



State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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May 23, 2002

James T. Jensen, Vice President
Savage Industries Inc.
5250 South 300 West, Suite 200
Salt Lake City, Utah 84107

Re: Results of the Midterm Permit Review, Savage Industries Inc., Savage Coal Terminal, C/007/022-MT02, Outgoing File

Dear Mr. Jensen:

The Division has completed a review of the Savage Coal Terminal facility as required by R645-303-211. You should recall that the items under review were as follows:

1. An AVS check to ensure that Ownership and Control information is current and correct.
2. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee initiated plan changes are appropriately incorporated into the plan document.
3. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
4. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
5. The Division may conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

On April 19, 2002 the Division approved amendment # 02A-1, submitted by Savage Industries Inc. to remove topsoil and develop a 13-acre parcel for coal storage. The review of that amendment included three additional requirements that were incorporated into the Midterm Review.

They were as follows:

6. Climatological information
7. Violation history information.
8. Reclamation of high water table areas.

The results of the review are contained in the enclosed review documents. You will note that items 6 and 8 need your further attention. These items deal with the precipitation data and the reclamation of high water table areas. Additional information will need to be provided in the form of an amendment to the Savage Coal Terminal mining and reclamation plan. The amendment should be submitted by no later than June 25, 2002.

If you have any questions regarding these requirements or the Midterm Review please don't hesitate to call me at (801) 538-5325, or Joe Helfrich at (801) 538-5290.

Sincerely,



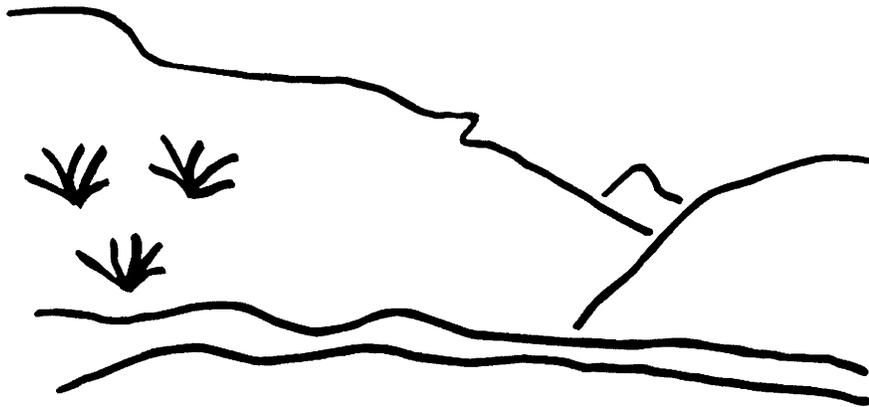
Daron R. Haddock
Permit Supervisor

an

cc: Boyd Rhodes
Dan Guy
Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Savage Coal Terminal
Midterm Review
C/007/022-MT02
Technical Analysis
May 22, 2002

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INTRODUCTION

TECHNICAL ANALYSIS

INTRODUCTION

The midterm review for the Savage Coal Terminal facility was initiated by way of Division correspondence to James T. Jensen, (Vice President of Savage Industries Inc.), on March 26, 2002. The following items were chosen for review:

1. An AVS check to ensure that Ownership and Control information is current and correct.
2. A review of the plan to ensure that the requirements of all permit conditions, division orders, and notice of violation abatement plans, and permittee-initiated plan changes are appropriately incorporated into the plan document.
3. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
4. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
5. The Division will conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

On April 19, 2002 the Division approved amendment # 02A-1, submitted by Savage Industries Inc. to remove topsoil and develop a 13-acre parcel for coal storage. Three additional requirements were incorporated into the Midterm Review. They were:

6. Climatological information
7. Violation history information.
8. Reclamation of high water table areas.

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INTRODUCTION

SUMMARY OF OUTSTANDING DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical Analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the Division, result in denial of the proposed permit changes, or may result in other executive or enforcement action as deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.** A seed mix for lowlands within the disturbed area, a re-evaluation of the location and species composition of the current reference area, and a revised vegetation map, plate 9-1. 18
- R645-301-724,** Precipitation data from 1992 to present must be provided. The information can be acquired by contacting Don Jensen, (State Climatologist at Utah State University), (435) 797-2190. 7

SUMMARY OF PERMIT CONDITIONS

SPECIAL CONDITIONS OR STIPULATIONS TO THE PERMIT APPROVAL

Regulatory References: 30 CFR773.17; R645-300-140; R645-300-145.

Analysis:

The permit was renewed August 7, 1999 and expires August 7, 2004. There are no special conditions or stipulations attached to the current permit. The permittee-initiated plan changes have been incorporated into the plan document

Findings:

Savage Industries Inc. has met the regulatory requirements for item #2 of the midterm review.

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SUMMARY OF OUTSTANDING DEFICIENCIES

GENERAL CONTENTS

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

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

Minimum Regulatory Reference:

The operator of the coal mine and all owners and controllers of the operation must be identified by name and address. The Division with the Applicant/Violator System must crosscheck the information provided and other sources such as DOGM inspection and enforcement records, State corporation commission or tax records. If the Division identifies any errors in the ownership or control information, the applicant must be contacted to resolve the matter immediately. If the Division discovers that none of the persons identified in the application has had any previous mining experience, the applicant will be contacted to verify this fact.

The Applicant/Violator System will be updated with new information received by the Division.

Analysis:

The permittee has provided the Division with an updated list of the officers directors and shareholders. Changes to the information in the current plan were noted and provided to the AVS.

Findings:

Savage Industries Inc. has met the regulatory requirements of item #1 of the midterm review.

VIOLATION INFORMATION

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

Minimum Regulatory Reference:

The application must inform the Division of any of the following:

- (1) State or Federal permits suspension or revocation;
- (2) Bond or other security forfeiture in the last five years;
- (3) Any State or Federal violations received in the last three years by the applicant or any subsidiary, affiliate, or persons controlled by or under common control with the applicant. All outstanding violations (regardless of date) must also be disclosed.

The Division will review all available information and will not issue a permit if any operation owned or controlled by the applicant or linked to the applicant is in violation of SMCRA or the State Program or any State or Federal environmental law.

The Division will notify the applicant of the violation, suspension or forfeiture hindering their current application for permit and give the applicant an opportunity to rebut the findings. The Division will keep the Applicant Violator System updated.

Analysis:

The AVS office provided a quality check on Savage Industries Inc. on April 19, 2002. The inquiry revealed that there were no outstanding notices of violation or cessation orders in the name of Savage Industries Inc.

There are also no outstanding notice of violation abatement plans for the Coal loadout facility. There have not been any violations issued since 1997 nor has Savage Industries Inc., or any affiliate, or persons controlled by or under common control with Savage had a federal or state permit to conduct coal mining and reclamation operations suspended or revoked in the past five years.

Findings:

Savage Industries Inc. has met the regulatory requirements for items #1 and #7 of the midterm review.

ENVIRONMENTAL RESOURCE INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

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

CLIMATOLOGICAL RESOURCE INFORMATION

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

Minimum Regulatory Requirements:

Provide a statement of the climatological factors that are representative of the proposed permit area, including: the average seasonal precipitation; the average direction and velocity of prevailing winds; and, seasonal temperature ranges. Additional data may be requested as deemed necessary to ensure compliance other regulatory requirements.

Analysis:

Updated climatological information is provided for in Section 11 of the MRP. Table 11-1 includes the temperature, precipitation, snowfall and evapotranspiration data from 1968-1992. From the data provided in Table 11-1, the mean annual precipitation over a 24 year period is 9.3 inches. Current information from 1992 to present should also be provided. Table 11-2 summarizes the mean wind speeds in Castle valley The mean annual soil temperature is 47 – 48 degrees Fahrenheit and the frost-free period ranges from 118 to 196 days.

Findings:

The summarized current climatological and air quality information is not adequate to meet the requirements of item #6 of the midterm review and this section of the Regulations. Prior to final approval of the midterm review the permittee must provide the following information in accordance with:

R645-301-724, Precipitation data from 1992 to present must be provided. The information can be acquired by contacting Don Jensen, (State Climatologist at Utah State University), (435) 797-2190.

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HYDROLOGIC INFORMATION

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

Minimum Regulatory Requirements:

General

All underground mining and reclamation activities shall be conducted to minimize disturbance of the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area, and to support approved postmining land uses in accordance with the terms and conditions of the approved permit and the performance standards of this part. The Division may require additional preventative, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented. Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment.

Groundwater Monitoring

In order to protect the hydrologic balance underground mining activities shall be conducted according to the hydrologic reclamation plan. Ground-water quality shall be protected by handling earth materials and runoff in a manner that minimizes acidic, toxic, or other harmful infiltration to ground-water systems and by managing excavations and other disturbances to prevent or control the discharge of pollutants into the ground water.

Ground-water monitoring shall be conducted according to the ground-water monitoring plan. The Division may require additional monitoring when necessary. Ground-water monitoring data shall be submitted every 3 months to the Division or more frequently as prescribed by the Division. Monitoring reports shall include analytical results from each sample taken during the reporting period. When the analysis of any ground-water sample indicates noncompliance with the permit conditions, the operator shall promptly notify the Division and immediately provide for any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance. Plans and hydrologic information to evaluate and mitigate the noncompliance situation and information relevant to the PHC shall be submitted to the Division as required.

Ground-water monitoring shall proceed through mining and continue during reclamation until bond release. The Division may modify the monitoring requirements including the parameters covered and the sampling frequency if the operator demonstrates, using the monitoring data obtained, that: the operation has minimized disturbance to the prevailing hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quantity and quality are suitable to support approved postmining land uses; or, monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan.

Equipment, structures, and other devices used in conjunction with monitoring the quality and quantity of ground water onsite and offsite shall be properly installed, maintained, and operated and shall be removed by the operator when no longer needed.

Surface Water Monitoring

In order to protect the hydrologic balance, underground mining activities shall be conducted according to the approved plan, and the following: surface-water quality shall be protected by handling earth materials, ground-water discharges, and runoff in a manner that minimizes the formation of acidic or toxic drainage; prevents, to the extent possible using the best technology currently available, additional contribution of suspended solids to streamflow outside the permit area; and otherwise prevent water pollution. If drainage control, restabilization and revegetation of disturbed areas, diversion of runoff, mulching, or other reclamation and remedial practices are not adequate to meet water-quality standards and effluent limitations, the operator shall use and maintain the necessary water-treatment facilities or water-quality controls. Surface-water quantity and flow rates shall be protected by handling earth materials and runoff in accordance with the steps outlined in the approved plan.

Surface-water monitoring shall be conducted according to the approved surface-water monitoring plan. The Division may require additional monitoring when necessary. Surface-water monitoring data shall be submitted every 3 months to the Division or more frequently as prescribed by the Division. Monitoring reports shall include analytical results from each sample taken during the reporting period. When the analysis of any surface-water sample indicates noncompliance with the permit conditions, the operator

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shall promptly notify the Division and immediately provide for any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance. Plans and hydrologic information to evaluate and mitigate the noncompliance situation and information relevant to the PHC shall be submitted to the Division as required. The reporting requirements of the water monitoring plan do not exempt the operator from meeting any National Pollutant Discharge Elimination System (NPDES) reporting requirements.

Surface-water monitoring shall proceed through mining and continue during reclamation until bond release. The Division may modify the monitoring requirements, except those required by the NPDES permitting authority, including the parameters covered and sampling frequency if the operator demonstrates, using the monitoring data obtained, that: the operation has minimized disturbance to the hydrologic balance in the permit and adjacent areas and prevented material damage to the hydrologic balance outside the permit area; water quantity and quality are suitable to support approved postmining land uses; and, monitoring is no longer necessary to achieve the purposes set forth in the approved monitoring plan.

Equipment, structures, and other devices used in conjunction with monitoring the quality and quantity of surface water onsite and offsite shall be properly installed, maintained, and operated and shall be removed by the operator when no longer needed.

Acid- and toxic-forming materials and underground development waste

Drainage from acid- and toxic-forming materials and underground development waste into surface water and ground water shall be avoided by: identifying and burying and/or treating, when necessary, materials which may adversely affect water quality, or be detrimental to vegetation or to public health and safety if not buried and/or treated; and, storing materials in a manner that will protect surface water and ground water by preventing erosion, the formation of polluted runoff, and the infiltration of polluted water.

Discharges into an underground mine

Discharges into an underground mine are prohibited, unless specifically approved by the Division after a demonstration that the discharge will: minimize disturbance to the hydrologic balance on the permit area, prevent material damage outside the permit area and otherwise eliminate public hazards resulting from underground mining activities; not result in a violation of applicable water quality standards or effluent limitations; be at a known rate and quality which shall meet the effluent limitations for pH and total suspended solids, except that the pH and total suspended solids limitations may be exceeded, if approved by the Division; and, meet with the approval of the Mine Safety and Health Administration.

Discharges shall be limited to the following: water; coal-processing waste; fly ash from a coal-fired facility; sludge from an acid-mine-drainage treatment facility; flue-gas desulfurization sludge; inert materials used for stabilizing underground mines; and, underground mine development wastes.

Water from one underground mine may be diverted into other underground workings according to the requirements of this section.

Gravity discharges from underground mines

Surface entries and accesses to underground workings shall be located and managed to prevent or control gravity discharge of water from the mine. The surface entries and accesses of drift mines first used after the implementation of a State, Federal, or Federal Lands Program and located in acid-producing or iron-producing coal seams shall be located in such a manner as to prevent any gravity discharge from the mine. Gravity discharges of water from an underground mine first used before the implementation of a State, Federal, or Federal Lands Program, may be allowed by the Division if it is demonstrated that the untreated or treated discharge complies with the performance standards and any additional NPDES permit requirements.

Water-quality standards and effluent limitations

Compliance with all applicable State and Federal water quality laws and regulations and with the effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.

Diversions: General

With the approval of the Division, any flow from mined areas abandoned before May 3, 1978, and any flow from undisturbed areas or reclaimed areas, after meeting the criteria for siltation structure removal, may be diverted from disturbed areas by means of temporary or permanent diversions. All diversions shall be designed to minimize adverse impacts to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area and to assure the safety of the public. Diversions shall not be used to divert water into underground mines without approval of the Division.

The diversion and its appurtenant structures shall be designed, located, constructed, and maintained to: be stable; provide protection against flooding and resultant damage to life and property; prevent, to the extent possible using the best

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technology currently available, additional contributions of suspended solids to streamflow outside the permit area; and, comply with all applicable local, State, and Federal laws and regulations.

Temporary diversions shall be removed when no longer needed to achieve the purpose for which they were authorized. The land disturbed by the removal process shall be restored. Before diversions are removed, downstream water-treatment facilities previously protected by the diversion shall be modified or removed, as necessary, to prevent overtopping or failure of the facilities. This requirement shall not relieve the operator from maintaining water-treatment facilities as otherwise required.

A permanent diversion or a stream channel reclaimed after the removal of a temporary diversion shall be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel including the natural riparian vegetation to promote the recovery and the enhancement of the aquatic habitat. The Division may specify additional design criteria for diversions.

Diversions: Perennial and intermittent streams

Diversion of perennial and intermittent streams within the permit area may be approved by the Division after making the finding relating to stream buffer zones that the diversions will not adversely affect the water quantity and quality and related environmental resources of the stream. The design capacity of channels for temporary and permanent stream channel diversions shall be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream from the diversion. Protection against flooding and resultant damage to life and property shall be met when the temporary and permanent diversions for perennial and intermittent streams are designed so that the combination of channel, bank and flood-plain configuration is adequate to pass safely the peak runoff of a 10-year, 6-hour precipitation event for a temporary diversion and a 100-year, 6-hour precipitation event for a permanent diversion. The design and construction of all stream channel diversions of perennial and intermittent streams shall be certified by a qualified registered professional engineer as meeting the performance standards and any design criteria set by the Division.

Diversions: Miscellaneous flows

Diversion of miscellaneous flows, which consist of all flows except for perennial and intermittent streams, may be diverted away from disturbed areas if required or approved by the Division. Miscellaneous flows shall include ground-water discharges and ephemeral streams. The design, location, construction, maintenance, and removal of diversions of miscellaneous flows shall meet all of the general performance standards of this section. Protection against flooding and resultant damage to life and property shall be met when the temporary and permanent diversions for miscellaneous flows are designed so that the combination of channel, bank and flood-plain configuration is adequate to pass safely the peak runoff of a 2-year, 6-hour precipitation event for a temporary diversion and a 10-year, 6-hour precipitation event for a permanent diversion.

Stream buffer zones

No land within 100 feet of a perennial stream or an intermittent stream shall be disturbed by underground mining activities, unless the Division specifically authorizes underground mining activities closer to, or through, such a stream. The Division may authorize such activities only upon finding that: underground mining activities will not cause or contribute to the violation of applicable State or Federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream; and, if there will be a temporary or permanent stream-channel diversion, it will comply with the regulatory requirements for diversions.

The area not to be disturbed shall be designated as a buffer zone, and the operator shall mark it accordingly with buffer zone markers.

Sediment control measures

Appropriate sediment control measures shall be designed, constructed, and maintained using the best technology currently available to: prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area; meet the more stringent of applicable State or Federal effluent limitations; and, minimize erosion to the extent possible.

Sediment control measures include practices carried out within and adjacent to the disturbed area. The sedimentation storage capacity of practices in and downstream from the disturbed areas shall reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include but are not limited to: disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling, grading, and prompt revegetation; stabilizing the backfilled material to promote a reduction of the rate and volume of runoff; retaining sediment within disturbed areas; diverting runoff away from disturbed areas; diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion; using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds, and other measures that reduce overland flow velocity, reduce runoff volume, or trap sediment; treating with chemicals; and, treating mine drainage in underground sumps.

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Siltation Structures: General

All surface drainage from disturbed areas shall be passed through a siltation structure before leaving the permit area. Siltation structures shall mean a sedimentation pond, a series of sedimentation ponds, or other treatment facility. Other treatment facilities means any chemical treatments, such as flocculation, or mechanical structures, such as clarifiers, that have a point-source discharge and that are utilized to prevent additional contribution of suspended solids to streamflow or runoff outside the permit area.

Disturbed area requiring treatment through a siltation structure shall not include those areas in which the only underground mining activities include: diversion ditches, siltation structures, or roads that are designed, constructed and maintained in accordance with the regulatory requirements; and, for which the upstream area is not otherwise disturbed by the operator.

Additional contributions of suspended solids and sediment to streamflow or runoff outside the permit area shall be prevented to the extent possible using the best technology currently available. Siltation structures for an area shall be constructed before beginning any underground mining activities in that area, and upon construction shall be certified by a qualified registered professional engineer, or when authorized under the regulations, by a qualified registered professional land surveyor, to be constructed as designed and as approved in the reclamation plan.

Any siltation structure which impounds water shall be designed, constructed and maintained in accordance with the requirements for impoundments.

Siltation structures shall be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated. In no case shall the structure be removed sooner than 2 years after the last augmented seeding. When the siltation structure is removed, the land on which the siltation structure was located shall be regraded and revegetated in accordance with the reclamation plan. Sedimentation ponds approved by the Division for retention as permanent impoundments may be exempted from this requirement.

Any point-source discharge of water from underground workings to surface waters which does not meet effluent limitations shall be passed through a siltation structure before leaving the permit area.

Siltation Structures: Sedimentation ponds

Sedimentation ponds, when used, shall: be used individually or in series; be located as near as possible to the disturbed area and out of perennial streams unless approved by the Division; and, be designed, constructed, and maintained to:

- 1.) Provide adequate sediment storage volume;
- 2.) Provide adequate detention time to allow the effluent from the ponds to meet State and Federal effluent limitations;
- 3.) Contain or treat the 10-year, 24-hour precipitation event ("design event") unless a lesser design event is approved by the Division based on terrain, climate, other site-specific conditions and on a demonstration by the operator that the effluent limitations will be met;
- 4.) Provide a nonclogging dewatering device adequate to maintain the required time;
- 5.) Minimize, to the extent possible, short circuiting;
- 6.) Provide periodic sediment removal sufficient to maintain adequate volume for the design event;
- 7.) Ensure against excessive settlement;
- 8.) Be free of sod, large roots, frozen soil, and acid- or toxic-forming coal-processing waste; and
- 1.) Be compacted properly.

A sedimentation pond shall include either a combination of principal and emergency spillways or a single open-channel spillway configured as specified in this section, designed and constructed to safely pass the applicable design precipitation event. The Division may approve a single open-channel spillway that is: of nonerodible construction and designed to carry sustained flows; or earth- or grass-lined and designed to carry short-term infrequent flows at non-erosive velocities where sustained flows are not expected.

The required design precipitation event for a sedimentation pond meeting the spillway requirements of this section is: for a sedimentation pond meeting the size or other criteria of 30 CFR Sec. 77.216(a), a 100-year 6-hour event, or greater event as specified by the Division; or, for a sedimentation pond not meeting the size or other criteria of 30 CFR Sec. 77.216(a), a 25-year 6-hour event, or greater event as specified by the Division.

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Analysis:

Sediment Control Measures

The existing plan primarily provides sediment control through the use of silt fences, straw bales, sedimentation ponds, rock gabion energy dissipators, and ASCA's for the BTCA treatment of disturbed areas. All silt fences have been viewed during monthly inspections and are maintained and in good working order.

BTCA's 1 through 6, as illustrated in Plates 3-2 and 4-1, are inspected in the field on a regular basis and determined to be providing adequate sedimentation control.

Maintenance of the disturbed area ditches and ponds have been monitored during regular quarterly inspections.

Sedimentation Ponds

Sediment Pond 5 regularly holds water due to shallow groundwater in the area. When Pond 5 starts holding significant water, it is diverted to Pond 6 and then to the sump where it is used on the site for dust control. All ponds on the facility have 60 percent clean-out markers that are visible and well maintained. A record check from 1990 through 2002 indicated only one UPDES discharge has occurred; in June 1995.

Findings:

No failure of BTCA off the permit area has been noted during the site inspections. The Mine plan meets the minimum requirements of the regulations. Although not a requirement, the Division recommends installing an inexpensive rain gage at the site. In the event a major storm, the operator would be able to demonstrate whether the magnitude of the storm exceeded the designed storm event for sediment controls.

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REVEGETATION

Regulatory Reference: 30 CFR 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.

Minimum Regulatory Requirements:

Revegetation: General requirements

The permittee shall establish on regraded areas and on all other disturbed areas except water areas and surface areas of roads that are approved as part of the postmining land use, a vegetative cover that is in accordance with the approved permit and reclamation plan and that is: diverse, effective, and permanent; comprised of species native to the area, or of introduced species where desirable and necessary to achieve the approved postmining land use and approved by the Division; at least equal in extent of cover to the natural vegetation of the area; and, capable of stabilizing the soil surface from erosion.

The reestablished plant species shall: be compatible with the approved postmining land use; have the same seasonal characteristics of growth as the original vegetation; be capable of self-regeneration and plant succession; be compatible with the plant and animal species of the area; and, meet the requirements of applicable State and Federal seed, poisonous and noxious plant, and introduced species laws or regulations.

The Division may grant exception to these requirements when the species are necessary to achieve a quick-growing, temporary, stabilizing cover, and measures to establish permanent vegetation are included in the approved permit and reclamation plan.

When the Division approves a cropland postmining land use, the Division may grant exceptions to the requirements related to the original and native species of the area. Areas identified as prime farmlands must also meet those specific requirements as specified under that section.

Revegetation: Timing

Disturbed areas shall be planted during the first normal period for favorable planting conditions after replacement of the plant-growth medium. The normal period for favorable planting is that planting time generally accepted locally for the type of plant materials selected.

Revegetation: Mulching and other soil stabilizing practices

Suitable mulch and other soil stabilizing practices shall be used on all areas that have been regraded and covered by topsoil or topsoil substitutes. The Division may waive this requirement if seasonal, soil, or slope factors result in a condition where mulch and other soil stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetative cover.

Revegetation: Standards for success

Success of revegetation shall be judged on the effectiveness of the vegetation for the approved postmining land use, the extent of cover compared to the cover occurring in natural vegetation of the area, and the general requirements for Revegetation. Standards for success and statistically valid sampling techniques for measuring success shall be selected by the Division and included in an approved regulatory program.

Standards for success shall include criteria representative of unmined lands in the area being reclaimed to evaluate the appropriate vegetation parameters of ground cover, production, or stocking. Ground cover, production, or stocking shall be considered equal to the approved success standard when it is not less than 90 percent of the success standard. The sampling techniques for measuring success shall use a 90-percent statistical confidence interval (i.e., a one-sided test with a 0.10 alpha error).

Standards for success shall be applied in accordance with the approved postmining land use and, at a minimum, the following conditions:

- 1.) For areas developed for use as grazing land or pasture land, the ground cover and production of living plants on

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- the revegetated area shall be at least equal to that of a reference area or such other success standards approved by the Division.
- 2.) For areas developed for use as cropland, crop production on the revegetated area shall be at least equal to that of a reference area or such other success standards approved by the Division.
 - 3.) For areas to be developed for fish and wildlife habitat, recreation, shelter belts, or forest products, success of vegetation shall be determined on the basis of tree and shrub stocking and vegetative ground cover. Such parameters are described as follows: minimum stocking and planting arrangements shall be specified by the Division on the basis of local and regional conditions and after consultation with and approval by the State agencies responsible for the administration of forestry and wildlife programs. Consultation and approval may occur on either a programwide or a permit-specific basis; trees and shrubs that will be used in determining the success of stocking and the adequacy of the plant arrangement shall have utility for the approved postmining land use. Trees and shrubs counted in determining such success shall be healthy and have been in place for not less than two growing seasons. At the time of bond release, at least 80 percent of the trees and shrubs used to determine such success shall have been in place for 60 percent of the applicable minimum period of responsibility; and, vegetative ground cover shall not be less than that required to achieve the approved postmining land use.

For areas to be developed for industrial, commercial, or residential use less than 2 years after regrading is completed, the vegetative ground cover shall not be less than that required to control erosion.

For areas previously disturbed by mining that were not reclaimed to the requirements of the performance standards and that are remined or otherwise redisturbed by surface coal mining operations, as a minimum, the vegetative ground cover shall be not less than the ground cover existing before redisturbance and shall be adequate to control erosion.

The period of extended responsibility for successful revegetation shall begin after the last year of augmented seeding, fertilizing, irrigation, or other work, excluding husbandry practices that are approved by the Division.

In areas of more than 26.0 inches of annual average precipitation, the period of responsibility shall continue for a period of not less than five full years. Vegetation parameters identified for grazing land or pasture land and cropland shall equal or exceed the approved success standard during the growing seasons of any two years of the responsibility period, except the first year. Areas approved for the other uses shall equal or exceed the applicable success standard during the growing season of the last year of the responsibility period.

In areas of 26.0 inches or less average annual precipitation, the period of responsibility shall continue for a period of not less than 10 full years. Vegetation parameters shall equal or exceed the approved success standard for at least the last 2 consecutive years of the responsibility period.

The Division may approve selective husbandry practices, excluding augmented seeding, fertilization, or irrigation, provided it obtains prior approval from the Director as a State Program Amendment that the practices are normal husbandry practices, without extending the period of responsibility for revegetation success and bond liability, if such practices can be expected to continue as part of the postmining land use or if discontinuance of the practices after the liability period expires will not reduce the probability of permanent revegetation success. Approved practices shall be normal husbandry practices within the region for unmined lands having land uses similar to the approved postmining land use of the disturbed area, including such practices as disease, pest, and vermin control; and any pruning, reseeding, and transplanting specifically necessitated by such actions.

Analysis:

Standards for Success

As shown on Plates 3-2 and 9-1 and discussed in Sections 3.4.4.2 (page 3-48) and 9.3.2.5, the reference area was set up in 1980 for the shadscale phase of the salt desert community to establish revegetation success standards for the entire mine site. Production of the reference area was estimated at 450-lbs/acre air dry and the site was rated in good condition in September 1983 by Mr. Don Andrew, Range Conservationist with the USDA SCS (MRP, Figure 9-1). The Permittee has made a commitment in Section 9.3.2.5 of the MRP to re-evaluate the condition of the condition of the reference area during the 2002 growing season.

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The reference area soils are described as Chipeta silty clay slopes 3-20%. The reference area soils differ from much of the permit area including a small acreage of those to be disturbed in that their elevation places them above the water table and they are not subject to accumulations of salt from ponding water as are the Killpack soils that support the wetland salt grass vegetation.

The Division suspects that upon reclamation, sizeable areas of ponded water will exist at the entire site for the following reasons:

- During recent removal of refuse, the Permittee was obliged to remove equipment from areas along the eastern boundary of the permit due to the elevated water table.
- As noted in the MRP Section 9.5 "eventual soil saturation or inundation of the low western permit area is possible upon final reclamation."
- As noted in the MRP Section 9.2.1, page 9-2, "A sedge meadow was mapped during the original study (June 1980), adjacent to the current western permit boundary. Although no such type was actually mapped within the permit area, a low area does exist within the currently mapped Disturbed, Agricultural area, now drained by a French drain."

These wetlands will not likely meet the criteria for success established for higher ground. i.e. diversity. The Permittee has documented the condition of the wetland vegetation within the proposed disturbed area (Appendix 9-3). Reclamation for wetland areas within the permit can be patterned after previously existing wetland descriptions. i.e. the baseline data method described in the Vegetation Information Guidelines.¹ The wetland within the proposed disturbance is one of two last wet areas remaining in the permit area. Savage Industries should develop a wetland mix for lowlands within the disturbed area.

The site will receive the final reclamation seed mix as described in Table 3-2 of the MRP: Crested wheat grass, Thickspike wheatgrass, Indian ricegrass, Fairway crested wheatgrass, Squirreltail grass, Russian wildrye, Globemallow, Sunflower, Palmer penstemon, Yellow sweetclover, Kochia, Winterfat, Shadscale, Matbush, Whitestem rubber rabbitbrush, and Four-wing saltbush. As stated on page 3-58 the final mix may undergo alteration depending upon the success of the interim seed mixture.

Savage Industries has made plans for a wetland mix along the Price River Pipeline (page 3-58). This mix is found in Table 3-3. Reclamation of the pipeline will include willow plantings and streambank wheatgrass.

¹ Utah Division of Oil, Gas and Mining. February 1992. Vegetation Information Guidelines. p 6.

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Findings:

The information provided is not adequate to meet the requirements of this midterm item, 8 and this section of the Regulations. Prior to approval of this midterm review the permittee must provide the following information in accordance with:

R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284. A seed mix for lowlands within the disturbed area, a re-evaluation of the location and species composition of the current reference area, and a revised vegetation map, plate 9-1.

BONDING AND INSURANCE REQUIREMENTS

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

Minimum Regulatory Requirements:

General

After a permit application has been approved, but before a permit is issued, the applicant shall file with the Division, on a form prescribed and furnished by the Division, a bond or bonds for performance made payable to the Division and conditioned upon the faithful performance of all the requirements of the Act, the regulatory program, the permit, and the reclamation plan.

The bond or bonds shall cover the entire permit area, or an identified increment of land within the permit area upon which the operator will initiate and conduct surface coal mining and reclamation operations during the initial term of the permit. As surface coal mining and reclamation operations on succeeding increments are initiated and conducted within the permit area, the permittee shall file with the Division an additional bond or bonds to cover such increments.

The operator shall identify the initial and successive areas or increments for bonding on the permit application map and shall specify the bond amount to be provided for each area or increment. Independent increments shall be of sufficient size and configuration to provide for efficient reclamation operations should reclamation by the Division become necessary.

An operator shall not disturb any surface areas, succeeding increments, or extend any underground shafts, tunnels, or operations prior to acceptance by the Division of the required performance bond.

The applicant shall file, with the approval of the Division, a bond or bonds under one of the following schemes to cover the bond amounts for the permit area as determined: a performance bond or bonds for the entire permit area; a cumulative bond schedule and the performance bond required for full reclamation of the initial area to be disturbed; or, an incremental-bond schedule and the performance bond required for the first increment in the schedule.

Form of bond

The Division shall prescribe the form of the performance bond. The Division may allow for: a surety bond; a collateral bond; a self-bond; or a combination of any of these bonding methods.

Performance bond liability shall be for the duration of the surface coal mining and reclamation operation and for a period which is coincident with the operator's period of extended responsibility for successful revegetation or until achievement of the reclamation requirements of the Act, regulatory programs, and permit, whichever is later.

With the approval of the Division, a bond may be posted and approved to guarantee specific phases of reclamation within the permit area provided the sum of phase bonds posted equals or exceeds the total amount required. The scope of work to be guaranteed and the liability assumed under each phase bond shall be specified in detail.

Isolated and clearly defined portions of the permit area requiring extended liability may be separated from the original area and bonded separately with the approval of the Division. Such areas shall be limited in extent and not constitute a scattered, intermittent, or checkerboard pattern of failure. Access to the separated areas for remedial work may be included in the area under

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extended liability if deemed necessary by the Division.

The bond liability of the permittee shall include only those actions which he or she is obligated to take under the permit, including completion of the reclamation plan, so that the land will be capable of supporting the postmining land use approved. Implementation of an alternative postmining land use which is beyond the control of the permittee, need not be covered by the bond. Bond liability for prime farmland shall be specific to include productivity requirements.

Determination of bond amount

The amount of the bond required for each bonded area shall: be determined by the Division; depend upon the requirements of the approved permit and reclamation plan; reflect the probable difficulty of reclamation, giving consideration to such factors as topography, geology, hydrology, and revegetation potential; and, be based on, but not limited to, the estimated cost submitted by the permit applicant.

The amount of the bond shall be sufficient to assure the completion of the reclamation plan if the work has to be performed by the Division in the event of forfeiture, and in no case shall the total bond initially posted for the entire area under 1 permit be less than \$10,000.

An operator's financial responsibility for repairing material damage resulting from subsidence may be satisfied by the liability insurance policy required in this section.

Terms and conditions for liability insurance

The Division shall require the applicant to submit as part of its permit application a certificate issued by an insurance company authorized to do business in the United States certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operations for which the permit is sought. Such policy shall provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of the surface coal mining and reclamation operations, including the use of explosives, and who are entitled to compensation under the applicable provisions of State law. Minimum insurance coverage for bodily injury and property damage shall be \$300,000 for each occurrence and \$500,000 aggregate.

The policy shall be maintained in full force during the life of the permit or any renewal thereof and the liability period necessary to complete all reclamation operations under this Chapter.

The policy shall include a rider requiring that the insurer notify the Division whenever substantive changes are made in the policy including any termination or failure to renew.

The Division may accept from the applicant, in lieu of a certificate for a public liability insurance policy, satisfactory evidence from the applicant that it satisfies applicable State self-insurance requirements approved as part of the regulatory program and the requirements of this section.

Analysis:

Determination of Bond Amount

The Permittee provided the Division with updated bond costs calculations for the coal stockpile amendment AM02, which was approved on April 19, 2002. The current bond amount is for \$2,525,000. The Division calculated the bond amount to be \$2,154,000. Therefore, the current bond is adequate.

Findings:

The information in the mining and reclamation plan is adequate for the Division to make a determination about the reclamation cost estimate. The Division found that the bond amount is sufficient to allow the Division to reclaim the site in the event of bond forfeiture.

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