

1996
OSM / UTAH
OVERSIGHT TEAM



**OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT**

Annual Evaluation Summary Report

for the

Regulatory Program

Administered by the State

of

Utah

for

Evaluation Year 1996

(January 1, 1996, through September 30 , 1996)

November 1996

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I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. This report contains summary information regarding the Utah Program and the effectiveness of the Utah program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of January 1, 1996 through September 30, 1996. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the OSM Denver Field Office.

II. Overview of the Utah Coal Mining Industry

Coal is found beneath approximately 18 percent of the state of Utah, but only 4 percent is considered minable at this time. The demonstrated coal reserve base is about 6.4 billion tons, which is 1.3 percent of the national reserve base. Most of Utah's coal resources are held by the Federal government and Indian tribes.

The coal fields are divided into the Northern, Central, Eastern, and Southwestern Utah Coal Regions. The most productive region is the Central Utah Coal Region which includes the Book Cliffs, Wasatch Plateau, and Emery Coal Fields. There are vast, substantially undeveloped coal fields in the Southwestern Utah Coal Region. Within this Region, there are considerable reserves that are within the 1.7 million-acre Grand Staircase-Escalante National Monument that was designated by the President in September 1996. It is not clear whether existing Federal coal leases within the Monument can or will be developed. Development of other coal fields within the Region could be difficult because of environmental concerns resulting from the proximity of national parks and other recreation areas.

Most of the coal is bituminous and is of Cretaceous age. The BTU value is high compared to other States. Sulfur content ranges from medium to low in the more important coal fields.

Coal production has been steadily increasing since the early 1970's; production was more than 24 million tons in 1995 (see table 1). The majority of the coal production is produced by underground mining operations, which mostly mine seams exceeding 8 feet in thickness.

Currently, there are 31 permitted operations (table 2) that have thus far received permits for 119,060 acres of land (see table 2) and have disturbed 2,956 acres (table 5). Utah considers each these operations to be an inspectable unit. Of these 31 operations, 20 are active or temporarily inactive, and 11 are inactive or abandoned (table 2). Of the 19 active operations, 9 are underground mines that use the longwall mining method, 5 are underground mines that use the room-and-pillar mining method, 4 are loadout facilities, and 1 is a surface

mining operation extracting coal from an underground mine refuse pile.

Utah's coal industry has a significant impact on the local economies where mining occurs. According to the Utah Department of Employment Security, Labor Market Information Services, mines in 1994 employed a total of 2,251 persons in the three counties where most of the coal mining occurs (1,021 in Carbon County; 900 in Emery County; and 330 in Sevier County).

The climate of the Central Utah Coal Region is characterized by hot, dry summers and cold, relatively moist winters. Normal precipitation varies from 6 inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from 5 months in some valleys to only 2 1/2 months in mountainous regions. These extreme climatic conditions make reclamation a challenge.

III. Overview of the Public Participation Opportunities

A. Public participation in the oversight process

On April 9, 1996, the OSM/Utah oversight team participated in a Utah Division of Oil, Gas and Mining (DOGGM) stakeholder's meeting. Twenty-seven persons attended this meeting, which served as a forum for interested public and private parties to learn about and provide input on DOGM activities for coal, oil and gas, and other mineral regulatory programs.

The team briefly described the new oversight process, which emphasizes the measurement of on-the-ground results and de-emphasizes procedural reviews. The team identified the following six topics that it intended to review this evaluation period: citizen participation, revegetation success, erosional stability, alternative sediment control and small area exemptions, highwall elimination and retention as a part of approximate original contour restoration, and surface and ground-water protection.

The team had selected the surface and ground-water protection topic for review in light of previously expressed public concerns about potential mine impacts on surface and ground-water quantity and quality. At the meeting, one attorney, who represents water user associations, indicated that he agreed with the team's decision to review the topic.

The team did not receive any oral or written comments in response to its request for comments on the oversight process, recommendations for additional review topics, and suggestions for improvements for future annual evaluation reports.

B. Public participation in the State program

The most visible and controversial issue arising from public involvement in the State program process has been the Southern Utah Wilderness Alliance's (SUWA's) petition to the Board of Oil, Gas and Mining. In its petition, SUWA appealed DOGM's October 1995

decision to approve the permit application for the Andalex Resources, Inc., Smoky Hollow Mine. The Board conducted hearings on the appeal during March through May 1996, and the permittee and petitioner submitted post-hearing briefs to the Board during August through October 1996. Following DOGM's decision to permit the mine and prior to the Board making a decision on the appeal, the President on September 18, 1996, designated a 1.7 million-acre area, which included the permit area, as the Grand Staircase-Escalante National Monument. As of this report, the Board has not made a decision on the appeal.

IV. Major Accomplishments, Issues, and Innovations

A. Accomplishments

Section 102(d) of SMCRA indicates that one of the purposes of SMCRA is to assure that mining operations are conducted in a manner that protects the environment. As the result of their evaluations on alternative sediment control and small area exemptions, and erosional stability (at phase II bond release), OSM and DOGM concluded that Utah is successfully preventing off-site impacts to land and water resources. As the result of their evaluations on revegetation (at phase II bond release), they also concluded that Utah is assuring successful on-site reclamation.

Section 102(i) indicates that one of the purposes of SMCRA is to assure that the States have appropriate procedures for public participation in the development, revision, and enforcement of regulations, standards, and reclamation plans. As the result of their evaluations on citizen involvement, OSM and DOGM concluded that DOGM is adequately following its State program procedures for citizen complaints and for involving the public in permit decisions and bond releases.

B. Issues

Citizens and water user associations have alleged that one mine has significantly impacted the hydrologic balance. OSM and DOGM evaluated surface and ground-water monitoring data for the mine to determine whether significant impacts, which were not predicted by DOGM in its cumulative hydrologic impact assessment, were occurring. They did not identify any such impacts, but they will continue to evaluate future data to determine if any long-term adverse impact trends are developing.

As the result of their joint evaluation of approximate original contour restoration, OSM and DOGM identified three issues relating to highwall elimination and retention that need to be resolved by Utah.

- Some reclamation plans have insufficient documentation of dates when highwalls were created. Without documentation as to whether highwalls were created before or after May 3, 1978, DOGM cannot determine what reclamation requirements of Utah's program apply.

- Reclamation plans for some mines are inadequate to the extent that they do not require post-May 3, 1978, highwalls to be completely eliminated to meet approximate original contour requirements.
- DOGM Directive Tech-002, Approximate Original Contour (AOC) Requirements, is inconsistent with the Utah's rules. The "Retained Highwalls" section of the directive needs to be revised to indicate that a retained highwall cannot be greater in height or length than the cliffs or cliff-like escarpments that were replaced or disturbed by the mining operation.

OSM and DOGM will continue their evaluation of this topic in the next oversight evaluation year.

As the result of their joint evaluation of citizen involvement, OSM and DOGM concluded that communication could be improved between DOGM and the Division of Water Quality on water quality problems at coal mines. DOGM will propose to the Division of Water Quality that an existing memorandum of understanding between the two agencies be revised to more specifically address communication procedures between the agencies.

C. Innovations

The Director, DOGM, continues to actively participate on the joint States and OSM Steering Committee that reviews national implementation of OSM directive REG-8, "Oversight of State Regulatory Programs," and that makes recommendations to the OSM Director for further directive revisions. The Committee's efforts ensure that the major innovations of the results-oriented oversight process, which originally became effective January 1, 1996, are carried out and improved.

DOGM recently created a Hydrology Working Group that is responsible for entering mine water quantity and quality monitoring data into a computer database. This initiative, which is being funded through an OSM memorandum of understanding, will facilitate DOGM's determinations on mine-caused hydrologic impacts.

V. Success in Achieving the Purposes of SMCRA

To further the concept of reporting end results and measuring the States' success in achieving the purposes of SMCRA, OSM and the States on a nationwide basis conducted evaluations whose purpose was to measure the number and extent of off-site impacts and the number of mined acres that have been successfully reclaimed. Individual topic reports, which provide additional details on how the following evaluations and measurements were conducted, are available in the OSM Denver Field Office.

A. Off-site impacts

Table 4 shows the number and type of off-site impacts that OSM and DOGM documented as having occurred during the evaluation period. OSM and DOGM compiled this information from 96 observations they made. These observations included 87 DOGM complete inspections, 2 DOGM partial inspections, and 7 minesite evaluations conducted jointly by OSM and DOGM. From these observations, OSM and DOGM found four incidents of off-site impacts to water resources and no off-site impacts to people, land, and man-made structures. For all four incidents, DOGM cited the operators with notices of violation. Although all four incidents concern water resources, there is no pattern of noncompliance with the same Utah water protection performance standard that suggests a programmatic deficiency in Utah's program. The low number of observed off-site impacts is an indication that Utah is effective in preventing off-site impacts to water, people, land, and man-made structures.

B. Bond releases

Table 5 shows the acreages released partially (phases I and II) or totally (phase III) from bond during the evaluation period. Of the 2,956 acres of total disturbance that had not yet received final (phase III) bond release at the end of the evaluation period, only 10 acres of this total received any type of bond release during the evaluation period. During the 15 years since OSM originally approved Utah's program, only one site has received a phase III bond release.

This lack of acreage that has received bond release is due to two factors.

- Of Utah's 31 permitted operations, 26 are underground mines (table 2). Most of these underground mining operations are long-lived, and the surface disturbances for them are relatively small and remain active during the entire life of the mining operations because of their continued use as surface facilities.
- The 10-year minimum bond liability period and extreme climatic conditions make revegetation difficult.

VI. OSM Assistance

For the 1-year grant period starting July 1, 1996, OSM funded the Utah program in the amount of \$1.39 million (table 8). Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection, and other activities that it performs for mines on Federal lands. Because most of the mines in Utah occur on Federal lands, the percentage of total program costs for which OSM provides funding is high (85 percent, table 8).

On September 13, 1996, OSM entered into a memorandum of understanding with DOGM that gives DOGM up to \$10,000 for work related to hydrologic data that will be used in the development and evaluation of cumulative hydrologic impact assessments for permitting mines, the evaluation of reclamation success for reclamation bond releases, and access by

citizen's groups seeking independent confirmation of the effects of coal mining and reclamation operations on the hydrologic balance. DOGM will use the money for entering water monitoring data into the Utah Division of Water Quality database, entering water monitoring site locations into Utah's Geographic Information System, and purchasing computer software.

VII. Oversight Topic Reviews

During the evaluation year, OSM and DOGM initiated and completed evaluations of four topics: citizen involvement, alternative sediment control and small area exemptions, erosional stability (at phase II bond release), and revegetation success (at phase II bond release). They also initiated evaluations on two other topics that will continue into the next evaluation year: surface and ground-water protection, and highwall elimination and retention as a part of approximate original contour restoration. Written reports for all of these topics are available for review in the OSM Denver Field Office.

Appendix. Tabular Summary of Core Data Characterizing the Program

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize OSM funding and Utah staffing. Unless otherwise specified, the reporting period for the data contained in all tables is January 1, 1996 to September 30, 1996. Additional data used by OSM in its evaluation of Utah's performance is available for review in the evaluation files maintained by the OSM Denver Field Office.

TABLE 1

COAL PRODUCTION (Millions of short tons)			
Period	Surface mines	Underground mines	Total
1993	0.00	21.33	21.33
1994	0.03	21.03	21.06
1995	0.07	24.57	24.64

^ACoal production as reported in this table is the gross tonnage which includes coal that is sold, used or transferred as reported to OSM by each mining company on form OSM-1 line 8(a). Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by States or other sources due to varying methods of determining and reporting coal production.

TABLE 2

INSPECTABLE UNITS (As of September 30, 1996)													
Coal mines and related facilities	Number and status of permits									Insp. Unit ^D	Permitted acreage ^A (hundreds of acres)		
	Active or temporarily inactive		Inactive		Abandoned		Totals						
	IP	PP	Phase II bond release		IP	PP	IP	PP					
			IP	PP					IP		PP	Total	
STATE and PRIVATE LANDS REGULATORY AUTHORITY: UTAH													
Surface mines	-	1	-	-	-	-	-	1	-	-	-	310	310
Underground mines	-	1	1	5	-	1	1	7	-	40	6226	6266	
Other facilities	-	2	-	-	-	-	-	2	-	-	629	629	
Subtotals	-	4	1	5	-	1	1	10	-	40	7165	7205	
FEDERAL LANDS REGULATORY AUTHORITY: UTAH													
Surface mines	-	-	-	-	-	-	-	-	-	-	-	-	-
Underground mines	-	14	-	4	-	-	-	18	-	-	111719	111719	
Other facilities	-	2	-	-	-	-	-	2	-	-	136	136	
Subtotals	-	16	-	4	-	-	-	20	-	-	111855	111855	
ALL LANDS^B													
Surface mines	-	1	-	-	-	-	-	-	-	-	-	-	310
Underground mines	-	15	1	9	-	1	-	-	-	-	-	-	117985
Other facilities	-	4	-	-	-	-	-	-	-	-	-	-	765
Totals	-	20	1	9	-	1	1	30	-	-	-	-	119060
Average number of permits per inspectable unit (excluding exploration sites) <u>.1</u>													
Average number of acres per inspectable unit (excluding exploration sites) <u>3841</u>													
Number of exploration permits on State and private lands: <u>0</u> On Federal lands: <u>0</u> C													
Number of exploration notices on State and private lands: <u>0</u> On Federal lands: <u>0</u> C													
^P Initial regulatory program sites. ^{PP} Permanent regulatory program sites. ^A When a unit is located on more than one type of land, includes only the acreage located on the indicated type of land. ^B Numbers of units may not equal the sum of the three preceding categories because a single inspectable unit may include lands in more than one of the preceding categories. ^C Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management. ^D Inspectable Units includes multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.													

TABLE 3

UTAH PERMITTING ACTIVITY

Type of application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres ^A	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New permits				4	1	100				4	1	100
Renewals				5	3	431				5	3	431
Incidental boundary revisions				2	1					2	1	
Revisions (exclusive of incidental boundary revisions)				64	40					64	40	
Transfers, sales and assignments of permit rights				3	1					3	1	
Small operator assistance				0	0					0	0	
Exploration permits				0	0					0	0	
Exploration notices ^B				2	0					2	0	
Totals				80	46	531				80	46	531

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions 3

^A Includes only the number of acres of proposed surface disturbance.

^B State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

TABLE 4

OFF-SITE IMPACTS

RESOURCES AFFECTED		People			Land			Water			Structures		
		minor	moderate	major	minor	moderate	major	minor	moderate	major	minor	moderate	major
TYPE OF IMPACT	DEGREE OF IMPACT												
Blasting													
Land Stability													
AND TOTAL NUMBER OF EACH TYPE	Hydrology						2 ^A	1 ^A	1 ^A				
	Encroachment												
	Other												
	Total						2 ^A	1 ^A	1 ^A				
Total number of permits or minesites with observed off-site impacts: Permits <u>2</u> or Minesites <u>2</u>													
Total number of permits or mine sites evaluated: Permits <u>31</u> or Minesites <u>31</u>													
Total number of observations made to evaluate minesites or permits for off-site impacts <u>96</u>													

^AFor an explanation of the violations, see the OSM oversight evaluation file.

TABLE 5

ANNUAL STATE MINING AND RECLAMATION RESULTS		
Bond release phase	Applicable performance standard	Acreage released during this evaluation period
Phase I	<ul style="list-style-type: none"> ● Approximate original contour restored ● Topsoil or approved alternative replaced 	0 ^A
Phase II	<ul style="list-style-type: none"> ● Surface stability ● Establishment of vegetation 	10 ^A
Phase III	<ul style="list-style-type: none"> ● Post-mining land use/productivity restored ● Successful permanent vegetation ● Groundwater recharge, quality and quantity restored ● Surface water quality and quantity restored 	0 ^A
	Total number of disturbed acres at end of last review period (December 31, 1995) ^B	2823.47
	Total number of acres disturbed during this evaluation year	2956.37
	Number of acres disturbed during this evaluation year that are considered remaining	0

^A The acreage receiving bond release was low owing to (1) most of the operations being long-lived underground mines with relatively small surface disturbances that remain active during the entire life of the mining operations and (2) a 10-year minimum bond liability period and extreme climatic conditions that make revegetation difficult.

^B Disturbed acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).

TABLE 6

STATE BOND FORFEITURE ACTIVITY (Permanent Program Permits)			
	Sites	Dollars	Acres
Bonds forfeited as of January 1, 1996 ^A	1		
Bonds forfeited during EY 1996	0		
Forfeited bonds collected as January 1, 1996 ^A	1		
Forfeited bonds collected during EY 1996			
Forfeiture sites reclaimed during EY 1996	0	B	
Forfeiture sites repermited during EY 1996	0		
Forfeiture sites unreclaimed as of September 30, 1996	1		
Excess reclamation costs recovered from permittee	0		
Excess forfeiture proceeds returned to permittee	0		
^A Includes data only for those forfeiture sites not fully reclaimed as of this date. ^B Cost of reclamation, excluding general administrative expenses.			

TABLE 7

UTAH STAFFING (Full-time equivalents at end of evaluation year)	
Function	EY 1996
Regulatory Program	
Permit review	13.0
Inspection	7.0
Other (administrative, fiscal, personnel, etc.)	4.0
Total	24.0

TABLE 8

FUNDS GRANTED TO UTAH BY OSM (Millions of dollars)		
Type of grant	Federal funds awarded	Federal funding as a percentage of total program costs
Administration and enforcement	1.39	85.0
Small operator assistance	0.00	0.0
Totals	1.39	