



**State of Utah**

**Department of  
Natural Resources**

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*Executive Director*

**Division of  
Oil, Gas & Mining**

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*Lieutenant Governor*

November 24, 2008

Cydney Garland, Claims Adjuster  
Savage Services Corporation  
6340 South 3000 East, Suite 600  
Salt Lake City, Utah 84121

Subject: Mine and Reclamation Plan Rewrite, Savage Services Corporation,  
Savage Coal Terminal, C0070022, Task ID #2955, Outgoing File

Dear Mr. Garland:

The Division has reviewed the updated Mining and Reclamation Plan. A Technical Analysis has been prepared which outlines some deficiencies in sections of the plan. Please take a look at the deficiency list and respond no later than December 31, 2008 to complete the update.

If you have any questions please feel free to speak with the staff reviewer's whose initials follow the deficiency: Priscilla Burton [PB] at the Price Field Office (435) 613-3733 and Wayne Western [WHW] (801) 538-5315, Joe Helfrich [JCH] (801) 538-5290, Dave Darby [DWD] (801) 538-5341 or myself at the Salt Lake Office (801) 538-5325.

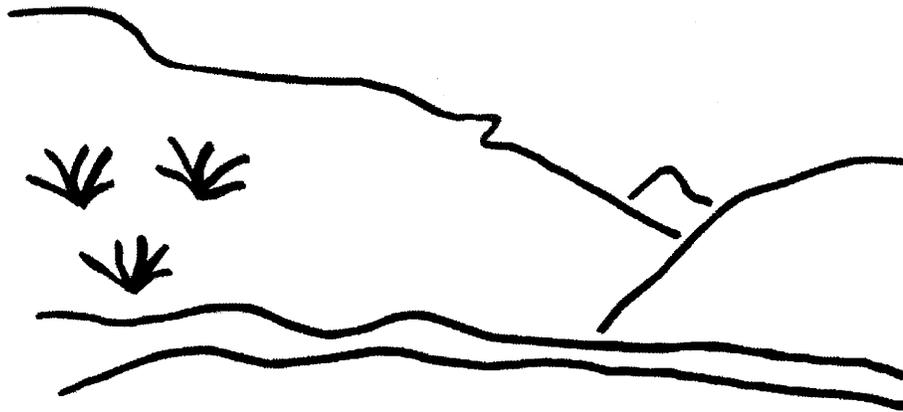
Sincerely,

James D. Smith  
Permit Supervisor

SS  
Enclosure  
cc: Boyd Rhodes, Savage  
Dan Guy, Blackhawk Engineering w/ copy  
Price Field Office

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# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

Savage Coal Terminal  
C/007/0022  
Technical Analysis  
November 24, 2008

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## TECHNICAL ANALYSIS DESCRIPTION

The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the minimum regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at <http://ogm.utah.gov>

The Division writes a TA as part of the review process. The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

When review of an application results in findings of noncompliance with the R645-Coal Mining Rules, the Division discusses the deficiencies in the analysis sections and cites regulatory references for the deficiencies in the findings sections of the Draft TA. The regulatory references cited describe the minimum requirements for meeting the R645-Coal Mining Rules and obtaining a permit.

The Draft TA includes a summary list of deficiencies at the beginning of the document. The Applicant/Permittee will receive the summary list of deficiencies and a redline/strikeout version of the Draft TA at the completion of the review. As the Applicant/Permittee resolves the listed deficiencies, the Division modifies the Draft TA, until a Final TA with no deficiencies is written. Approval is based upon the Final TA. The Permittee will receive an electronic version of the Final TA.

The Final TA is the starting point for review of subsequent applications for permit change, renewal, transfer, assignment, or sale of permit right. The Division modifies the analysis and findings in the Final TA to reflect the changes in the application.

## SUMMARY OF DEFICIENCIES

This document presents the Division's technical review of the mining and reclamation plan (MRP), including all amendments currently under review for permit #C/007/0022. The following summary lists all outstanding deficiencies identified by the Division.

Accordingly, the Division has identified the following issues:

**R645-300-141**, Section 116.100 states the permit area is 153.46 acres. No legal description of the permit area was found in the application.

The Permit issued August 4, 2004 provides the legal description as follows:

### **Township 15 South, Range 10, East, SLBM**

Section 11: W1/2SW1/4 except 0.24 ac. in NW corner,  
E1/2SW1/4 except East 100 feet and 5.42 ac. in SW corner.

Also included in the permit area is a 20-foot Right-of-Way for a pipeline across the SE1/4NW1/4 and NW1/4NW1/4 of Section 11 (1.21 acres), and across the SW1/4SW1/4, NW1/4/SW1/4, SW1/4NW1/4 and NE1/4NW1/4 of Section 2 (3.97 acres).

This permit area description does not appear to match the permit area circumscribed on Plate 1-1 that shows the permit area skirting around property owned by Keven and Lois Jensen in the W1/2SW1/4 of Section 11. Please verify this legal description and if necessary, provide a corrected legal description in Chapter 1. [PB]

**R645-301-112.200**, The AVS system lists Savage Service Corp employer ID number as 870387049. This is the number that the MRP lists for Savage Companies. Therefore, please confirm employer ID numbers for Savage Services Corp and Savage Companies, to ensure that no error has been made in writing the MRP. [PB]

**R645-301-112.230**, Section 112.230 states that Savage Services Corp will pay the abandoned mined fee, but the name, address, telephone number, and employer I.D. of a person was not provided. [PB]

**R645-301-112.330**, In Section 112.310, the MRP must distinguish between officer and directors for Savage Services Corporation and those for Savage Companies. •The Corporate Secretary should provide an end date for recently retired director James T. Jensen. •End dates are requested for the following officers names listed in the AVS system: Eric B. Adamson, Arthur D. Johnson, Fred C. Busch, Raymond Alt, Kenneth W. Cooper, Kim F. Christensen, Ellis Edwards, Charles O. Monroe, Jeff M. Chessler, Troy Reid, Mark Wehmanen, Gary L. Plant, Kenneth D. Ellzey, Boyd E. Draper, Troy M. Savage, Isaac Haboucha, Butch Jentzsch, Terrence Savage, Kevin R. Haugh, and Mark Andrew Nelson. • Hire dates are provided, but the MRP need only list the date that ownership position was assumed. Please indicate whether hire date is equivalent to the date that the ownership position was assumed. •Start and end dates must be confirmed by notarized Secretary signature. • Provide percent ownership for all officers and directors listed in Section 112.310. [PB]

**R645-301-112.340**, The Catale Oklahoma Loadout has been listed in Section 112.340 as a site operated within the last five years by Savage Industries Inc. The MRP must list the permit number of this site and verify its status (reclamation, bond release, etc.). Is it still under Savage Services Corp. control? If not, when was it sold? [PB]

**R645-301-112.600**, Adjacent surface and mineral owners are shown on Plate 1-1. Table 1-1 supplies the names and addresses of the surface and mineral owners. The heading for table 1-1 should clearly indicate both surface and mineral owners area listed or a separate table could be created for mineral owners. Table 1-1 is not current for either surface or mineral ownership. Table 1-1 is missing the following surface owners: 2 C' Properties, LLC; Shane & Kristin Campbell; Daniel Campbell; Nick Platis, et. al Table 1-1 is missing the following mineral owners: BLM (O & G owner); Mountain Coal Co. (coal and other mineral owner). In addition, Table 1-1 lists the following surface owners who are no longer shown on Plate 1-1: Alan Walton, David R. Cave, Rocky Mountain Power; Mountain States Telephone and Telegraph. •Table 1-2 was referred to in Section 112.600, but could not be found. [PB]

**R645-301-112.700**, A letter from MSHA found in Chapter 5, Figure 5-6 states that refuse pile 1211-UT-9-0034 was reassigned the number 1211-UT-09-01444-01. Please refer to this number when listing MSHA ID numbers in Chapter 1 of the application. •Please clarify in Section 112.700 whether the temporary refuse pile with MSHA ID 1211-UT-9-0033 is still in existence. If this pile is no longer in existence and if the MSHA ID number was retired, please edit Section 112.700 accordingly. [PB]

**R645-301-114 and R645-301-121.200**, All right of entry agreements in Section 114 were negotiated by either Swisher Coal or Beaver Creek Coal Co, but, the loadout was purchased from Mountain Coal Co. To be clear, Chapter 1 should make the connection between Beaver Creek Coal Co. and Mountain Coal Co. • In addition, the site is referred to throughout the MRP as the Castle Valley Spur Processing and Loadout Facility or CV Spur, however the name was changed to the Savage Coal Terminal with transfer of the permit in 1999 to Savage Industries, Inc. (Attachment A of the 1995 Permit). This information should be presented in the narrative of Chapter 1. [PB]

**R645-301-114.100**, From the information provided, it appears that Savage Industries acquired ownership of the permit area in 1994 through a lease agreement with option to purchase (item 7, Section 114.100). The specific lands to which this lease pertains must be disclosed, as well as the date the purchase agreement option was executed. • Ownership of the surface has changed hands since the 1978 Right of Way agreement for the water line from the Price River and for the river pump was negotiated (items 4 & 5, Section 114.100). Were any subsequent agreements filed with the County Recorder? • Item 6, Section 114.100, should indicate the application number for the exchange of water is filed with Division of Water Rights. • Item 8, Section 114.100 should indicate where the name change is filed (Department of Commerce? Or with the County Recorder?) [PB]

**R645-301-117.100**, The application (dated April 9, 2008) must be accompanied by a current liability insurance certificate. [PB]

**R645-301-117.200**, An affidavit of publication must be made part of the application. [PB]

**R645-301-123**, Appendix 1-5 provides a signature of James Jensen, Executive Vice President, certifying that the information in the application is true and correct. There is no date on this signature, but the notary's commission expired in 1997. This is probably the original certification that accompanied the original MRP. Since Mr. Jensen recently retired, it is recommended that the signature of another authorized official of the company be provided in Appendix 1-5, to verify that the information provided in the application is true and correct. [PB]

**R645-301-140**, The wildlife map, Plate 10-1 from the existing MRP, should be included in the reformatted application along with any other pertinent wildlife maps identified in the DWR's database. The DWR may have additional wildlife species maps for the area where the Savage Coal Terminal is currently located. [JH]

**TECHNICAL ANALYSIS DESCRIPTION**

November 24, 2008

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**R645-301.230** The Permittee shall describe in the MRP, Section 231.400, whether the topsoil hauled from the coal stockpile expansion area was placed on top of or in between the previous existing topsoil and subsoil stockpiles.

**R645-301-222 and R645-301-121.200**, On page 29 of this section, there is a reference to Sections 8.5 and 8.6 that do not exist any longer with this reformatted plan. • Five soil types described by Bruce Chessler in 2006 (Appendix 2-3) along with those identified by the 2002 Larsen survey have been removed from the Soils Map 2-1 with this reformatting amendment. The soils map should portray the baseline soils information, not the extent of current disturbance. [PB]

**R645-301-244 and R645-301-354 and R645-301-355**, Section 542.200 must be updated with the knowledge gained from topsoil stockpiles, that the best technology for establishing vegetation is surface roughening for water harvesting and seeding immediately after topsoil placement, regardless of season. [PB]

**R645-301-322, -301-333, -301-342, -301-358**, In order to ensure compliance with the Endangered Species act as required by R645-301-332, the application needs to include calculations for water consumed in acre feet per year for the loadout facility that will contribute to the habitat of the four endangered fish species in the upper Colorado River watershed system. A copy of the criterion used to calculate water consumption has been provided to the applicant by way of "E" mail. They include the Colorado pike minnow, razorback sucker, humpback chub and the bonytail. These four endangered fish species are included in the Fish and Wildlife Services' Colorado fish recovery program which requires a payment of 15.95 per acre foot for each acre foot up to and including any excess of 100 acre feet of water consumed per year. [JH]

**R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275**, The information is reformatted in accordance with the R645 rules and includes a description of the post mining land use for the disturbed area as light industrial, (chapter 4, page section 411.100). However, chapter three, page 17, section 330 indicates that the postmining land use would be wildlife habitat for small mammals and songbirds. The applicant may choose to implement either one or both of the proposed post mining land uses and should revise the appropriate sections of the application. [JH]

**R645-301-521.190**, The Permittee must include in the MRP a table that shows the number of permitted and disturbed areas and whether they are owned by the

federal government, state government, local government or private persons. The Division needs that information for reports that go to OSM. [WHW]

**R645-301-526.100**, The Permittee did not meet the requirements of this section. R645-301.526.100 deals with structures that was used for coal mining and reclamation and were constructed prior to January 21, 1981. The main reason for that regulations is to show that structures constructed before January 21, 1981 meet the performance standards even if they do not meet the design standards. [WHW]

**R645-301-527.100**, The Permittee must classify each road as primary or ancillary. The Permittee cannot make general statements such as the one in Chapter 5 page 6 "All other roads on the site are considered Ancillary Roads". The Permittee must state purpose or use of ancillary roads. [WHW]

**R645-301-521.252**, The Permittee must commit to placing perimeter signs around the permit boundaries rather than state that the permit boundaries are shown on a map. [WHW]

**R645-301-527.270**, The Permittee must commit to place topsoil markers on topsoil piles rather than state what the signs will look like. [WHW]

**R645-301-731.300**, Provide in Attachment 1 of Appendix 5-1 the analyses referred to in Section 536. Provide in Attachment 1 of Appendix 5-2, the acid toxic analysis of air-jig separation waste for parameters described in Appendix 5-2. [PB]

**R645-622.400**, The Permittee should provide a map showing the location of the old reclaimed wells. [DWD]

**TECHNICAL ANALYSIS:**

**SUMMARY OF PERMIT CONDITIONS**

As determined in the analysis and findings of this Technical Analysis, approval of the plan is subject to the following Permit Conditions. The applicant is subject to compliance with the following Permit Conditions and has committed to comply with the requirements of these conditions as referenced in the approved Permit.

Accordingly, the permittee has committed to comply with the requirements of the following Permit Conditions, as specified, and in accordance with the requirements of:

## **GENERAL CONTENTS**

### **IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

#### **Analysis:**

Section 112 of the MRP indicates that the applicant and operator is Savage Services Corp. The current five year Mining and Reclamation permit, dated August 7, 2004, is assigned to Savage Services Corp. Employer identification number is listed with address and telephone number.

Section 112.300 states that Savage Services Corporation is wholly owned by Savage Companies (also a Utah corporation). The ownership and control information for both companies is provided in Section 112.300. An end date for recently retired director James T. Jensen is requested. End dates for all other retired or inactive officers and directors listed in the AVS system is also requested.

The applicant's resident agent is listed as C.T. Corporation (address and telephone provided). In addition, Appendix 1-6 designates James Jensen, Boyd Rhodes and Dan Guy as authorized representatives for the purposes of permit and environmental monitoring. Section 112.230 states that Savage Services Corp will pay the abandoned mined fee, but the name, address, telephone number, and employer I.D. of a person was not provided.

Section 112.340 lists the Catale Oklahoma Loadout as a site operated within the last five years by Savage Industries Inc. The MRP must list the permit number of this site.

Section 112.700 provided MSHA site identification number 42-01444 for the facility. Appendix 1-2 lists MSHA I.D. numbers: 1211-UT-9-0033 (temporary refuse permit) and 1211-UT-9-0034 (permanent refuse permit). A letter from MSHA found in Chapter 5, Figure 5-6 states that refuse pile 1211-UT-9-0034 was reassigned the number 1211-UT-09-01444-01 and that all future reference to this waste pile should use the reassigned number.

Adjacent surface and mineral owners are shown on Plate 1-1. Table 1-1 supplies the names and addresses of the surface and mineral owners. Table 1-2 was referred to in Section 112.600, but could not be found. The heading for table 1-1 should clearly indicate both surface and mineral owners area listed or a separate table could be created for mineral owners. Table 1-1 is not current for either surface or mineral ownership. Table 1-1 is missing the following surface

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**GENERAL CONTENTS**

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**Findings:**

The information provided does not meet the requirements of the Regulations. Prior to approval, provide the following in accordance with:

**R645-301-112.200**, The AVS system lists Savage Service Corp employer ID number as 870387049. This is the number that the MRP lists for Savage Companies. Therefore, please confirm employer ID numbers for Savage Services Corp and Savage Companies, to ensure that no error has been made in writing the MRP. [PB]

**R645-301-112.230**, Section 112.230 states that Savage Services Corp will pay the abandoned mined fee, but the name, address, telephone number, and employer I.D. of a person was not provided. [PB]

**R645-301-112.330**, In Section 112.310, the MRP must distinguish between officer and directors for Savage Services Corporation and those for Savage Companies. •The Corporate Secretary should provide an end date for recently retired director James T. Jensen. •End dates are requested for the following officers names listed in the AVS system: Eric B. Adamson, Arthur D. Johnson, Fred C. Busch, Raymond Alt, Kenneth W. Cooper, Kim F. Christensen, Ellis Edwards, Charles O. Monroe, Jeff M. Chessler, Troy Reid, Mark Wehmanen, Gary L. Plant, Kenneth D. Ellzey, Boyd E. Draper, Troy M. Savage, Isaac Haboucha, Butch Jentzsch, Terrence Savage, Kevin R. Haugh, and Mark Andrew Nelson. • Hire dates are provided, but the MRP need only list the date that ownership position was assumed. Please indicate whether hire date is equivalent to the date that the ownership position was assumed. •Start and end dates must be confirmed by notarized Secretary signature. • Provide percent ownership for all officers and directors listed in Section 112.310. [PB]

**R645-301-112.340**, The Catale Oklahoma Loadout has been listed in Section 112.340 as a site operated within the last five years by Savage Industries Inc. The MRP must list the permit number of this site and verify its status (reclamation, bond release, etc.). Is it still under Savage Services Corp. control? If not, when was it sold? [PB]

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**R645-301-112.700**, A letter from MSHA found in Chapter 5, Figure 5-6 states that refuse pile 1211-UT-9-0034 was reassigned the number 1211-UT-09-01444-01. Please refer to this number when listing MSHA ID numbers in Chapter 1 of the application. Please clarify in Section 112.700 whether the temporary refuse pile with MSHA ID 1211-UT-9-0033 is still in existence. If this pile is no longer in existence and if the MSHA ID number was retired, please edit Section 112.700 accordingly. [PB]

## **VIOLATION INFORMATION**

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

### **Analysis:**

Violation information is discussed in Section 113. The three-year history of compliance found in Appendix 1-1 is current as of 2008. An AVS check conducted on September 17, 2008 did not reveal any outstanding violations for Savage Services Corp. or Mountain Coal Co.

### **Findings:**

The information provided meets the requirements of the Utah Coal Rules.

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## RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

### Analysis:

Section 114 describes the right of entry and Plate 1-1 shows surface ownership. All documents providing right of entry were entered into by previous owners of the site and were acquired upon purchase of the site. From the information provided, it appears that Savage Industries acquired ownership of the permit area in 1994 through a lease agreement with option to purchase (item 7, Section 114.100). The specific lands to which this lease pertains must be disclosed, as well as the date the purchase agreement option was finalized.

Ownership of the surface has changed hands since the 1978 Right of Way agreement for the water line from the Price River and for the river pump was negotiated (items 4 & 5, Section 114.100). Were any subsequent agreements filed with the County Recorder?

Item 6, Section 114.100, should indicate the application number for the exchange of water is filed with Division of Water Rights.

Item 8, Section 114.100 should indicate where the name change is filed (Department of Commerce? Or with the County Recorder?)

All right of entry agreements in Section 114 were negotiated by either Swisher Coal or Beaver Creek Coal Co, but the loadout was purchased from Mountain Coal Co. To be clear, Chapter 1 should make the connection between Beaver Creek Coal Co. and Mountain Coal Co.

In addition, the site is referred to throughout the MRP as the Castle Valley Spur Processing and Loadout Facility or CV Spur, however the name was changed to the Savage Coal Terminal with transfer of the permit in 1999 to Savage Industries, Inc. (Attachment A of the 1995 Permit). This information should be presented in the narrative of Chapter 1.

### Findings:

The information provided does not meet the requirements for right of entry. Prior to approval, please provide the following, in accordance with:

**R645-301-121.200 and R645-301-114**, All right of entry agreements in Section 114 were negotiated by either Swisher Coal or Beaver Creek Coal Co, but the loadout was purchased from Mountain Coal Co. To be clear, Chapter 1 should make the connection between Beaver Creek Coal Co. and Mountain Coal Co. • In addition, the site is referred to throughout the MRP as the Castle Valley Spur Processing

and Loadout Facility or CV Spur, however the name was changed to the Savage Coal Terminal with transfer of the permit in 1999 to Savage Industries, Inc. (Attachment A of the 1995 Permit). This information should be presented in the narrative of Chapter 1. [PB]

**R645-301-114.100**, From the information provided, it appears that Savage Industries acquired ownership of the permit area in 1994 through a lease agreement with option to purchase (item 7, Section 114.100). The specific lands to which this lease pertains must be disclosed, as well as the date the purchase agreement option was executed. • Ownership of the surface has changed hands since the 1978 Right of Way agreement for the water line from the Price River and for the river pump was negotiated (items 4 & 5, Section 114.100). Were any subsequent agreements filed with the County Recorder? • Item 6, Section 114.100, should indicate the application number for the exchange of water is filed with Division of Water Rights. • Item 8, Section 114.100 should indicate where the name change is filed (Department of Commerce? Or with the County Recorder?) [PB]

## **LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS**

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

### **Analysis:**

Section 114.100 states that Plate 1-1 shows the boundaries of the permit area. Section 116.100 states the permit area is 153.46 acres. Legal descriptions are provided for lease agreements and rights of way, but no legal description of the permit area was found in the application.

The Permit issued August 4, 2004 provides the legal description as follows:

#### Township 15 South, Range 10, East, SLBM

Section 11: W1/2SW1/4 except 0.24 ac. in NW corner,  
E1/2SW1/4 except East 100 feet and 5.42 ac. in SW corner.

Also included in the permit area is a 20-foot Right-of-Way for a pipeline across the SE1/4NW1/4 and NW1/4NW1/4 of Section 11 (1.21 acres), and across the SW1/4SW1/4, NW1/4/SW1/4, SW1/4NW1/4 and NE1/4NW1/4 of Section 2 (3.97 acres).

This permit area description does not appear to match the permit area circumscribed on Plate 1-1, which shows the permit area skirting around property owned by Keven and Lois Jensen in the W1/2SW1/4 of Section 11. Please verify this legal description and provide any corrected legal description in Chapter 1.

The operation is within 100' of a public road providing access to the site. There are no dwellings within a ¼ mile of the permit area (Sec. 115.300). The Division's Findings (dated July 6, 1995 State Decision Document Permit Transfer, ACT/007/022) concerning the status of lands unsuitable remains unchanged with this Permit Modification as there has been no change to the legal description of the lands involved.

**Findings:**

The information provided does not meet the requirements of the Utah Coal Rules. Prior to approval, please provide the following, in accordance with:

**R645-300-141**, Section 116.100 states the permit area is 153.46 acres. No legal description of the permit area was found in the application.

The Permit issued August 4, 2004 provides the legal description as follows:

**Township 15 South, Range 10, East, SLBM**

Section 11: W1/2SW1/4 except 0.24 ac. in NW corner,  
E1/2SW1/4 except East 100 feet and 5.42 ac. in SW corner.

Also included in the permit area is a 20-foot Right-of-Way for a pipeline across the SE1/4NW1/4 and NW1/4NW1/4 of Section 11 (1.21 acres), and across the SW1/4SW1/4, NW1/4/SW1/4, SW1/4NW1/4 and NE1/4NW1/4 of Section 2 (3.97 acres).

This permit area description does not appear to match the permit area circumscribed on Plate 1-1, which shows the permit area skirting around property owned by Keven and Lois Jensen in the W1/2SW1/4 of Section 11. Please verify this legal description and if necessary, provide a corrected legal description in Chapter 1.

[PB]

## **PERMIT TERM**

Regulatory References: 30 CFR 778.17; R645-301-116.

### **Analysis:**

The permit term is for five years. The current permit was issued on August 4, 2004 and will expire in August 2008. The life of mine is indefinite and renewals will be sought every five years (Sec. 1116.100).

### **Findings:**

The information provided meets the requirements of the Utah Coal Rules.

## **PUBLIC NOTICE AND COMMENT**

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

### **Analysis:**

A draft of the newspaper advertisement is provided in Appendix 1-3. In accordance with R645-301-117.200, an affidavit of publication must be made part of the application. Liability insurance certificate is provided in Appendix 8-3. This insurance certificate expired on April 1, 2008.

### **Findings:**

The information provided does not meet the requirements of the Utah Coal Rules. Prior to approval, please provide the following, in accordance with:

**R645-301-117.100**, The application (dated April 9, 2008) must be accompanied by a current liability insurance certificate.[PB]

**R645-301-117.200**, An affidavit of publication must be made part of the application.  
[PB]

## **FILING FEE**

Regulatory Reference: 30 CFR 777.17; R645-301-118.

### **Analysis:**

A filing fee was paid at the time of the original application in 1994. A copy of that payment is found in Appendix 1-5.

### **Findings:**

The information provided meets the requirements of the Utah Coal Rules.

## **PERMIT APPLICATION FORMAT AND CONTENTS**

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

### **Analysis:**

Section 123 refers to Appendix 1-5 for a notarized statement that the information provided in the application is true and correct. Appendix 1-5 provides a signature of James Jensen, Executive Vice President. There is no date on this signature, but the notary's commission expired in 1997. This is probably the original certification that accompanied the original MRP. Since Mr. Jensen recently retired, it is recommended that the signature of another authorized official of the company be provided in Appendix 1-5, to verify that the information provided in the application is true and correct.

### **Findings:**

The information provided does not meet the requirements of the Utah Coal Rules. P prior to approval, please provide the following, in accordance with:

**R645-301-123**, Appendix 1-5 provides a signature of James Jensen, Executive Vice President, certifying that the information in the application is true and correct. There is no date on this signature, but the notary's commission expired in 1997. This is probably the original certification that accompanied the original MRP. Since Mr. Jensen recently retired, it is recommended that the signature of another authorized official of the company be provided in Appendix 1-5, to verify that the information provided in the application

## **REPORTING OF TECHNICAL DATA**

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

### **Analysis:**

Analytical data is accompanied by the names of the individuals or firms responsible for collection and/or analysis of the data. Exceptions will be noted in this technical analysis.

### **Findings:**

The information provided meets the requirements of the Utah Coal

## **MAPS AND PLANS**

Regulatory Reference: 30 CFR 777.14; R645-301-140.

### **Analysis:**

The reformatted application includes a wetland delineation map, vegetation map, archaeology map and land use map, plates 1 of the wetland evaluation, 3-1, 4-1 and 5-2 respectively. The wildlife map, Plate 10-1 from the existing MRP, should be included in the reformatted application along with any other pertinent wildlife maps identified in the DWR's database. The DWR may have additional wildlife species maps for the area where the Savage Coal Terminal is currently located.

Plate 5-1 indicates most of the site was disturbed pre-SMCRA. The map differentiates between lands disturbed post law, but before May 3, 1978.

### **Findings:**

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval, the following information must be provided.

**R645-301-140**, The wildlife map, Plate 10-1 from the existing MRP, should be included in the reformatted application along with any other pertinent wildlife maps identified in the DWR's database. The DWR may have additional wildlife species maps for the area where the Savage Coal Terminal is currently located.

## COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

### Analysis:

The information provided is complete although some information is outdated.

### Findings:

Where information provided does not meet the requirements of the Utah Coal Rules, deficiencies have been written

## **ENVIRONMENTAL RESOURCE INFORMATION**

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

### **GENERAL**

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

#### **Analysis:**

The site is located about four miles southeast of Price Utah at the following address: 2025 East 5000 South, Price Utah 84501.

The 153 acre site is located approximately 4,000 feet southwest from the Price River floodplain and 4,000 feet north of Miller Creek. The permit area lies on what used to be undeveloped rangeland dominated by shad scale and mat saltbush. The area is zoned for industrial use (Section 411) and is in an industrial corridor along Ridge Road between State Hwy 10 and Wellington (Figure 7-7).

#### **Findings:**

The information provided meets the requirements of the Utah Coal Rules.

### **PERMIT AREA**

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

#### **Analysis:**

The Permittee did not meet the requirements of this section. The Permittee must include in the MRP a table that shows the number of permitted and disturbed areas and whether they are owned by the federal government, state government, local government or private persons. The Division needs that information for reports that go to OSM.

The Permittee showed the permit area on Plate 1-1. The Permittee give the legal descriptions of the permit area in Chapter 1 of the MRP.

**Findings:**

The information that the Permittee provided in the application is not considered adequate to meet the requirements of this section. Before approval, the Permittee must provide the following in accordance with:

**R645-301-521.190**, The Permittee must include in the MRP a table that shows the number of permitted and disturbed areas and whether they are owned by the federal government, state government, local government or private persons. The Division needs that information for reports that go to OSM.

**HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION**

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

**Analysis:**

Historic and Archaeological resource information is included in chapter 4 and the confidential binder of the reformatted MRP. The information is reformatted in accordance with the R645 rules. Cultural resource surveys have been completed for the current permit area. No eligible sites have been identified.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

**CLIMATOLOGICAL RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.18; R645-301-724.

**Analysis:**

Climatological information is provided in Section 724.400. Table 7-15 shows the annual precipitation of 10.36 inches based on a 10-year monitoring period. Low monthly average is 0.36 inches in December and the high monthly average is 1.37 in August. The average mean temperature for the area is 51 degrees F. The average annual snowfall is 19.6 inches. The prevailing wind direction is from the north through northwest during autumn, winter, and spring with a shift to the south-southwest during late spring and summer. Table 7-16 summarizes the mean wind speeds for the site. The wind speed and direction is important at the terminal, because the wind can transport coal dust from the stacks of coal.

**Findings:**

The applicant has provided sufficient information for this section.

**VEGETATION RESOURCE INFORMATION**

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

Vegetation resource information is included in chapter 3 of the reformatted MRP. The information is reformatted in accordance with the R645 rules. The information includes a description of the vegetative communities within the disturbed and permit areas, vegetation test plots and analysis and wetland delineation for the 13-acre load out expansion.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

**FISH AND WILDLIFE RESOURCE INFORMATION**

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

**Analysis:**

Fish and wildlife resource information is included in chapter 3 of the application. The information is reformatted in accordance with the R645 rules and includes a description of the wildlife resources within the disturbed and adjacent areas.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations

**SOILS RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

**Analysis:**

The permit area soils were surveyed by James P. Walsh and Associates in July 1980 (Section 222.100). Much of the area had been previously disturbed at that time (Map 5-1). The results of the survey are included in Chapter 2 as Sections 222.300 through Section 224 and Tables 2-2, 2-3, 2-4, 2-5, 2-6 and 2-7. [Table 2-6 Seedbed Quality Material Volumes, has been updated over time.]

The following pedons were described by Mr. James Walsh at the loadout site: Billings Series; Chipeta Series; Disturbed Lands; Killpack Series; Killpack Series High Water Table Variant; Saltair Series. All are gypsiferous soils formed from Mancos shale.

A topsoil thickness survey of the coal stockpile area was conducted in the spring of 2002 by Mr. Dan Larsen, soil scientist, EIS Environmental Engineering Consultants, Helper, Utah. Mr. Larsen's survey is included as Appendix 2-2. Mr. Larsen confirmed that on the average six inches would be salvaged from the Chipeta soils, but he created a topsoil salvage map to indicate an area of salvage from 4 – 7 inches, and area of salvage from 7 to 9 inches and an area of salvage from 3 – 6 inches thick. This map was utilized along with the expertise of the soil scientist on site during soil salvage (Section 231.100).

Section 231.100 describes the reclamation of disturbed soils, rather than importation of soil substitutes for the 77.2 acres of pre-law disturbance. On page 29 of this section, there is a reference to Sections 8.5 and 8.6 that do not exist any longer with this reformatted plan.

A typical pedon of Disturbed land is described in Section 222.200: twelve inches of gravel fill covers light grayish brown silty clay [massive, hard, very sticky and very plastic, calcareous, with numerous gypsum crystals and threads]. This pedon description is contradicted by the laboratory analysis of disturbed land where the percent clay is listed as 10% and the texture is given as silty loam and the saturation is 37%, typical of loam soil, not clays (12 – 60 inch sample, Hole 6, Table 2-5). Table 2-5 also indicates that between 12 – 60 inches, the disturbed land pH is 7.6 and the EC is 47.9, the SAR is 18.8 and the Nitrogen content is 72%. This soil is toxic (sodic) and will be very difficult to use as germination medium. Consequently, further sampling will be conducted prior to final grading of the site to evaluate the extent of the sodic hazard and to develop a management plan that will provide adequate soil cover for germination and rooting (Section 231.300).

#### Settling Pond Construction [09082006]

In July 2006, Bruce Chessler conducted a soil survey of the 6.61 acre expansion area (Appendix 2-3). The locations of the three soil pits are shown on Figure 1. Five soil types were described. These map units along with those identified by the 2002 Larsen survey have been removed from the Soils Map 2-1 with this reformatting amendment. The soils map should portray the baseline soils information, not the extent of current disturbance. The 2006 survey expanded upon and modified the original soil survey of the area by James P. Walsh and

Associates in July 1980. [Note: The MRP does not contain survey information to confirm the Sa and ChC soil map units in the north west corner of the permit area (shown on Plate 2-1).]

The soil map unit disturbed by the settling ponds was Billings silty clay 1 – 3% slopes, moist (Plate 2-1). The soils to be disturbed were derived from Mancos Shale and deposited by water. Brigham Young University laboratory reports confirm the saline/sodic chemistry and the clay texture of the soil. Dispersion of the illitic and kaolinitic clays confounded the hydrometer method of particle size analysis of the subsoil horizons and no data was reported for texture. Mechanical analysis of texture indicated 40 – 50% clays in the subsoil. Interestingly, the laboratory reports indicate an unusually high amount of phosphorus in the surface 12 inches (average 6.51 mg/Kg phosphorus) and a negligible amount of potassium throughout the soil profile (average 0.45 mg/Kg potassium in the surface six inches). The pH values are slightly above neutral (7.7) at SP1 and SP2 gradually climbing up to 8.5. The SAR values of 5 to 6 were noted in the surface horizons of SP1 and SP2. Subsurface SAR values climbed to 30 at depth in pits SP1 and SP2.

Survey site SP3 that was the most saline/sodic of the sampled soils with pH values at the surface of 8.3 to 8.6, EC values at the surface of 14 – 20 mmhos/cm, SAR values at the surface of 40 to 116, is representative of the vegetation reference area. The vegetation is salt desert shrub with the predominant vegetation being shad scale and greasewood.

### **Findings:**

The information provided does not meet the requirements of the Utah Coal Rules. Prior to approval, provide the following in accordance with:

**R645-301-222 and R645-301-121.200**, On page 29 of this section, there is a reference to Sections 8.5 and 8.6 that do not exist any longer with this reformatted plan. • Five soil types described by Bruce Chessler in 2006 (Appendix 2-3) along with those identified by the 2002 Larsen survey have been removed from the Soils Map 2-1 with this reformatting amendment. The soils map should portray the baseline soils information, not the extent of current disturbance. [PB]

## **LAND-USE RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 783.22; R645-301-411.

### **Analysis:**

Land use resource information is included in chapter 4 of the reformatted MRP. The information is reformatted in accordance with the R645 rules and includes a description of the land uses prior to, current and post mining associated with the loadout activities.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

**ALLUVIAL VALLEY FLOORS**

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

**Analysis:**

**Alluvial Valley Floor Determination**

Savage Coal Terminal is currently zoned for industrial use by Carbon County. Prior to December 17, 1973 (pre-SMCRA) the land was zoned agricultural Figure 7-7 shows the AVF and zoning area in the vicinity of the terminal. The 1989 Technical Analysis document that accompanied the Beaver Creek Coal Company permit outlines the existence of an alluvial valley floor in sections 1, 2, and 12 of T15S, R10E, based on published information and Plate 6-1 of the permit. The 1989 document also confirms the connection between the unconfined, upper aquifer beneath the permit area and the Quaternary alluvium within the Price River Alluvial Valley Floor. Ground water moves generally in an east-northeast direction.

Although French drains were installed to intercept the ground-water flow along the northern and western margins of the permit area towards the Price River, the eastern portion of the permit still has a moderately high potential for being hydrologically connected, year round, in the subsurface to the Price River Alluvial Valley Floor. The Permittee has monitored the shallow, unconfined aquifer along the eastern and western portions of the permit area. Plate 7-1 shows the monitoring locations, both of which are to the east of the proposed disturbance. Monitoring information is being filed in the electronic water database.

Hydrologic monitoring of the site was reviewed recently by Mr. Gregg Galecki (Inspection Report, December 18, 2001). Mr. Galecki agrees with the Division's 1989 determination that there is a low potential for degrading alluvial valley floor ground-water quality.

Settling Pond Construction [09082006]

In 1989, the Division found by reason of statutory exclusion that the site is not within an alluvial valley floor, although approximately 40 acres of the permit area was previously cropland (Section 410). Figure 7-7 illustrates the mixture of agricultural, and industrial land use in the vicinity of the Savage Coal Terminal.

Plate 6-1 illustrates that the location of the Savage Coal Terminal straddles the Quaternary pediment mantle and the Quaternary Alluvium. The settling ponds lie within the Billings silty clay, which is characteristic of alluvial fans and flood plains. The Billings silty clay is a Torriorthent, meaning that it was formed from water deposition.

Irrigation canals run adjacent to the permit area on the south and east borders. Figure 7-6 "Location of Irrigation Canals" was updated in 2006.

### **Applicability of Statutory Exclusions**

The Division determined in 1989 that the Savage Coal Terminal

1. Does not include the extraction of coal;
2. Will not result in a significant disturbance to the surface or groundwater regime; and
3. Occurs on undeveloped rangeland that is not significant to farming, grazing, or any other agricultural activity.

Therefore, the statutory exclusion from operating within an alluvial valley floor was invoked.

### **Findings:**

The statutory exclusion from operating within an alluvial valley floor has been invoked for this permitted site. The information provided meets the minimum requirements of the regulations.

## **PRIME FARMLAND**

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

### **Analysis:**

Abandoned agricultural land makes up a portion of the land at Savage Coal Terminal. The land was under cultivation, but was deemed uneconomical and abandoned (Sections 410 and 411).

Settling Pond Construction [09082006]

In June of 1980, the Soil Conservation Service determined that the site did not contain prime farmland, Figure 2-1. The soils to be disturbed for the settling ponds include Billings Silty Clay loam (Map Unit #8 in the Carbon County Soil Survey). According to the Carbon County soil survey information, land use of the Billings silty clay unit is crop production (alfalfa, grass and grain) and wildlife habitat and range. The soil survey indicates the subsoils are saline/sodic with high clay content.

**Findings:**

The Division concludes that there is no prime farmland within the permit area.

**GEOLOGIC RESOURCE INFORMATION**

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

**Analysis:**

The Permittee has submitted information to address geologic resources in Chapters 6 and 7. The operator explains that the operation moves and cleans coal from mining operations. No coal is mined at the site. It is strictly a surface operation. Section 620 describes the regional geophysical setting of the site. SCT lies in the middle of Castle Valley. Its surface was originally covered with Quaternary alluvium, slope wash and pediment mantle material. In Section 622, the Permittee describes the geology below the surface. The logs of core holes drilled prior to plant construction are shown in Figure 6-2 and the core holes shown on Figure 6-3. Underlying the surface soils is the consolidated units of the Mancos Shale. Maxfield (1976) describes the Mancos Shale having three major marine shale transgressive sequences, separated by two sandstone delta complexes, which built from the west. The SCT sits on the middle Bluegate shale member. Cores taken at the site reveal that 20-25 feet below the surface lies a dark blue-gray dense mudstone with veins of calcite and gypsum. The upper 20 feet consists of weathered brown to gray semi-silty layers. The weathered surface sometimes contains lenses of gravelly material left behind as the overlying terrace eroded. Boreholes were drilled at the Savage Coal Terminal prior to plant construction. Plate 6-1 shows the geology of the site. Logs of the boreholes are presented Figure 6-2 Logs of the holes ore shown on Figure 6-3.

**Findings:**

The Permittee has addressed the minimum requirements of this section.

## **HYDROLOGIC RESOURCE INFORMATION**

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

### **Analysis:**

#### **Sampling and Analysis**

The Permittee has collected many years of water monitoring data. In Section 724.100 the Permittee describes the existence of 14 groundwater observation wells, has provided data to establish the shallow perched aquifer. Table 7-1 presents the data. The wells (actually, piezometers have since been reclaimed (as of May 1999). Two shallow (20-22 feet) groundwater monitoring wells were installed in 2006 are being monitored at the site. The operator is also monitoring groundwater in an open well that collects water from the shallow perched aquifer that exists between the land surface and consolidated Bluegate Shale. Groundwater quality tends to run high, but as the Permittee has pointed out, the groundwater intercepted on the French drain is of better quality than that of the Price River, since the river picks up salts from the surrounding basin and irrigation return flow. Two surface sites are monitored on the permit area.

#### **Baseline Information**

Baseline water monitoring has long been established. The Permittee has submitted water-monitoring data to the Division's water monitoring database, since they took over the operation. Some monitoring goes back to 1982.

#### **Baseline Cumulative Impact Area Information**

The Division has defined the cumulative impact area for the CHIA, based on information in the MRP and Section 728 describing the probable hydrologic consequences.

#### **Probable Hydrologic Consequences Determination**

The probable hydrologic consequences determination is provided in Appendix 7-3. The operator claims that the terminal has operated over the past 28 years with no negative impacts. The Permittee claims the only negative impact from the proposed facilities would be from possible acid/toxic contamination of the groundwater from the coal or refuse. This potential

impact will be minimized by regular testing of the refuse for acid/toxic potential, as well as regular monitoring of the groundwater.

The Permittee does not identify the disturbed area discharge as a potential for impacts. However, the Permittee has discussed the facilities and methods that are currently being used to ensure no disturbed area drainage leaves the site. Runoff from the disturbed area is directed into a series of 5 sedimentation points by a combination of collection ditches and culverts. All surface hydrologic structures are sized to carry runoff from a 10 yr.-24 hr precipitation event, including storage capacity of the sedimentation ponds. Sedimentation ponds 1,2 and 3 are in series and flow to Sedimentation Pond 6. Sedimentation pond 5 also flows to Sedimentation Pond 6. Before Sedimentation Pond 6 discharges it is sampled to meet the discharge requirements of the UPDES permit.

### **Groundwater Monitoring Plan**

The Permittee describes baseline ground water information in Section 724. SCT describes a very deep aquifer found in the Ferron Sandstone 500 feet below the terminal. The aquifer was identified by oil and gas wells drilled in the area. The water found in the Ferron Sandstone is brackish. The operation does not plan to use any water from the Ferron Sandstone. The great amount of clays and shales between the terminal and Ferron Sandstone prevent any contamination from operations.

The applicant has identified shallower water tables in the alluvium and weathered shales above the Bluegate shale. These groundwater sources are variable and discontinuous and have poor water quality. The information shows there is no regional groundwater table at the site. Aerial extent of the perched water tables could not be precisely determined.

Using well data the Permittee has described groundwater activity on and adjacent to the coal terminal. Figure 7-1 shows the typical ground water monitoring well design. The older wells (piezometers) CV0W, CV2W, CV3W, CV4W, CV5W, CV6W, CV7W, CV8W, CV9W, CV10W, CV11W, CV12, and CV13, drilled for CV Spur, have been decommissioned and reclaimed. Table 7-1 shows the ground water levels in the wells from 1980 through 1982. Table 7-1A shows the characteristics of the wells. Table 7-1 provides the well characteristics and water level information. A map showing the well locations is not provided. If the locations are known, a map should be part of the MRP.

CV1W (surface ditch), and CV14W (French drain) are still active monitoring sites. Two new shallow ground water monitoring wells S-1-GW and S-2-GW were drilled in 2006. These monitoring sites are shown on Plate 7-1.

Shallow ground water permeability and the storage coefficient were measured during a pump test at well CV6W. Tables 7-5 through 7-14 show the ground water quality for each sample collected at the wells. The second table presents the water quality standards for aquatic and agricultural use. Table 7-2 shows the pump test calculations for groundwater flow in Well CV6W.

During initial construction of if the site a French drain was built to intercept groundwater on the north and west sides. The drain collects groundwater at the interface of the weathered shale and consolidated shale. It is only about 8 feet at the southwestern end of the terminal and runs about 23 feet deep at the northeast corner. A sump (culvert) collects the water from the drain which is ranges about 20 –25 gallons per minute. The water in the sump is used in the in the plant. The Permittee has a water right for water taken at the French drain.

### **Surface-Water Monitoring Plan**

The Permittee describes baseline surface water information in Section 724.200. The Permittee has submitted and characterized the surface water hydrology for the site. A water-monitoring program has been developed that identifies the measured flows and quality of water on and adjacent to the terminal.

All stream channels in the vicinity of the terminal are ephemeral. Runoff from the terminal and adjacent areas flow to the Price River. The quality of the Price River is degraded at this lower level. All runoff over the terminal is directed to sedimentation ponds. Pond 6 receives the overflow from Ponds 1,2 and three and Pond 5. Pond 6 is the only outflow of disturbed area surface water from the terminal. All discharges from Sedimentation Pond 6 are monitored under the UPDES permit system. Natural surface runoff is poor with total dissolved solids ranging from 2000 to 3000 mg/L. Drainage areas on the permit and adjacent area are shown on Figure 7-4, subdrainages are shown on Figure 7-5. Plate 7-1 shows the locations of surface water monitoring. Two surface sites are monitored, CV14-W, an undisturbed drainage surface ditch and Pond 6, a UPDES discharge site. The operator has installed a system of culverts, ditches and berms on site to direct surface flow to the sedimentation ponds, Plates 7-1 and 7-1.

### **Findings:**

**R645-622.400** The Permittee shall provide a map showing the location of old reclaimed wells should be placed in the MRP.

## **MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION**

**Analysis:**

**Affected Area Boundary Maps**

The Permittee meet the requirements of this section. Plate 1-1 shows the permit area. For hydrology the affected area lies within the Permit area. The permit area is shown on several maps. The hydrologic structures and surface runoff regime can be seen on Plates 7-1 and 7-2.

**Coal Resource and Geologic Information Maps**

A geologic map is submitted as Plate 6-1. Logs of the boreholes are presented Figure 6-2. Logs of the holes are shown on Figure 6-3.

**Existing Structures and Facilities Maps**

Plate 7-1 shows all the facilities on the Permit area. All hydrologic features are shown on Plates 7-1 and 7-2.

**Existing Surface Configuration Maps**

The Permittee meet the requirements of this section. Plate 7-1 and 7-2 show the permit boundary and existing surface configuration

**Mine Workings Maps**

There are no mine workings at the site.

**Monitoring and Sampling Location Maps**

Plate 7-1 shows the water monitoring locations.

**Permit Area Boundary Maps**

The Permittee met the requirements of this section. Plate 1-1 shows the permit area.

**Subsurface Water Resource Maps**

There are no maps that show the subsurface water resources of the site. The Permittee should plot the data from Table 7-1 on a map and show the location of groundwater.

### **Surface and Subsurface Manmade Features Maps**

Plate 7-1 shows the surface and subsurface manmade features. A list of the facilities and the dates when the structure was constructed are provided in section 511.100.

### **Surface and Subsurface Ownership Maps**

A surface ownership map is provided as Plate 1-1. The subsurface is not used except for water monitoring. There are no maps that show the subsurface water resources of the site. However, data in table 7-1 provides an insight to the location of shallow groundwater.

### **Findings:**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

## OPERATION PLAN

### MINING OPERATIONS AND FACILITIES

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

#### **Analysis:**

The Permittee met the minimum requirements of this section. The information is in the engineering section of the MRP.

#### **Findings:**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

### EXISTING STRUCTURES:

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

#### **Analysis:**

The applicant has provided several hydrologic maps showing the existing structures on the terminal facility, Plates 5-2, 7-1 and 7-2. A list of the structures is provided in Section 511.100. A small IBC area near the Price River is established for a pump that supplies water from the river to the preparation plant when supplies are low. The area showing the river pump and pipeline is shown on Plate 3-8.

The Permittee did not meet the requirements of this section. The term "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.

The main purpose of this regulation was to determine if the existing structures met the R645 Rules performance standards.

**Findings:**

The information that the Permittee provided in the application is not considered adequate to meet the requirements of this section. Before approval, the Permittee must provide the following in accordance with:

**R645-301-526.100**, The Permittee did not meet the requirements of this section. R645-301.526.100 deals with structures that was used for coal mining and reclamation and were constructed prior to January 21, 1981. The main reason for that regulations is to show that structures constructed before January 21, 1981 meet the performance standards even if they do not meet the design standards.

**PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES**

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

**Analysis:**

The site is located about four miles southeast of Price Utah at the following address: 2025 East 5000 South, Price Utah 84501.

The 153 acre site is located approximately 4,000 feet southwest from the Price River floodplain and 4,000 feet north of Miller Creek. The permit area lies on what used to be undeveloped rangeland dominated by shadscale and mat saltbush. The area is zoned for industrial use (Section 411) and is in an industrial corridor along Ridge Road between State Hwy 10 and Wellington (Figure 7-7). As stated in 115, no historic places or public parks are adjacent to this permit area.

**Findings:**

There is no effect to historic places or public parks.

**RELOCATION OR USE OF PUBLIC ROADS**

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

**Analysis:**

The Permittee met the requirements of this section. In Section 526.116, the Permittee states that there are no public roads within 100 feet of the permit boundary, except were the

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access road enters the disturbed area. The Permittee does not plan on conducting additional operations within 100 feet of a public road.

### **Findings**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

## **AIR POLLUTION CONTROL PLAN**

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

### **Analysis:**

Appendix 4-3 contains an Air Quality Approval Order for the loadout, DAQE-ANI793003-06 (last updated in 2006). Section 420 describes the operational measures taken to reduce particulates. The plan allows for a throughput of 10,000,000 tons of coal annually at the loadout facility.

### **Findings:**

The information provided in the information provided and the MRP is adequate to meet the requirements of this section of the regulations.

## **COAL RECOVERY**

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

### **Analysis:**

The Savage Coal Terminal is a coal processing operation. It cleans, sorts and mixes coal from other mines. There is no coal mining occurring at the site.

### **Findings**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

## **SLIDES AND OTHER DAMAGE**

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

### **Analysis:**

The Permittee met the requirements of this section. In Section 515 of the MRP, the Permittee describes how they will respond to slides and impoundment hazards.

### **Findings**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

## **FISH AND WILDLIFE INFORMATION**

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

### **Analysis:**

The application includes fish and wildlife information that addresses and is formatted in accordance with these sections of the regulations for the protection and enhancement plan, endangered and threatened species, bald and golden eagles and wetlands and habitats of unusually high value for fish and wildlife.

In order to ensure compliance with the Endangered Species act as required by R645-301-332 the application needs to include calculations for water consumed in acre feet per year for the loadout facility that would contribute to the habitat of the four endangered fish species in the upper Colorado River watershed system. A copy of the criterion used to calculate water consumption has been provided to the applicant by way of "E" mail. They include the Colorado pike minnow, razorback sucker, humpback chub and the bonytail. These four endangered fish species are included in the Fish and Wildlife Services' Colorado fish recovery program which requires a payment of 15.95 per acre foot for each acre foot up to and including any excess of 100 acre feet of water consumed per year.

### **Findings:**

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval, the following information must be provided.

**R645-301-322, -301-333, -301-342, -301-358,** In order to ensure compliance with the Endangered Species act as required by R645-301-332 the application needs to include

calculations for water consumed in acre feet per year for the loadout facility that would contribute to the habitat of the four endangered fish species in the upper Colorado River watershed system. A copy of the criterion used to calculate water consumption has been provided to the applicant by way of "E" mail. They include the Colorado pike minnow, razorback sucker, humpback chub and the bonytail. These four endangered fish species are included in the Fish and Wildlife Services' Colorado fish recovery program which requires a payment of 15.95 per acre foot for each acre foot up to and including any excess of 100 acre feet of water consumed per year.

## TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

### Analysis:

#### Topsoil Removal and Storage

Plate 5-2 Surface Facility Map illustrates a topsoil and subsoil stockpile location adjacent to the Savage office. The construction of the topsoil pile is described in Sec. 231.100. The volume of soil recovered prior to settling pond construction in 2006 was 13,028 yd<sup>3</sup>. After settling pond construction in 2006, the total volume of stored topsoil is 62,314 yd<sup>3</sup>. (Table 2-6). Based upon the soil survey (Appendix 2-3) topsoils were salvaged to a depth of 12 inches and subsoil to a depth of 24 inches (Table 2-6 and Section 231.100, p. 27). **BiBe soils were of such poor quality that they were not be salvaged.**

Section 231.400 summarizes the volume of material stored in three stockpiles at the Savage Coal Terminal. Plate 2-2 and Appendix 2-1 provides as-built information for the subsoil/topsoil stockpile created in 2002. Cross sections and volumes are provided to arrive at 49,285.93 yd<sup>3</sup>. Plate 2-3 provides as-built information for the settling pond subsoil (6,514 yd<sup>3</sup>) and topsoil (6,514 yd<sup>3</sup>) storage piles. These piles were treated with liquid fertilizer as described in Section 231.100 and seeded in October 2006.

During the 2002 construction of the coal stockpile/coal loop area (directly opposite the office), there were 8,002 bank cubic yards of topsoil stripped from 9.92 acres of Chipeta soils and 4,138 bank cubic yards of topsoil stripped from the 3.42 acres of Killpack soils for a total of 12,298 cubic yards. Stripping depth was six inches for Chipeta and nine inches for Killpack. Subsequent information provided with the settling pond construction amendment indicated that the volume of soil recovered in 2002 was 13,028 yd<sup>3</sup>. Table 2-6 records a figure of 49,286 cubic yards for the combined yardage of topsoil salvaged from the coal stockpile/truck loop expansion and the topsoil that had been previously salvaged and stockpiled at the site.

Prior to reformatting, the MRP indicated on page 3-54 that the soil salvaged from the 2002 coal stockpile expansion would be placed between the two existing piles and then graded. The Division recommended that the topsoil and subsoil piles be regarded prior to live hauling the topsoil from the coal storage site for placement over the entire surface of the reconfigured topsoil and subsoil piles. In this manner, the seeds, propagules, microbes and nutrients available in the topsoil being salvaged would be located on the surface of the topsoil pile where the germinating and establishing plants could benefit from them. It is not known whether this procedure was followed. The reformatted plan written in 2008 refers to the construction of the topsoil/subsoil pile in Section 231.400, but does not describe whether the topsoil hauled from coal stockpile expansion area was placed "on top of" or "in between" the previously existing topsoil and subsoil stockpiles.

A qualified soil scientist will be on site during topsoil stripping to ensure adequate recovery of the soils (Section 230).

**Findings:**

**R645-301.230** The Permittee shall describe in the MRP, Section 231.400, whether the topsoil hauled from the coal stockpile expansion area was placed on top of or in between the previous existing topsoil and subsoil stockpiles.

**VEGETATION**

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

**Analysis:**

The application includes information about protective measures for vegetation during the operation phase of mining activities that is formatted in accordance with R645-301-330, 331 and 332.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

**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 did not meet the requirements of this section. The purpose of the reformatting is to get the MRP into the form of the R645 Rules. The Permittee has most of the road information in the Section 511, which is general information and does not deal specifically with roads.

In Section 511.100, the Permittee lists several roads and classifies them as primary and then make a blanket statement that all other roads are ancillary but does not provide information on the other roads. The Permittee must state in the MRP if there are ancillary roads and if so describe them.

**Plans and Drawings**

The Permittee met the general requirements for road plans and drawings. The plans and drawings contained the following:

- On Plate 5-4, the Permittee list the roads and shows typical cross sections. The site is flat, less than 5% grade so detailed profiles of the roads are not needed.
- There are no roads that are in channels of intermittent or perennial streams.
- There are not fords of perennial or intermittent streams.
- There are no natural stream channels that will be altered.
- There are no low-water crossings.

**Performance Standards**

The Permittee did not meet the general performance standards for roads. All roads road shall be located, designed, constructed, reconstructed, used, maintained, and reclaimed so as to:

- The Division considers that the designs meet the requirements to control erosion and air pollution when the hydrology and air quality requirements have been met.
- The Division considers that the Permittee has controlled damage to wildlife when the biology requirements have been met.
- The Division considers that the Permittee will prevent additional contributions of suspended solids to stream flow when the hydrology requirements have been met.
- The Division considers that the Permittee will neither cause nor contribute to, directly or indirectly, the violation of State or Federal water quality standard applicable to receiving waters when the hydrology requirements have been met.
- The Division considers that the Permittee will prevent or control damage to public or private property, including the prevention or mitigation of adverse effects on lands within

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the boundaries of units of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, including designated study rivers, and National Recreation Areas designated by Act of Congress if the general requirements have been met.

- The Permittee meet the requirements for using nonacid- and nontoxic-forming substances in road surfacing. The Permittee stated that gravel or asphalt would be used as road surfaces.
- In Section 527.240 of the MRP, the Permittee committed to repair a road damaged by catastrophic event as soon as practicable.

In addition to the above, primary roads shall meet the following requirements:

- The Permittee had the Plate 5-4 which shows the roads and cross sections certified by a registered professional engineer.
- The Permittee adequately address the requirement that each primary road embankment shall have a minimum static factor of 1.3. In Section 511.100 of the MRP, the Permittee states that the safety factor has been achieved
- The Division considers that the Permittee met the requirements to minimize erosion if the general hydrology requirements have been met.
- The Permittee does not have fords in perennial or intermittent streams.
- The Division considers that the roads have adequate drainage control if the hydrology requirements have been met.
- The Permittee stated that the roads were surfaced with crushed gravel or asphalt.

### Primary Road Certification

The Permittee met the requirements of this section. The Permittee had Plate 5-4, Savage Coal Terminal Road Map certified by a registered professional engineer.

### Other Transportation Facilities

The Permittee met the requirements of this section. The Permittee shows the conveyors and rail systems on Plate 5-2, Savage Coal Terminal Facility Map. The Permittee also describes the conveyors and rail systems in the MRP.

### Findings:

The information that the Permittee provided in the application is not considered adequate to meet the requirements of this section. Before approval, the Permittee must provide the following in accordance with:

**R645-301-527.100**, The Permittee must classify each road as primary or ancillary. The Permittee cannot make general statements such as the one in Chapter 5 page 6 “All other roads on the site are considered Ancillary Roads”. The Permittee must state what the ancillary roads are.

## **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 Mine Wastes**

The Permittee meet the requirements of this section. The Permittee did address how they would handle noncoal waste in Section 511.100 and 528.334 of the MRP.

#### **Coal Mine Waste**

The Permittee meet the requirements of this section. The information is located in Section 536 of the MRP. Because the Permittee only processes coal, there will be no underground development waste or excess spoiling generated at the site.

The Permittee’s current plan is to haul all coal processing waste off site. The Permittee will ship coal processing waste generated from washing coal from the Dugout Mine back to the Dugout Mine’s refuse pile. Coalmine waste deposited on the site up to 1984 is scheduled to be shipped off site as fuel to Sunnyside Cogeneration Associates power plant or a similar facility.

#### **Refuse Piles**

A permanent refuse pile (Section 514.100) with MSHA # 1211-UT-09-01444-01 is located on Map 5-2. [The refuse pile remained dormant until June of 2005.] As noted in section 536, the refuse pile may be re-mined for use at the Sunnyside Co-generation plant (Appendix 5-1) or may be taken off-site, cleaned using a patented air cleaning technology and the resulting higher BTU product blended with coals stored at the Savage site for shipment to cement plants was approved (Appendix 5-2). The reject from this latter enhancement process is returned to the MSHA refuse pile for final disposal.

Section 536 relates that the coal processing plant was restarted in 2006, after being idle since 1984. In 2006, Savage Industries negotiated a contract with an outside Company to wash high ash coal. Coal processing waste generated by this activity was approved for temporary storage at the Savage Coal Terminal in the permitted MSHA refuse pile. The wash plant waste from this process may be stored temporarily at the MSHA refuse pile site, but will be returned to the outside Company for final burial.

Based upon the approved operation plan, the temporary storage of this coal processing waste will utilize the same placement, compaction and drainage requirements as those implemented for the permanent storage refuse facility. Quarterly inspections with P.E. certification will be conducted for this temporary pile as well. The coal processing material will be stored for a maximum of one year prior to return shipment to the outside Company's waste rock permanent disposal facility.

**Findings:**

The information that the Permittee provided in the application is considered adequate to meet the requirements of this section.

**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, -300-148, -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:**

**General**

The Savage Coal Terminal sits near the middle of Castle Valley. A broad eroded plain lying between the Wasatch Plateau to the west, the Book Cliffs to the north and the San Rafael to the east. The coal terminal is relatively flat terrain draining toward the Price River.

**Groundwater Monitoring**

The Permittee monitors three groundwater-monitoring sites, Table 7-17. Two groundwater drains have been installed at the Savage Coal Terminal in the past and are shown on Plate 7-1. The drain on the east side of the proper was installed to drain a boggy area to facilitate construction of the railroad grade. Flow from the drain gradually diminished after installation and eventually it stopped flowing. The drain was installed at the surface of the Bluegate shale

just below the weathered shale and soils. The drain discharges a continuous flow of about 22 gpm into a 26 feet deep sump. The operator refers to this drain as the French Drain. The groundwater is used in the preparation plant and dust control at the site. The site, CV-1-W, is monitored during the 2<sup>nd</sup> and 4<sup>th</sup> quarters for flow. The Permittee has a water right for the water. The Permittee recently drilled two groundwater-monitoring wells. S-1-GW is located on the north east corner of the terminal and S-2-GW is on the east side of the permit area. The new wells will be monitored quarterly for the first two years then bi-annually after that. Water quality will be checked according to Table 7-17. Water rights documentation is provided in Appendix 7-2.

### **Surface Water Monitoring**

The Permittee supplied sufficient information to address this section. Surface monitoring will be conducted at two sites on the permit area, Table 17-7. The sites are shown on Plate 7-1. An undisturbed drainage ditch runs from the western side of the permit area around the northern side to divert undisturbed drainage away from the terminal facilities. At the northeast end of the ditch, the operator has established a surface water-monitoring site, CV-14-W. Monitoring will consist of volume measurements conducted during the 2<sup>nd</sup> and 4<sup>th</sup> quarters. The other surface water-monitoring site is at the discharge of Sedimentation Pond 6 the site is CV-15-W. Monitoring will be monthly in accordance with the UPDES permit. Results for all samples will be submitted to the DOGM database within 60 days following the end of each sampling cycle.

### **Acid- and Toxic-Forming Materials and Underground Development Waste**

The Permittee supplied information to address this section. The Permittee proposed to avoid acid and toxic forming material contamination several methods. First, the refuse pile has been tested and it does not contain any acid-or toxic-forming materials. All oils, greases and fuels will be stored within an enclosed concrete basin. Coal shipped to the terminal is tested at the mine for acid and toxic forming materials. Monitoring of ground and surface waters will identify any anomalies.

Section 536 refers to Appendix 5-1 and 5-2 for laboratory analysis of coalmine waste. Appendix 5-1 includes Attachment 5-1, which is titled Refuse Pile Analyses, but no analyses were found in this attachment. Appendix 5-2 describes sampling of waste returning to the site after air separation processing procedures. Acid/toxic parameters will be analyzed on every 5,000 Tons of waste returned to the site. Attachment 1 provides acid/toxic analysis, but does not provide those analyses that are described in Appendix 5-2.

The temporary storage of coal processing waste from the 2006 start up of the wash plant facility requires the sampling of every 5000 tons of refuse for analysis of acid and toxic potential

if the material is to be stored in excess of thirty days. The analytical results of this sampling will be forwarded to the Division on a quarterly basis, as well as provided with the Annual Report for the Savage Coal Terminal.

### **Transfer of Wells**

There are two monitoring wells (piezometers) on site that are less than 30 feet deep. There are no plans for transferring these wells. The Permittee has presented plans to reclaim these monitoring sites according to Utah State regulations

### **Water-Quality Standards And Effluent Limitations**

The Permittee has provided plans for controlling sediment and effluents from the permit area. All potentially toxic materials will be stored on concrete and contained within a contained area. Hydrologic structures consisting of ditches, culverts and berms will direct runoff to 5 sedimentation ponds, where sediments will settle out. All flow eventually flows to Sedimentation Pond 6, the only discharge point from the disturbed area. Discharges will be sampled to ensure it meets UPDES standards

### **Diversions: General**

Figure 7-4 shows the drainages associated with the Savage Coal Terminal (SCT). Undisturbed diversion UD-1 directs flow away from the disturbed area. Figure 7-5 shows the subdrainages of the coal terminal. Table 7-25 provides the culvert design specifications.

### **Diversions: Perennial and Intermittent Streams**

The closest perennial stream to the facility is the Price River. Water is diverted from the Price River into the Carbon and Price-Wellington canals as it enters the central portion of the basin. The canals are diverted upstream from the Savage Coal Terminal and are used for irrigation. Water quality is good, the total dissolved solid concentration in the canal ranges between 250 and 600 mg/L. The canal water is not used by Savage Coal Terminal. All other overland flow at the terminal is ephemeral. The Permittee has a well developed in alluvium adjacent to the river. Water is pumped from the well as needed in the Preparation Plant. The Permittee has a water right to divert water from the river well to the facilities. The Permittee also has a water right for the groundwater flowing through the French Drain to the corrugated stand pipe.

### **Diversions: Miscellaneous Flows**

Hydrologic transport structures on the site were calculated using the 10 yr-24 hr precipitation event determined from the national weather service (NOAA, 1973). It was found to be 1.7 inches. The SCS curve number method (SCS, 1972) was used to calculate the runoff volumes, Section 741. Table 7-18 shows the weighted curve number determination for the drainage. Table 7-19 presents the areas of the subdrainages and the total runoff volumes in acre-feet.

### **Stream Buffer Zones**

There is not a perennial or intermittent stream within 100 feet of the terminal. However, there is a pump owned and used by the Permittee to supply water to the plant on occasion. The pump site is identified as BTCA Area #6 in Section 741. The pump area is located adjacent to the Price River approximately 7500 feet north of the northeast corner of the terminal. It is approximately 0.69 acres. It includes a well, pump, pump house and associated disturbance. The area is in a depression and does not drain.

### **Sediment Control Measures**

The Permittee has provided information in Section 732, 733 and 741 to address this section. There are a total of 5 sedimentation ponds on this site, Plate 7-2. Surface runoff carrying disturbed area sediment is directed to the sedimentation ponds via ditches, culverts and berms. The Permittee has submitted hydrologic design calculations for the hydrologic transport structures and the sediment containment structures (ponds in Section 741). Sedimentation pond design specification and details are provided in Plates 7-4, 7-5 and 7-6. The design capacities of the ponds including the sedimentation storage and runoff volumes are provided in Table 7-21. Sedimentation volumes generated during a precipitation event will be trapped in the ponds. The Permittee has designed the ponds to hold the storage capacity of the 10 yr-24 hr precipitation event plus the sediment volume. Sediment storage volumes have been calculated and markers have been placed in the ponds to cleaning will take place when the sediment level reaches 60 percent of the storage level.

There are seven small areas located within the permit areas that do not drain into the sedimentation ponds. Six of these areas have been designated as best technology currently available because they are small. The areas are shown on Plate 7-2 and described in Section 741. The areas are less than an acre and the runoff is controlled by berms. One area is identified as a small area exemption because it is a buried pipeline from the river pump to the northeast corner of the terminal as described in Chapter 1 and shown on Plate 1-1 and Appendix 7-1. The area is approximately 20 feet wide and 1000 feet long. The pipeline was installed in 1977-78 and is

totally buried. BTCA's and the SAE are designed to treat or contain runoff from the 10 yr-24 hr precipitation event.

### **Siltation Structures: Sedimentation Ponds**

The Permittee has supplied designs for Sediment Ponds 1, 2, and 3 in Plate 7-3. These ponds act in series to capture sediment from the northern half of the permit then transmit any overflow to Pond 6. Each of these ponds has a grouted spillway designed to pass the flow of the 25 yr- 6 hr precipitation event. Designs for Sedimentation Pond 6 are shown on Plate 7-4. Pond 5 captures the runoff from most of the area on the south side of the permit. Overflows from Pond 5 flow to Pond 6. Plate 7-5 show the designs for Sedimentation Pond 6.

### **Siltation Structures: Exemptions**

There are 5 areas the Permittee has identified as BTCA (best technology currently available) areas. These areas are smaller than one acre and an alternate sediment control measure such as total containment or runoff is filtered through a silt fence. Only one SME exists on the site, the pipeline that transports water from the pump by the Price River to Sedimentation Pond 6.

### **Discharge Structures**

Discharges from ponds, culverts or diversions flow less than 5 feet per second and considered no erosive. When calculations or site conditions indicate erosive velocities, the outlets are protected by grout, rip rap described in Section 741. All impoundment are equipped with spillways sized to carry runoff from a 25 yr-6 hr precipitation event.

### **Impoundments**

### **Ponds, Impoundments, Banks, Dams, and Embankments**

All embankments are designed and inspected by a registered engineer.

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**Findings:**

The information provided does not meet the requirement of the Utah Coal Rules. Prior to approval, please provide the following, in accordance with:

**R645-301-731.300**, Provide in Attachment 1 of Appendix 5-1 the analyses referred to in Section 536. •Provide in Attachment 1 of Appendix 5-2, the acid toxic analysis of air-jig separation waste for parameters described in Appendix 5-2. [PB]

**SUPPORT FACILITIES AND UTILITY INSTALLATIONS**

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

**Analysis:**

The Permittee did meet the requirements of this section. The Permittee did show the location of the support facilities on Plate 5-2, Savage Coal Terminal Facility Map.

**Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section.

**SIGNS AND MARKERS**

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

**Analysis:**

The Permittee did not meet the requirements of this section. R645-301-521.252, the Permittee must commit to placing perimeter signs around the permit boundaries rather than state that the permit boundaries are shown on a map. R645-301-527.270, the Permittee must commit to place topsoil markers on topsoil piles rather than state what the signs will look like.

**Findings:**

The information provided in the application is not considered adequate to meet the minimum requirements of this section. Before approval, the Permittee must provide the following in accordance with:

**R645-301-521.252**, the Permittee must commit to placing perimeter signs around the permit boundaries rather than state that the permit boundaries are shown on a map.

**R645-301-527.270**, the Permittee must commit to place topsoil markers on topsoil piles rather than state what the signs will look like.

**USE OF EXPLOSIVES**

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

**Analysis:**

The Permittee met the requirements of this section. The Permittee does not plan on using any explosives at the site.

**Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section.

**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 Permittee meet the requirements of this section. Plate 5-1 shows the affected area, which the Division also considers the permit area.

**Mining Facilities Maps**

The Permittee meet the requirements of this section. Plate 5-1 shows the surface facilities.

**Certification Requirements**

The Permittee inspects all pond embankments on a quarterly basis. The Permittee meet the requirements of this section. All appropriate maps have been certified.

**Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section.

## **RECLAMATION PLAN**

### **GENERAL REQUIREMENTS**

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

#### **Analysis:**

The Permittee has submitted a reclamation plan in Section 540 of the MRP. A schedule of reclamation is provided in Section 542. All facilities will be dismantled and the site reclaimed. The Permittee will salvage those materials that can be salvaged. All the other material will be hauled to the landfill. All final grading, preparation and placement of topsoil will be done along the contour to minimize subsequent erosion.

#### **Findings:**

The Permittee has submitted sufficient information to address this section.

### **POSTMINING LAND USES**

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

#### **Analysis:**

The information is reformatted in accordance with the R645 rules and includes a description of the post mining land use for the disturbed area as "*light industrial*", (chapter 4, page 6 section 412.100). However chapter three, page 17, section 330 indicates that the postmining land use would be wildlife habitat for small mammals and songbirds. The applicant may choose to implement either one or both of the proposed post mining land uses and should revise the appropriate sections of the application accordingly.

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**Findings:**

The information in the application is not adequate to meet the requirements of this section of the regulations. Prior to approval the following information must be provided.

**R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275,** The information is reformatted in accordance with the R645 rules and includes a description of the post mining land use for the disturbed area as light industrial, (chapter 4, page section 411.100). However chapter three, page 17, section 330 indicates that the postmining land use would be wildlife habitat for small mammals and songbirds. The applicant may choose to implement either one or both of the proposed post mining land uses and should revise the appropriate sections of the application.

**PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES**

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

**Analysis:**

The information is reformatted in accordance with the R645 rules and includes a description of the protection of the fish, wildlife and related environmental values. Section 358 is addressed under section 333 and section 342 is addressed under section 540

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

**APPROXIMATE ORIGINAL CONTOUR RESTORATION**

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -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 Permittee met the requirements for reclaiming the site to the approximate original contours (AOC). The definitions of AOC are couched in terms of backfilling and grading in order to achieve certain results. The mining and reclamation plan must provide the basis for determining whether the proposed backfilling and grading plan will:

- Minimize off-site effects. The Division considers that requirement will be met if the biology and hydrology requirements.
- Achieve a final surface configuration, which closely resembles the general surface configuration of the land prior to mining. The area was disturbed prior to the passage of SMCRA and there are no topographic. The surrounding area is flat and the general reclamation plan calls for restoring the land to the topography of the adjacent area.
- Provide a subsurface foundation for a vegetative cover capable of stabilizing the surface from erosion. The Division considers this requirement is meant is the biology requirements are meant.
- Support the approved postmining land use. The Division considers that this requirement is met if the postmining land use requirements are met.

**Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section.

**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 did not meet the requirements of this section. The requirements for backfilling and grading are as follows:

- Achieve the approximate original contour. The Division addressed those requirements in the AOC section of the TA.
- Eliminate all highwalls, spoil piles, and depressions. There are no highwalls or spoil piles on the site. The Permittee committed to remove the ponds and other major depression at the site.
- Achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides. The Permittee did not address this issue.
- Minimize erosion and water pollution both on and off the site; and, support the approved postmining land use. The Division considers that the Permittee will meet those requirements if the biology and hydrology requirements have been met.

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Specific backfilling and grading requirements that apply to the site are:

- There is no settled or vegetated fill on site.
- There is no spoil on the site.
- There is no mined out area on the site.
- There are no exposed coal seams on the site.

### **Findings:**

The information provided in the application is considered adequate to meet the minimum requirements of this section.

## **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:**

The Permittee did not address this section of the regulations. The Permittee must address the requirements of underground openings, which includes wells.

### **Findings:**

The information provide in the amendment is not considered adequate to meet the requirements of this section. Before approval, the Permittee must provide the following in accordance with:

**R645-301-529**, The Permittee must address the closure of all underground openings including wells. The comment that the site is a surface mine is insufficient.

## **TOPSOIL AND SUBSOIL**

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

### **Analysis:**

#### **Redistribution**

Soil preparation and redistribution is described in Section 542.200. Currently, there are 132.5 acres disturbed (Table 2-9) and 62,314 cubic yards of topsoil and subsoil stored at the site ( Sec. 231.400).

Currently the mass balance for the mine site is as follows:

- Topsoil available = 62,314 yd<sup>3</sup> stockpiled topsoil and subsoil.
- Disturbed area = 132.5 acres
- Post Law Disturbance = 55.3 acres
- Topsoil required (Post Law) = 44,617 yd<sup>3</sup>, reflecting the commitment to re-apply six inches of topsoil to post-law areas
- Max area for 6" redistribution = 77.25 acres, reflecting the area that could be covered to a depth of six inches by the stored soil.

Commitments for deep chiseling and soil testing during final reclamation are found in Section 231.300.

**Findings:**

The information provided meets the requirements of the topsoil/subsoil handling plan.

**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 Permittee meet the requirements of this section. The Permittee committed to reclaim all roads.

**Findings:**

The information provided meets the requirements of the topsoil/subsoil handling plan.

**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:**

**Hydrologic Reclamation Plan**

On final cessation of operations all surface structures and facilities for the operation will be removed. There are no plans to transfer any wells to other parties. The two monitoring wells will be filled and capped. All sedimentation ponds and diversions will remain in place until an effective vegetation cover has been established to reduce suspended solids from the affected area. Once the success of revegetation is determined to be acceptable, all diversions and sedimentation ponds will be removed. The berms around the ponds will be pushed in and compacted to complete the backfilling. The pipeline system consisting of 2 PVC pipes laid parallel in a trench approximately 30 inches wide for a distance of approximately 10,000 feet (Plates 5-7 and 5-8) from the pumphouse to the Price River will be removed along with the pumphouse, pump, grading, and 6 foot CMP well. The pumphouse will be regarded to original contour and reseeded. The area is a natural low spot therefore; the reclamation will be in a small non-draining area. The Permittee does not plan to retain any roads.

**Findings:**

The information provide in the amendment is considered adequate to meet the requirements of this section.

**CONTEMPORANEOUS RECLAMATION**

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

**Analysis:**

**General**

The information is reformatted in accordance with the R645 rules and includes a description of contemporaneous reclamation measures employed for those areas no longer need for the loadout activities. Additional information is included in section 540.

**Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations.

## **REVEGETATION**

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

### **Analysis:**

#### **Revegetation: General Requirements**

The information is reformatted in accordance with the R645 rules and includes a description of the revegetation measures to be implemented during reclamation. The revegetation measures are described in chapter 5, section 540, and pages 41-49.

### **Findings:**

The information in the application is adequate to meet the requirements of this section of the regulations

## **STABILIZATION OF SURFACE AREAS**

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

### **Analysis:**

Establishing vegetation at the site will be difficult due to lack of water and saline/sodic soils. A case in point is the vegetation establishment on the topsoil and subsoil stockpiles. Initially, topsoil and subsoil stockpiles were smoothly graded and tilled to a depth of 5 inches. Slopes greater than 20% were prepared using a crawler tractor at right angles to the slope to leave grouser tracks parallel to the slope. There was 2000 lbs/acre hay mulch incorporated into the surface with roughening and a temporary seed mix applied (Table 5-1) and treatment with 2,000 lbs/ac of wood fiber mulch and 60 lbs/acre of tackifier (prior to reformatting in 2008, these treatments were documented on page 3-54, Section 3.5.2, but this information was removed from Section 541.100, Soil Removal and Storage, pg. 41 of the reformatted plan.) This sort of treatment was ineffective in establishing vegetation and was abandoned with reconstruction of the topsoil/subsoil stockpile in 2002 and construction of the 2006 settling pond stockpiles.

The best technology as of 2006 is described in Section 231.100. Hay mulch will be applied at a rate of 2,000 pounds/acre and incorporated into the surface during the roughening of the pile with a trackhoe. After hydroseeding, wood fiber mulch will be over sprayed at a rate of 2000 lbs/acre in combination with 60 lbs of Tac per acre.

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Mulching is also described in Section 542.200, p. 48. However, Section 542.200 does not reflect the best technology for water harvesting (gouging). Please refer to the Practical Guide to Reclamation in Utah<sup>1</sup> available on the Internet at <http://dogm.nr.state.ut.us> for specifications on extreme surface roughening.

The mean annual precipitation for the site is about 10 inches (Section 724.200 and Table 7-15). Section 542.200 describes seeding after September 1 to allow for optimum growing conditions. The site receives most of its precipitation from August through September, making it a candidate for July seeding of warm season species. A summer (July) seeding is acceptable because several of the species are warm season and summer seeding will allow their establishment. If seeded in the fall, warm season species usually cannot compete with the other weed and seeded species and will not be seen. Past experience with the soils at this site indicates that seeding must immediately follow topsoiling to allow good seed/soil contact, regardless of season.

Section 542.200, Recontouring, provides a commitment to stabilize rills and gullies.

### Findings:

The information provided does not meet the requirements of the Utah Coal Rules. Prior to approval, the application must contain the following in accordance with:

**R645-301-244 and R645-301-354 and R645-301-355**, Section 542.200 must be updated with the knowledge gained from topsoil stockpiles, that the best technology for establishing vegetation is surface roughening for water harvesting and seeding immediately after topsoil placement, regardless of season. [PB]

## CESSATION OF OPERATIONS

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

### Analysis:

Section 515.322 states that a notice will be provided to the Division whenever the operation ceases for longer than 30 days. Section 515.322 provides details of the contents of that notice, in accordance with R645-301-515.320.

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<sup>1</sup> Utah Division of Oil, Gas and Mining, Department of Natural Resources. 2000. The Practical Guide to reclamation.

**Findings:**

The information provided meets the requirements of the Utah Coal Rules.

**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 Permittee met the requirements of this section. The Permittee showed the affected area on several maps including Plate 5-1.

**Bonded Area Map**

The Permittee met the requirements of this section. The Permittee showed the bonded area on several maps including Plate 5-1.

**Reclamation Backfilling And Grading Maps**

The Permittee did not meet the requirements of this section. The Permittee must have at least one map that shows the final contours at the same scale as Plate 5-2. In addition, the contour lines outside of the disturbed areas must be the same on the operational and final contour maps.

The Permittee needs to show two reclamation scenarios. The first scenario is that most of the material in the refuse pile has been removed. The second scenario is that the refuse pile is reclaimed in place.

**Reclamation Facilities Maps**

The Permittee meet the requirements of this section. There are no reclamation facilities scheduled for the site.

### **Final Surface Configuration Maps**

Plate 5-6 shows the Post mining topography and drainage pattern of the reclaimed terminal area. The Permittee meet the requirements of this section.

### **Reclamation Monitoring And Sampling Location Maps**

Surface and groundwater monitoring will continue through reclamation. Monitoring sites are shown in Plate 7-2.

### **Reclamation Surface And Subsurface Manmade Features Maps**

The Permittee did not meet the requirements of this section. The Permittee must include maps in the MRP that show the facilities that will remain after final reclamation, such as railroads and pipelines. The map must be at the same scale as the general reclamation maps.

### **Certification Requirements.**

The Permittee met the requirements of this section. The maps that the Permittee provided met the certification requirements.

### **Findings:**

The information provide in the amendment is not considered adequate to meet the requirements of this section.

## **BONDING AND INSURANCE REQUIREMENTS**

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

### **Analysis:**

#### **General**

The Permittee met the requirements of this section. In Chapter 8 of the MRP, the Permittee addressed the general requirements for bonding and insurance.

**Form of Bond**

The Permittee met the requirements of this section. The bond is in Appendix 8-2 of the MRP.

**Determination of Bond Amount**

The Permittee met the requirements of this section. The Permittee gave the Division enough information to calculate the reclamation cost estimate. The reclamation cost estimate is in Appendix 8-1 of the MRP.

**Terms and Conditions for Liability Insurance**

The Permittee met the requirements of this section. The insurance information is in Appendix 8-3 of the MRP.

**Findings:**

The information provide in the amendment is considered adequate to meet the requirements of this section.

**COAL PREPARATION PLANTS NOT LOCATED WITHIN THE PERMIT AREA OF A MINE**

Regulatory Reference: 30 CFR Sec. 785.21, 827; R645-302-260, et seq.

**Analysis:**

This coal preparation and loading facility meets the R645-100 definition of coal processing plant and falls under regulation in accordance with R645-302-260.

**Findings:**

As noted by itemized deficiencies, the application does not meet the requirements of the Utah Coal Rules.

## **CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)**

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

### **Analysis:**

The Division updates the CHIA when there are changes to the permit area. Rewrite of the MRP will not cause changes to the operation or mine permit area.

### **Findings:**

The Permittee has submitted sufficient information to address this section.

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