



GARY R. HERBERT  
Governor

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Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

October 20, 2014

Kirk Nicholes, Resident Agent  
Alton Coal Development, LLC  
463 North 100 West, Suite 1  
Cedar City, Utah 84720

Subject: Addition of Underground Mining, Alton Coal Development, LLC, Coal Hollow Mine, C/025/0005, Task ID #4652

Dear Mr. Nicholes:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application.

If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock  
Coal Program Manager

DRH/sqs  
O:\025005.COLAWG4652\Deficiencies.docm





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GREG BELL  
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**State of Utah**  
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**Technical Analysis and Findings**  
**Utah Coal Regulatory Program**

**PID:** C0250005  
**TaskID:** 4652  
**Mine Name:** COAL HOLLOW  
**Title:** ADDITION OF UNDERGROUND MINING

**General Contents**

**Permit Term**

*Deficiencies Details:*

R645-301-116, Disturbed acreage is listed by mining phase in Section 116 of the MRP. Section 116 should be updated with this application along with drawings 5-16A, 5-18, 5-19, 5-38 and 5-38A.

R645-301-112.800, The permit term is not extended by this application beyond 6 years (2017) at which time Pit 11 underground access will be reclaimed. If the Permittee has an interest in extending the underground operations eastward into adjacent lands and thereby delaying reclamation of pit 11, then a statement of the interest in contiguous lands should be declared in accordance with R645-301-112.800. If there is no interest in contiguous lands, then application should provide a narrative and timeline for reclamation of the portals and the pit in which they are located.

pburton

**Permit Application Format and Contents**

*Deficiencies Details:*

R645-301-121 The proposed clean-copy version of page 7-97 does not contain the information changed in the red-line version of the application.

R645-301-121 The following sets of pages within the approved MRP have information cut off between pages: 7-4 to 7-5, 7-12 to 7-13, 7-23 to 7-24, and 7-25 to 7-26. Please correct these problems.

adaniels

**Permit Application Format and Contents**

*Deficiencies Details:*

Clarify referenced rule: Rule R645-301-624.400 does not exist.

kstorrar

**Permit Application Format and Contents**

*Deficiencies Details:*

R645-301-121.200, The pagination of the Table of Contents is not accurate and must be revised.

pburton

## **Environmental Resource Information**

### **Geologic Resource Information**

*Deficiencies Details:*

R645-301-622.200, -624.110, -642.210; R645-301-722, -725.100: Need a geologic cross-section between drill holes CH-1-05 and CH-2-05 (extrapolation may be necessary below abandonment depth of well CH-2-05), north of cross-section E-E' in drawing 7-15. Cross-section should include:

- 1) the sink valley fault
- 2) geologic stratum
- 3) aquifer contained within alluvium and pre-mining potentiometric surface
- 4) delineation between 'Fine Grained Alluvium' and 'Potential Coarse Grained Alluvium' if present

kstorrar

### **Probable Hydrologic Consequences Determination**

*Deficiencies Details:*

R645-301-728.350 Update section 728, Probable Hydrologic Consequences, of the MRP to include an evaluation of potential impacts to the hydrologic balance with the addition of underground mining.

R645-301-728.334 In multiple sections of the PHC, groundwater impacts are evaluated based on the intention of leaving pits open less than 60 to 120 days. The pits where the underground mining portals will be located will be left open for a longer period of time, so these sections of the PHC should be updated to assess impacts of leaving these pits open.

R645-301-728.400 If pits 13, 14, and 15 will no longer be surfaced mined due to proposed underground mining, commitments in the current PHC regarding the construction of a low-permeability barrier should be evaluated to determine if this information is still needed in the plan. Section 731.530 of the approved MRP should also be updated to indicated that the water-replacement well has already been drilled.

adaniels

### **Maps Subsurface Water Resources**

*Deficiencies Details:*

R645-301-722 Please update maps 7-4 and 7-5 of the approved MRP, to contain the most current permit boundary.

adaniels

### **Maps Surface Water Resource**

*Deficiencies Details:*

R645-301-722 Please update maps 5-25 and 5-26 of the approved MRP, to contain the most current permit boundary.

adaniels

## **Operation Plan**

### **Mining Operations and Facilities**

*Deficiencies Details:*

R645-301-525.212, Blasting within 500 feet of an active or abandoned underground mine. The added description of the

mining method to be implemented to recover underground reserves meets the requirements of this section. However, the red line revised text of this section states that "No surface mining or reclamation activities are proposed to take place within 500 feet of the underground mine." This statement should be re-evaluated by the Permit applicant as its stated meaning is that no backfilling, grading, topsoiling or re-vegetation work can occur within 500 feet of the underground Coal Hollow Mine. R645-301-525.212 references that if a Permittee needs to blast within 500 feet of an active or abandoned underground mine, that an anticipated blast design be submitted to the Division. No blast design was submitted as part of the Task ID #4652 application. The revised text (no surface mining or reclamation activities are proposed to take place) dictates that no reclamation activities will occur within 500 feet of the deep mine face-up. The Division expects that all reclamation of the surface mined pits (with the exception of Pit 11) be completed within one year of the initiation of underground mining. In accordance with the requirements of R645-301-524.212, Drawing 5-3B should be re-certified for the Task ID #4652 application.

phess

## Mining Operations and Facilities

### Deficiencies Details:

In accordance with R645-301-515.321 the statement in this section needs to be updated to include any potential underground opening closures and water treatment activities that will continue during the temporary cessation.

R645-301-521.141 the text was edited to include the updated Drawings, however, the text only references surface mining while the Drawings include surface and underground mining. Following said paragraph in section 521.141 a new paragraph was added describing the underground operations but only references Drawings 5-3B and 5-10A when Drawings 5-3, 5-9A, 5-10A and 5-38 (as currently labeled) also show relevant information. As per R645-301-521.141, this section of text should be edited to include all the properly labeled Drawings that are relevant to understanding both surface and underground operations.

The text in the section 526 mine facilities R645-301-121,-121.100 for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-521.142 states that subsidence will be prevented by following the recommendations provided in the reference Norwest Corporation letter report, Appendix 5-9. The attached report included recommendations of a seven or five entry designs but does not reference or detail the calculations for pillar stability of the three entry design shown on Drawing 5-10A. See subsidence control plan section for further discussion. The calculations for pillar safety and percent extraction for the proposed five underground sections is not included and should be to verify no subsidence around the portals where overburden is relatively thin.

R645-301-521.162 text needs to be updated to include a yearly and overall disturbance sequence for the permitted area on Drawing 5-2 for open pit mining, alternative method of highwall mining, and underground mining.

R645-301-521.163 needs to be updated to include specific reclamation techniques required for reclamation of underground operations as well as the area of land shown on the updated Drawing 5-3.

R645-301-521.170 the transportation facilities text and drawings need to be updated to include the new conveyor system and the portal access/haul road associated with underground operations.

cparker

## Mining Operations and Facilities

### Deficiencies Details:

R645-301-121.100, As discussed during a recent site visit, the portals may be developed in Pit 10 rather than Pit 11 as shown on Drawing 5-10A and if so, the benches developed in pit 10 are at 40 ft. intervals rather than the 50 ft. intervals shown on Dwg 5-3B. A commitment to provide as-built maps for Drawing 5-10A and 5-3B is requested in the MRP.

pburton

## Air Pollution Control Plan

### Deficiencies Details:

R645-301-422; The applicant will need to update the current plan to include emissions from generators and any other

emission type equipment that may be needed to facilitate under ground mining activities and provide the appropriate approvals from the Division of Air Quality.

jhelfric

## Coal Recovery

### Deficiencies Details:

R645-301-121,-121.100 The redline section of Chapter 5, page 5-22 through 5-26 does not use the latest incorporated version of the MRP that the Division has on file. The current version of the MRP has incorporated task items #4517 (3/21/2014) and #4605 (6/25/2014) which supersedes all prior versions.

R645-301-522 requires a discussion of the underground operation designs that will utilize an extraction of 50% or less, and a pillar width/height ratio in excess of 4.0 to negate any subsidence as a best technology currently available to maintain the environmental integrity of the site so that re-affecting the land in the future through coal mining and reclamation operations is minimized. In the event the portals will remain open and future underground operations are to occur outside the current permit boundary a discussion of such intents should also be included. The reference Norwest Report (appendix 5-9) reference designs for the Federal Right of Way and not sections within the permitted area.

R645-301-523 The opening text of this section needs to be updated to reflect the underground mining methods as well as the open pit methods, including underground mining equipment.

R645-301-523 The following paragraph needs to be updated to reflect the updated alternative option tons produced from 3.0 million tons of coal to 3.5 million tons of coal with an update life approximation.

R645-301-523.100,-523.200.-523.220 Additional detail must be added to describe the sequence of mining and reclamation activities associated with Pit 9 Panel 3, Pit 10, and Pit 11 reclamation. If the portals are install within Pit 10 instead of Pit 11, as shown on Figure 5-10A, Pit 9 will likely fall within the 500 feet radius and will need to be addressed as to what its current state will be at the point of start of underground mining.

cparker

## Subsidence Control Plan Subsidence

### Deficiencies Details:

R645-301-525.311, Utilization of Subsidence Technology / R645-301-525.490, Other Information

The Task ID # 4652 application utilizes the information contained in Appendix 5-9 as technical support for the five entry and seven entry development systems which are intended to prevent subsidence and material damage to the extent economically and technologically feasible, maintain mine stability, and maintain the value and reasonably foreseeable use of the surface lands (See R645-301-525.311).

Appendix 5-9 is to be added to the mining and reclamation plan. It discusses entry width, cutting height, # of entries, extraction ratios, etc. and its contents meet the requirements of R645-301-525.240.

The submitted geotechnical report does not meet the requirements of the R645 Coal Mining Rules for the following reasons;

- 1) Appendix 5-9 was not P.E. certified by Mr. John C. Lewis. The Division can require that a subsidence control plan be certified under R645-301-525.490, Other Information. A sufficient amount of technical support was used in determining the pillar sizes for the different overburden depths and multiple entry configurations and the Division believes this technology is adequate to support the requested P.E. certification.
- 2) Although the pillar designs and their respective extraction ratios indicate that no subsidence will occur over the developed workings, the Division requires that in accordance with;
  - a. R645-301-525.440, A description of the monitoring, if any, needed to determine the commencement and degree of subsidence so that when appropriate other measures can be taken to prevent, reduce, or correct material damage.
  - b. The Division requires that the Permittee conduct surface walkovers of the developed panel areas within 60 days of completion of the mining of the land above the panel recovery areas, and at least once during the year following the completion of mining in the these areas.
  - c. If the walkovers determined that no affects or voids have developed to the surface, the Permittee will document this and forward same to the Division.
  - d. If surface cracking, or sinkhole type subsidence or other surface impacts are noted during surface walkovers, they will be documented, and located on a surface topographic map, reported to the Division, photographed, and repaired. The repair plan shall be approved by the Division prior to initiation of the field work (See R645-301-525.480).

If the surface monitoring indicates that no deformation is occurring, the Permittee can apply to the Division to discontinue the approved monitoring plan, based upon adequate documentation of the monitoring surveys.

phess

## **Subsidence Control Plan Subsidence**

### *Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-525.300,-525.310,-525.311 The application details how subsidence control measures in regards to underground mining operations are not required due to supporting details in Norwest's geotechnical report. The supports as designed are intended to prevent subsidence for any reasonable foreseeable use of surface lands. However Norwest's report is insufficient to meet R645-301-525.240 due to:

Appendix 5-9 calculations reference underground operations outside of the existing permitted area. The Division requests that the PE Mr. John C Lewis stamp the subsidence control plan due to high level of certainty required in the calculations to guarantee no subsidence for the underground designs within the permitted area.

R645-301 525.440 requires that appropriate monitoring and mitigation plan be included in the application so that in the event of any unexpected subsidence, proper procedures can be implemented. Such monitoring events could include surface inspections after panels have been completely mined out with documentation and notification to the Division in the event of any changes or repairs.

cparker

## **Subsidence Control Plan Slides and Other Damage**

### *Deficiencies Details:*

R645-301-533.700-714 The current MRP needs to be updated to reflect the changes in reclamation timing due to underground mining as it currently reflects the timing shown in Drawing 5-38.

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

cparker

## **Fish and Wildlife Protection and Enhancement Plan**

### *Deficiencies Details:*

R645-3-1-332; Development or first mining typically does not produce any noticeable subsidence. However second or retreat mining in a room and pillar operation will subside the surface. The text on Page 3-43 of the application should include a reference to the appropriate section of the MRP where the predicted subsidence information can be located. The text also needs to be revised to include a description of the anticipated impacts of subsidence on renewable resource lands and how such impacts will be mitigated.

jhelfric

## **Road System Other Transportation Facilities**

### *Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-534.100-200,-534.300-340 The current MRP needs to be updated to reflect the changes in reclamation timing due to underground mining as it currently reflects the timing shown in Drawing 5-38. The needs to be an added discussion of the portal access road proposed in the amendment as well as figure updated.

R645-301-527.100 Clarification is need as to what haul road is being used as portal access and to remove coal from the underground stockpile outside the portals.

R645-301-527.200 Specification for each road along with maintenance plans need to be provided

R645-301-527.200 the following needs to be address according to the state regulation:

- 1) Clarification is need if the seven primary roads listed in the original MRP include the portal access/haul road to the underground facilities
- 2) A description of the portal access road is required.
- 3) A description of the shuttle cars, underground conveyor system and conveyor stacking systems is required.

cparker

## Spoil Waste Excess Spoil

*Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-528.200 This section needs to be updated to reflect the scenario that Pit 10 or Pit 11 will remain open with continued underground mining operations and how overburden will be placed in the surrounding pits within 500 ft of the proposed portals before underground operations begin.

cparker

## Hydrologic Ground Water Monitoring

*Deficiencies Details:*

R645-301-731.211. Deficient in monitoring groundwater quantity up-gradient of the proposed underground mining areas 1st N, 2nd N, 3rd N, and 4th N. Groundwater wells north of the proposed underground mining are either not screened deep enough (Y-99) to measure the 'Potential Coarse Grained Alluvium Zone' water-levels shown in cross-section E-E' (Drawing 7-15B) or the well (UR-70) is not within the ground-water basin directly up-gradient of the underground mining area. The Permittee needs to install a well within the coarse grained alluvium of the Sink Valley ground-water basin, near the north-south permit boundary, and directly up-gradient of the 4th N underground mining zone (shown in Drawing 5-10A).

kstorrar

## Hydrologic Gravity Discharge From Underground Mine

*Deficiencies Details:*

R645-301-731 The Permittee should include a plan to handle and monitor any intercepted groundwater, taking into account volume, quality, duration of flow, as well as clearly setting monitoring and reporting requirements.

adaniels

## Hydrologic Impoundments

*Deficiencies Details:*

R645-301-733 Please update page 7-55 paragraph one, and 7-54 paragraph two, to include the correction that there are five sediment impoundments instead of four.

adaniels

## Maps Affected Area

*Deficiencies Details:*

R645-301-121.200, -141, -512.100, -512.110 Drawings submitted with permit applications will be presented in a consolidated format, to the extent possible, and will include all the types of information that are set forth on U.S. Geological Survey of the 1:24,000 scale series.

The Drawings in the application need to be updated in accordance with R645-301-141 USGS 1:24,000 Drawings include a scale and a scale bar. The Drawing formats, as submitted, leave a chance for misinterpretations due to resizing during printing. A scale bar helps maintain accuracy regardless of the printed format.

In accordance with R645-301-121.200, for clarification, on Drawing 5-3 the area currently show just as the portals should be relabeled "Portals and Underground Facilities/ Structures Area" because this area calls out the portals and numerous other facilities/structures associated with the underground operations such as a the portal access ramp, underground product conveyor belt, radial stacker belt, ventilation fan, a generator pad, sump pond, and coal stockpile.

Format errors on Drawing 5-3B are erroneous or misleading include:

- 1) Updated with a current PE stamp
- 2) The date on the title blocks is 2008
- 3) Drawn by employee no longer involved in operations
- 4) Scale ratio is ambiguous and liable to misreading without a bar or reference sheet size\*
- 5) Updated with labels on the elevation of the contours on the plan view
- 6) Details of the shotcrete around the portals
- 7) Details of the generator pad and fan

Drawing 5-9A and Drawing 5-10A are presumably mislabeled. Both updated Drawings show the surface and underground operations, though in the in Table of Contents Drawings 5-9A and 5-10A are labeled "Surface & Highwall Mining." Either the number is wrong or the title needs to be updated to reflect the underground operations as well.

Within the application the details on the shotcrete around the portals and the generator pad are missing. The following Drawings likely need to be added or updated to reflect the new underground operations:

- 5-2 Disturbance Sequence
- 5-8B Facilities and Structural Electrical
- 5-8C Facilities and Structural Water plan
- 5-16A Overburden Removal Sequence
- 5-18 Overburden removal Sequence
- 5-19 Overburden Removal Stages
- 5-22 Primary Mine Haul Roads Plan View
- 5-36 Post mining Topography-Cross section F-F' needs to be updated
- 5-38 Reclamation Sequences
- 5-38A Reclamation Sequences

cparker

## Maps Certification Requirements

*Deficiencies Details:*

R645-301-512.100 and -512.110 / R645-301-525.490 and -525.300  
Drawing 5-3B should be updated with a current P.E. stamp in accordance with R645-301-512.100 and -512.110.

Appendix 5-9 must be P.E. certified to support the subsidence control plan for the Alton underground mine.

phess

## Maps Certification Requirements

*Deficiencies Details:*

R645-301-513.500 was not updated to include the sealing of the portals at the conclusion of underground mining activities and final reclamation. It is mentioned in section 529 but also needs to be updated here as well.

R645-301-513.700 requires the permittee to show the nature, timing, and sequence of the surface coal mining and reclamation activities that propose to mine closer than 500 ft to an active underground mine for approval by the division and MSHA. Clarification in text and on Drawing 5-38 is required for the sequence of reclamation of Pit 10, Pit 11, and Pit 9 Panel 3.

cparker

## Reclamation Plan

### General Requirements

*Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-541.300,-513.500,-529, -542.700 A discussion needs to be added discussing how underground facilities will be removed.

R645-301-542.100 Needs to be updated to reflect the time table reclamation of portal sealing and reclamation of remaining open pits within 500 ft of the portals.

R645-301-542.300 Missing drawing reclamation cross sections

R645-301-542.800 Reclamation costs need to be updated in Appendix 8-1 to reflect underground facilities reclamation.

cparker

## **Backfill and Grading General**

*Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-553 text needs to be updated to include the timeline of sealing portals in junction with no surface activities within 500 ft of the portals until underground operations have ceased.

cparker

## **Mine Openings**

*Deficiencies Details:*

R645-301-513, -301-529,-301-551

The following pages, and sections refer to the management of the underground mine openings associated with the Alton Coal underground operation;

1) Page 5-51, Section 529, Management of Mine openings

2) Page 5-50, section 528.340, Return of Pit 11 Spoil Material from the excess spoils pile to the Pit 11 area after underground operations have ended

3) Page 5-63, section 535.500, Disposal of Excess Spoil At Drift Entries; all spoil removed from the Pit 11 area to mine the pit coal and develop the underground entries will be recovered from the excess spoil pile. This will be used in the closing off of the underground face up entries and Pit 11.

4) Page 5-64, Section 540, RECLAMATION PLAN, section 541.100-400 General ; "Underground mine portals will be closed in accordance with approved MSHA plans and backfilled".

5) Page 5-68, Section 542.700, Final Abandonment of Mine Openings and Disposal Areas

"Underground mine portals will be closed in accordance with approved MSHA plans and backfilled".

6) Page 5-70, Section 551; SEALING AND CASING OF UNDERGROUND OPENINGS

"When no longer required, underground mine openings will be closed in accordance with MSHA approved requirements and backfilled".

All six pages of the revisions made relative to the permanent closing and sealing of the underground portals say that the underground portals will be sealed according to the MSHA approved plans, which require sealing by backfilling of the Pit 11 area.

The Division does not know if MSHA or the USDO/ BLM would require concrete block seals 25 feet in by the highwall of each of the drift entries.

No mention is made of the R645 Coal Mining Rules which require the permanent closure of underground mine openings. Reference R645-301-513, -301-529,-301-551 in the application for clarification that the Division is responsible for the enforcement of same.

phess

## **Mine Openings**

*Deficiencies Details:*

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

The Division does not know if MSHA will require specific closure designs for each of the drift entries. No mention is made of the R645 Coal mining rules which require the permanent closure of underground access points.

cparker

## Bonding Determination of Amount

### Deficiencies Details:

#### Findings:

Based on the current information provided by the MRP, it is not clear as to whether the Permittee has a sufficient amount of bond posted to reclaim all of the disturbed acreage at the Mine. It appears that the posted \$ 10,000,000 may be insufficient to allow the initiation of mining activities in Phase III. Pit sequencing and methods of recovery have been varied numerous times by the Permittee, and in this proposal, Task ID #4652, the Permittee is suggesting that an approval for an underground mine be granted. In this operation, coal recovery and reclamation work must be jointly co-ordinated to ensure that reclamation is not allowed to fall behind by more than 60 days following completion of coal recovery from each pit (See Chapter 5, page 5-59). However, that plan was approved in January of 2010 for a coal stripping operation only. We now have two methods of mining in operation, with a third being proposed.

The currently approved reclamation plan is outdated, and it does not provide adequate information as to the progression of reclamation work following coal recovery by stripping or highwall mining. In accordance with the requirements of;

- 1) R645-301-121.200, "The permit application will be clear and concise, " and
- 2) R645-301-812-700, "The Division will require in the permit that adequate bond coverage be in effect at all times" and
- 3) R645-301-820.130, "The Operator will identify the initial and successive areas or increments for bonding on the permit application map submitted for approval as provided in the application, and will specify the bond amount to be provided for each area or increment".

The \$ 10,000,000 bond which is currently in place may not be adequate to ensure the reclamation of the mining areas designated as being part of Phase III at Coal Hollow. In order to clarify the amount of acres disturbed by surface mining, and highwall mining, the Permittee will provide a current map of the Coal Hollow Mine showing the following;

- A) the identification number of each pit which has been backfilled and rough graded, with the status of progress completed (acreage).
- B) the identification number of each pit which has been subsoiled, with the status of progress completed (acreage).
- C) the identification number of each pit which has been topsoiled, with the status of the completed topsoiling activity (acreage completed).
- D) the ID number of each pit which has been seeded, with the status of the seeding process (acreage completed).
- E) the acreage which has been undermined using highwall mining methods, and the locations where this method has been implemented.

F) the acreage of operations for both Phase II and Phase III is to be shown on Map 5-3.

The Permittee must provide adequate information to the Division to support a Division finding as to whether or not sufficient bond is in place at this time. If this can not be shown, the Permittee must either post additional bond in an amount to be determined by the Division, or cease coal recovery activities while continuing reclamation work until adequate bond can be posted.

4) R645-301-511, General Requirements. Each permit application will include descriptions of R645-301-511.300, Reclamation, and

5) R645-301-512.100, Cross Sections and Maps. "Cross sections and maps will be updated as required by the Division".

The maps which must be updated are the following; Drawings 5-3, 5-38, 5-18 and 5-19.

phess

## Bonding Determination of Amount

### Deficiencies Details:

R645-301-121,-121.100 The text included for this section in the redline is the original MRP and is not current version of the MRP for this section.

R645-301-820.112 Section needs to be updated as coal mining and reclamation operations on succeeding increments are initiated and conducted within the permit area, the permittee will file with the Division an additional bond or bonds to cover such increments in accordance with R645-830.400.

R645-301-830.140 Appendix 8-1 needs to be updated to reflect the new underground mining reclamation costs in detail so

that the Division can determine the appropriate bond amount.

cparker