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

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January 3, 2002

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

Re Approval of Amendment to Water Monitoring Plan, Savage Industries Inc., Savage Coal Terminal, C/007/022-AM01F, Outgoing File

Dear Mr. Jensen:

The above-referenced amendment is approved effective December 27, 2001. Enclosed are stamped incorporated Plate 7-1 and Pages 7-90 through 7-93 for your copy of the Mining and Reclamation Plan and a copy of our Technical Analysis for your information.

Thank you for completing this permitting action. If you have any questions, please feel free to call me at (801) 538-5325.

Sincerely,

A handwritten signature in black ink that reads "Daron R. Haddock".

Daron R. Haddock
Permit Supervisor

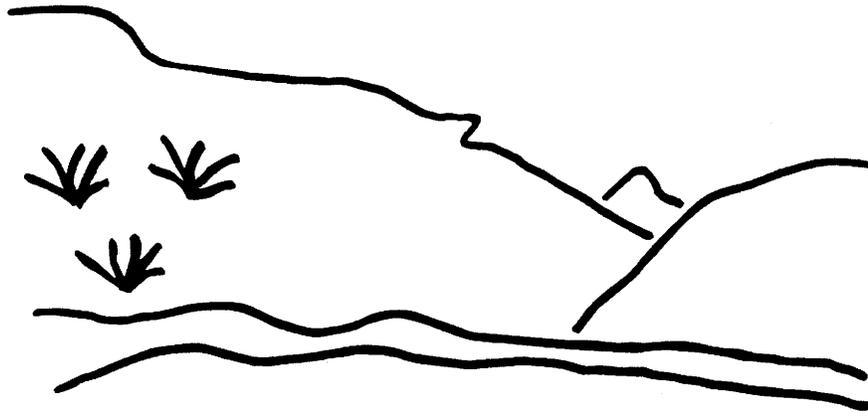
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Enclosure: (2)

cc Mark Page, Water Rights w/o
Dave Ariotti, DEQ w/o
Derris Jones, DWR w/o
Boyd Rhodes, Savage w/o
Dan Guy, Blackhawk w/o
Price Field Office

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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Savage Coal Terminal
Water Monitoring Station CV-16-W
C/007/022-AM01F
Technical Analysis
December 27, 2001

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INTRODUCTION

TECHNICAL ANALYSIS**INTRODUCTION**

On November 13, 2001, the Division received a proposed amendment to the Savage Coal Terminal Water Monitoring Program. The proposal is to eliminate Station CV-16-W, located along the west property boundary, from the Water Monitoring Program. The following technical review evaluates the proposed amendment from a hydrologic prospective only. The amendment meets the minimum requirements of the State regulation.

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INTRODUCTION

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HYDROLOGIC INFORMATION

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

Analysis:

Groundwater monitoring

Station CV-16-W was initiated in 1989 when a wetland/seep area located upslope of the property was diverted into the property by an adjacent landowner. Subsequently the adjacent landowner constructed facilities on the upslope property and diverted the flow to the northwest of the Savage Industries, Inc. property. The intention of the monitoring site was to monitor any possible overflow or contamination caused by the adjacent landowners' sediment pond. Additional changes affecting flow to Station CV-16-W include construction of an elevated roadway with associated ditches, and the adjacent landowner altering their sediment pond outlet to direct flow to the North. The drainage for the original site has been significantly altered.

From June 1989 through June 2001, CV-16-W has been monitored/visited a total of 78 times. Flow has been recorded a total of three times; June 1989, May 1990, and February 1997, respectively. The remaining site-visits were documented as No Flows. Laboratory analysis was conducted for the 1989 and 1990 samples only. The limited water quality data indicates the water is of poor quality with Specific Conductivity values of 3000 and 4690 umohms, Sulfate values of 2006 and 3152 mg/l, and Total Dissolved Solids values of 3102 and 4876 mg/l, respectively. Flows from 1989 through 1997 were 4.2 gpm, 1.7 gpm, and 0.2 gpm respectively. Due to the combination of minimal water quality/quantity data available, and the alteration of the drainage reporting to the site, elimination of the sample site location is reasonable.

Surface-water monitoring

A modification of the Surface-water monitoring is not necessary.

Findings:

Information in the application adequately addresses the requirements of the Hydrologic Information section of the Regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

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

Minimum Regulatory Requirements:

Each application shall contain maps, plans, and cross sections which show the mining activities to be conducted, the lands to be affected throughout the operation, and any change in a facility or feature to be caused by the proposed operations, if the facility or feature was shown and described as an existing structure.

The following shall be shown for the proposed permit area:

Affected area maps

The boundaries of all areas proposed to be affected over the estimated total life of all mining activities and reclamation activities, with a description of size, sequence, and timing of phased reclamation activities and treatments. All maps and cross sections used for mining design and mining operations shall clearly show the affected and permit area boundaries in reference to the reclamation work being accomplished.

Mining facilities maps

Location of each facility used in conjunction with mining operations. Such structures and facilities shall include, but not be limited to: buildings, utility corridors, roads, and facilities to be used in mining and reclamation operations or by others within the permit area; each coal storage, cleaning, and loading area; each topsoil, spoil, coal preparation waste, underground development waste, and noncoal waste storage area; each water diversion, collection, conveyance, treatment, storage and discharge facility; each source of waste and each waste disposal facility relating to coal processing or pollution control; each facility to be used to protect and enhance fish and wildlife related environmental values; each explosives storage and handling facility; location of each sedimentation pond, permanent water impoundment, coal processing waste bank, and coal processing water dam and embankment, and disposal areas for underground development waste and excess spoil; and, each plan or profile, at cross sections specified by the Division, of the anticipated surface configuration to be achieved for the affected areas during mining operations.

Mine workings maps

Location and extent of known workings of proposed, active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and adjacent areas. Location and extent of existing or previously surface-mined areas within the proposed permit area.

Monitoring and sampling location maps

Elevations and locations of test borings and core samplings. Elevations and locations of monitoring stations used to gather data on water quality and quantity, subsidence, fish and wildlife, and air quality, as required during mining operations.

Certification Requirements

Cross sections, maps, and plans required to show the design, location, elevation, or horizontal or vertical extent of the land surface or of a structure or facility used to conduct mining and reclamation operations shall be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such cross sections, maps, and plans, a qualified, registered, professional land surveyor, with assistance from experts in related fields such as landscape architecture.

Each detailed design plan for an impounding structure that meets or exceeds the size or other criteria of the Mine Safety and Health Administration, 30 CFR Section 77.216(a) shall: be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture; include any geotechnical investigation, design, and construction requirements for the structure; describe the operation and maintenance requirements for each structure; and, describe the timetable and plans to remove each structure, if appropriate.

Each detailed design plan for an impounding structure that does not meet the size or other criteria of 30 CFR Section 77.216(a) shall: be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional land surveyor, except that all coal processing waste dams and embankments shall be certified by a qualified, registered, professional engineer; include any design and construction requirements for the structure, including any required geotechnical information; describe the operation

OPERATION PLAN

and maintenance requirements for each structure; and, describe the timetable and plans to remove each structure, if appropriate.

Analysis:

Monitoring and Sample Location Maps

The elimination of Water Monitoring site CV-16-W requires a modification to the Water Monitoring Location Map. A revised map, Plate 7-1, was submitted with the proposed amendment.

Findings:

Information in the application is adequate to meet the requirements of the Maps, Plans, and Cross Sections of Resource Information section of the regulations

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