross section to show the entire White Oak mine site in order to evaluate AOC compliance

The Division needs to have topographic maps of the postmining topography at a scale of 1' = 100' and cross section on 100 foot centers that show the entire mine site. That map scale is the same as many of the maps submitted by the permittee.

The permittee needs to specifically address in the MRP how all highwall (including underground openings) at the White Oak mine site will be reclamation. At present no information on highwall elimination is in the engineering or reclamation sections of the MRP.

Under AOC guidelines all spoil piles must be eliminated. The permittee claims that no spoil (excess material) will be generated from the White Oak mine site. Cut and fill quantities for spoil are shown in Appendix R2. The calculations indicate that no excess spoil will be generated.

The AOC guidelines require that the restored drainages complement the surrounding natural drainages. The Division considers this requirement to be met if all the hydrologic regulations have been satisfied.

The AOC guidelines require that the reclaimed topography be compatible with the postmining land use, alternative postmining land use or a variance from the AOC requirements be granted. The permittee did not ask for an AOC variance. The Division considers those requirements to be met if all postmining regulations have been satisfied.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-553.110 and R645-301-553.120, The permittee must give the Division a detailed highwall elimination plan. The plan must identify when the highwalls were created and how they will be reclaimed.

R645-301-542.200 and R645-542.300, The permittee must give the Division a topographic map and cross section of the entire White Oak mine site at a scale of 1" = 100' with 5 foot contours and cross sections of 100 intervals.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The permittee reclamation plan for the White Oak mine site is located in either the engineering section or reclamation section of the MRP. For some operations the permittee gives general comments and for other operations they give site specific information. The Division

reviewed the backfilling and grading plan the results are as follows:

- How the mined out areas will be backfilled and graded once the coal has been removed by not more than 60 days or 1500 linear feet.

- Detailed cut and fill calculations for the entire White Oak mine site. While the spoil calculations show that all spoil (overburden) generated from surface mining will be used to backfill the surface mine the permittee does no show cut and fill calculations for the entire White Oak mine site. On page R-15 of 37 the permittee states that excess material from the White Oak mine site will be used as fill for either the haul road or White Oak Complex (mine site).

- Eliminate all highwalls, spoil piles and depressions, except as noted in the R645 regulations.

- Compaction of spoils and waste materials. The permittee states on page R-12 of 37 that all fill material shall be machine compacted where accessible and shall be placed in a controlled manner. Benches shall be constructed in lifts and compacted to assure integrity and stability of the embankment. The Division does not have any specific compaction requirements. The specifications are left to the permittee.

- Removal of all vegetation prior to backfilling and grading. The permittee did not specially address that issue. This issue is a performance standard that the permittee will be required to meet and not specifically address in the MRP.

- Topsoil removal, segregation and storage. The permittee did not specially address that issue. This issue is a performance standard that the permittee will be required to meet and not specifically address in the MRP.

- Preparation of final graded surfaces to minimize erosion and provides a surface for replacement of topsoil is discussed on page R12-37 of the reclamation section. The permittee state that 1) no slope equal to or greater than 2:1 will be ripped since ripping may create a higher potential for slope failure as well as decrease the soils suitability as a firm seedbed and 2) all areas to be revegetated with a slope of 3:1 or less may be ripped to a minimum depth of 14" and treated if necessary. Maximizing the roughness of the reclaimed surface will be paramount at most locations to achieve moisture retainage, enhance vegetative growth and reduce local erosion. The permittee did not state how slopes between 2:1 and 3:1 would be prepared.

- No refuse is scheduled to be disposed at the White Oak mine site.

- The permittee did not address backfilling over exposed coal seams, acid- and toxic forming materials, and combustible materials.

- The permittee did show in Appendix R2 that the reclaimed slopes would have static safety factors of 1.3 or greater. However, that information was not shown in the backfilling and grading section of the MRP.

Previously Mined Areas

The permittee did not address any previously mined areas. Previously mined areas are a factor if the permittee wants to use highwall standards for previously or continuously mined areas.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-553, The permittee must show how the mined out areas will be backfilled and graded once the coal has been removed by not more than 60 days or 1500 linear feet.

R645-301-553.100 through R645-301-553.150 and R645-301-830.140, The permittee must give the Division detailed cut and fill calculations for the entire White Oak mine site. Those calculations should be similar to the cut and fill calculations for spoil located in Appendix R2.

R645-301-553.110 and R645-301-553.120, The permittee must give the Division a detailed highwall elimination plan. The plan must identify when the highwalls were created and how they will be reclaimed.

R645-301-553.230, The permittee must state how slope with angles between 2:1 and 3:1 will be treated to minimize topsoil slippage.

R645-301-553.330, The permittee must state how coal seam and acid and toxic-forming materials and combustible materials will be backfilled and graded.

R645-301-121.200, The backfilling and grading plan must be organized in a clear and concise manner for example the slope stability analysis located in Appendix R2 is not mention in the engineering or reclamation section of the MRP

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

In Section 529.100 the permittee states the following:

The process of recovering the barrier coal during the surface mining process will uncover parts of the underground mine workings. The openings that are not filled with broken rock material as a result of the blasting process will have overburden material pushed into the opening to control access and water flow.

On page R-6 of 37, the permittee describes the sealing of underground mine openings as follows:

- The permittee proposes to modify the approved mine opening closure plan by not placing block stoppings.
- The permittee will state that the portal closure plan will utilize french drains. The french drain design and installation will be accomplished using the most prudent engineering practices and technology available, at the time the portal closure takes place.

Most portals are sealed with both stopping and backfill. However, 30 CFR 75.1711 only requires the permittee to install stopping or backfill a minimum of 25 feet. The Division is concerned about how the underground workings will be sealed since stoppings will not be used and french drains will be needed to transport water out of the mine workings. To show the Division that the mine openings will be properly sealed the permittee must give the Division detailed cross sections that show all underground workings will be sealed off with a minimum of 25 feet of material.

Map R645-301-527, White Oak Mine Site Final Reclamation Contours, does not show the location of the french drains. The permittee needs to show the location of all French drains and related structures that will be permanent features.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-551, The permittee must give the Division detailed cross sections that show 1) all underground openings (portals and working exposed by surface mining) will be backfilled with a minimum of 25 feet of material and 2) the locations of all french drains.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

The approved reclamation plan calls for the removal of all roads in the White Oak mine site and the haul road. The reclamation plan for the White Oak haul road is shown on maps R645-301-527 sheets 5 through 11. Map R645-301-527 sheets 12 through 14 show that the White Oak haul road and road within the White Oak mine complex will be reclaimed. On page R-3 of 37 of the February 2, 2001 submittal the permittee committees to the following reclamation activities:

- To reclaim the White Oak haul road as part of the final reclamation.
- To remove all surface structures at the White Oak mine complex. No mention of retaining all roads within the mine site is made.

R645-301-542.600 list the requirements for road reclamation which are as follows:

- To removal all bridges and culverts, unless approved as part of the postmining land use.
- Scarifying or ripping the road bed and replacing topsoil and revegetating the disturbed areas.
- Remove or otherwise dispose of road-surface materials that are incompatible with the postmining land use.

The permittee makes a general commitment in the White Oak mine site reclamation plan to removal all structures. The Division considers the commitment adequate to insure the removal of all culverts not needed as part of the postmining land use.

The permittee does not comment about scarifying or ripping the roadbeds. However, the permittee does commit to maximizing roughness (pocking) of the reclamation area. Because soil beneath the roads has been compacted the Division wants the permittee to address how the road beds will be scarified or ripped.

In the reclamation section of the MRP (pages 9 and 10 of 37) the permittee state that all asphalt will be hauled to a state approved disposal facility or reprocessed and donated to UDOT for road construction. Concrete not buried in place will be crushed and use to backfill portals, or aggregate or a backfill. When crushed concrete is used a fill it will be place against the toe of existing slope that will be backfilled.

Retention

All roads within the loadout facility, the mine complex and haul road will be reclaimed. If the permittee intents to use the general office area then they will not have to reclaim the roads associated with that site.

However, map R645-301-527, White Oak Mine Site Final Reclamation Contours, shows the centerlines for new and existing roads. Map R645-301-232-100, Post Reclamation, also shows the centerlines for new and existing roads. In Appendix 1-2 the permittee shows an agreement with Mrs. Bessie Oman, a landowner, which shows she consented to having leave the White Oak haul road after reclamation has been completed.

In a conversation between Wayne Western and David Miller, the permittee told the Division's staff that the haul road would be reclaimed under the current and proposed surface mining reclamation plan. References to retaining the haul road were in the submittal because the permittee may chouse to retain the haul road for future surface mining activities and at the request of the landowners. To avoid confusion the permittee should remove reference to the retaining the road from the MRP.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-542.630 and R645-301-121.200, The permittee must address how the road beds will be ripped or scarified during final reclamation.

R645-301-542.600 and R645-301-121.200, The permittee must either removal all references to the White Oak haul road being retained and for roads to be retained in the White Oak mine complex or the permittee must give the Division a reclamation plan that includes retention of those roads as part of an approved postmining land use.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

The permittee must address the issue of water discharges into underground mine workings when they are exposed during surface mining.

Gravity discharges

The permittee must address the issue of water discharges from underground mine workings when they are exposed during surface mining. On page R6 of 37 the permittee states that the portal closure plan will utilize french drains. The permittee describe how french drains will be installed after surface mining.

Sedimentation ponds

On page R-3 of 37 the permittee states that at the White Oak mine site that sediment pond No. 004A will be backfilled and recontoured. The permittee did not mention specifically what will be done with sediment pond Dugout D-1.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-513.600, The permittee address this issue of water being discharged into underground workings as a result of those workings being exposed during surface mining.

R645-301-731.521, The permittee address this issue of water being discharged from underground workings as a result of those workings being exposed during surface mining.

R645-301-542.400, The permittee address how all sediment ponds in the White Oak Mine complex including Dugout D-1 will be reclaimed.

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

The permittee committed in the MRP to meet the requirements of R645-301-515.300.

Findings:

The requirements of this section of the regulations are considered adequate in regard to the proposed permit changes for the addition of surface mining.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected area boundary maps

The Division usually considers that the permit boundaries to be the maximum extent of the affected areas. The affected areas within the permit area include underground workings and areas of surface disturbance. Drawing R645-301-100, Permit Area Base Map, shows the permit area.

Plate 5-1 A, White Oak Mine No. 2 and Plate 5-1 B, White Oak Mine No. 1 shows the location of the underground workings. The maps are dated as being updated on February 4, 2000 and were incorporated in the MRP on March 3, 2000.

The mine facilities and mine workings maps show the areas within the permit area that are affected by mining. R645-301-527 sheets 1-11 and show the disturbed area boundaries for the Valcam loadout, haul road and office complex.

Map R645-301-232-100, Post Reclamation, shows the disturbed area boundaries at the White Oak mine site. The permittee does not propose to change the disturbed area boundaries as a result of surface mining or reclamation.

Bonded area map

The Division usually considers that the disturbed areas are the bonded areas. Map R645-301-232-100, Post Reclamation, shows the disturbed area boundaries. The map does not show the contour lines in the entire disturbed area and within 100 feet of the disturbed area boundaries.

The haul road disturbed area boundaries on final reclamation maps are shown on R645-301-527 sheets 5– 1. The disturbed area boundaries at Valcam loadout facilities are shown on R645-301-527 sheets 1–3. The disturbed area boundaries for the general office area are shown on R645-301-527 sheet 4. The haul road, the loadout and general office area will not change with the proposed surface operation.

Reclamation backfilling and grading maps

Drawing R645-301-232-100, Cross Sections, shows the cross sections marked on R645-301-232-100, Post Reclamation. There are three cross sections on Drawing R645-301-232-100 and those cross sections do not correspond to the operational cross sections. The permittee needs to give the Division cross section on 100 foot intervals that are at a scale of 1" = 100' and correspond to the pre-surface mining cross sections and the surface mining operational cross sections.

Reclamation facilities maps

The permittee does not propose to leave any facilities at the White Oak mine site with the exception of the french drains. The location of the french drains must be shown on the reclamation maps.

The permittee does state that they may modify the permit to allow for the leaving the haul road including the section in the White Oak mine site to be left after reclamation. The Division appreciates the notice. On Drawing R645-301-232-100, Post Reclamation, the permittee shows the location of the haul road that they propose to give on the White Oak mine site. To avoid confusion the haul road should be removed from the reclamation map.

Final surface configuration maps

Drawing R645-301-232-100, Post Reclamation, shows the final contours. The map is at a scale of 1" = 200' and the contours do not extend 100' from the disturbed area boundaries. The Division needs the final surface contour map to be at a scale of 1" = 100' and shows the contours that are within 100' of the disturbed area boundaries.

Reclamation surface and subsurface manmade features maps

The permittee needs not propose to leave any surface or subsurface manmade features at the White Oak mine site with the exception of the french drains.

Reclamation treatments maps

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-542.300, The permittee must give the Division a contour map of the reclaimed White Oak mine site at a scale of 1" = 100' that show the contours within 100 feet of the disturbed area boundaries and the location of the cross sections.

R645-301-542.300, The permittee must give the Division cross sections on 100-foot intervals that show how the White Oak mine site will be reclaimed. The cross section must correspond to the pre-surface mining and operational cross sections. The cross section must be at a scale of 1" = 100'.

R645-301-542.300, The permittee show on the final reclamation contour map or equivalent the location of all manmade surface and subsurface features to be left in at the White Oak mine site including french drains.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Determination of bond amount

The Division reviewed the reclamation cost estimates provided by the permittee. The permittee states in Appendix R3 that some facilities were removed from the bond estimate because they have been removed. The Division cannot reduce the bond estimate for work that has been done unless the permittee has meet the requirements for bond release.

The permittee states that the portals sealing costs have been removed because they will be sealed as part of the surface mining operations. The Division cannot remove the portal seals costs because if the permittee failed to complete reclamation then the Division would have to seal the portals. Note: after the permittee seals the portals the Division can only reduce the bond amount if the permittee meets the requirements for bond release.

The permittee must provided the Division with detailed earthwork calculations for the White Oak mine site. The earthwork cost estimates must include costs for backfilling the White Oak mine site and placing topsoil or its equivalent. See OSM's *Reclamation Cost Estimating Handbook* for details.

The Division cannot reduce the riprap costs because blasting during the operational phase will create riprap at no additional cost.

Terms and conditions for liability insurance

The White Oak mine has an existing liability insurance policy that the Division considers adequate. No additional insurance will be needed for the surface mining operations.

Findings:

The information in the proposed significant revision is not considered adequate to meet the requirements of this section. Prior to approval, the permittee must provide the following in accordance with:

R645-301-830.120 through R645-301-830.140, The permittee must give the Division detailed cost estimates for the reclamation of the White Oak mine site. See the analysis section for details. Note: the Division can give the permittee a copy of the OSM reclamation handbook upon request.

R645-301-880, The permittee must meet the requirements of this section before the bond amount can be reduced for work done or work that is scheduled to be done.

RECOMMENDATION:

The Division should deny the significant division until all the deficiencies have been addressed.

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