**OFFICE OF SURFACE MINING**

**RECLAMATION AND ENFORCEMENT**

# Annual Evaluation Summary Report

**for the**

**Regulatory Program**

**Administered by the State**

**of**

# Utah

**for**

**Evaluation Year 1997**

**(October 1, 1996, through September 30, 1997)**

**November 1997**

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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 October 1, 1996, through September 30, 1997. 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 Division 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 most other western 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 27 million tons in 1996 (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 30 permitted operations (table 2) that have thus far disturbed 2,605 acres (table 2). Utah considers each these operations to be an inspectable unit. Of these 30 operations, 27 are active or temporarily inactive, 3 are inactive, and none are abandoned (table 2). Of the 25 active operations, 9 are underground mines that use the longwall mining method, 11 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, mining in 1996 employed a total of 2,224 persons in the three counties where most of the coal mining occurs (1,072 in Carbon County; 853 in Emery County; and 299 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 in the Oversight Process and Utah Program

### A. Oversight Process

On April 17, 1997, the OSM/Utah oversight team participated in a Utah Division of Oil, Gas and Mining (DOGM) stakeholder's meeting. Thirty-eight 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 oversight process, which emphasizes the measurement of on-the-ground results and de-emphasizes procedural reviews. The team identified the following four topics that it intended to review this evaluation period: public participation, highwall elimination and retention as a part of approximate original contour restoration, surface and ground water protection, and permitting of coal mine access and haul roads.

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, four persons requested copies of the 1996 annual evaluation report. 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. Utah Program

In connection with the 20th anniversary observance of the enactment of SMCRA, OSM established a Citizens Award program to recognize citizens who had been instrumental in safeguarding the coalfield environment. DOGM nominated the Emery County Public Lands Council, which was created as a forum to discuss issues relating to mining activity and its impact on the water supply in the Huntington Canyon area in the western portion of Utah's Wasatch

Plateau coalfield. DOGM had met with the Council on several occasions to discuss proposed revisions to the State statute. Through these meetings, DOGM received comments on its proposals and was able to reach consensus on an important requirement for mine operators to replace State-appropriated waters affected by coal mining operations. The Utah Legislature enacted this law revision, and it went into effect on May 5, 1997. Owing to "the Council's importance as a venue for citizens to work in partnership with federal and State agencies", OSM recognized the Emery County Public Lands Council with a Grassroots Organization award.

## IV. Major Accomplishments, Issues, and Innovations

### A. Accomplishments

#### 1. Public Participation

As the result of their evaluations on public participation, OSM and DOGM concluded that DOGM is following its State program procedures for notifying the public of proposed bond releases and permits (new permits, significant permit revisions, permit renewals, and permit transfers).

#### 2. Highwall Elimination and Retention As a Part of Approximate Original Contour (AOC) Restoration

During the last evaluation period, OSM and DOGM found that Directive Tech-002, "Approximate Original Contour (AOC) Requirements", was not consistent with Utah's rule at R645-301-553.650.100 because it did not indicate that a highwall retained under the AOC alternative cannot be greater in length or height than the cliffs and cliff-like escarpments that were replaced or disturbed by the mining operations. During this evaluation period, DOGM revised the directive to add the length criterion.

During the last evaluation period, OSM and DOGM found that not all permits included maps of sufficient detail to show when the highwalls were created. Without this information, DOGM could not determine which highwalls must be completely eliminated (post-May 3, 1978) and which must only be eliminated to the maximum extent technically practical using all reasonably available spoil in the permit area (pre-May 3, 1978). During this evaluation period, DOGM sent a survey to mine operators asking for information on highwall creation dates. Following receipt of the completed surveys, DOGM expended considerable effort in verifying the information and preparing a detailed inventory for the 97 highwalls in the State. The inventory serves as a useful compendium of reclamation requirements and plans for individual highwalls in the State.

In consideration of the steep slopes, natural benches, and cliffs that exist in the coal mining regions of Utah, Utah originally developed, and OSM approved in 1982, a carefully limited exception to highwall elimination. Under the "AOC alternative" provision of Utah's program, a highwall need not be eliminated during reclamation if the permittee establishes and DOGM finds

in writing that, among other things, the highwall replaces a pre-existing natural cliff or similar natural premining feature and resembles the structure, composition, and function of the natural cliff that it replaces. In compiling the highwalls inventory, OSM and DOGM found that, in the 15-year period since 1982, Utah has not approved any permits allowing the retention of highwalls under the AOC alternative. Therefore, OSM and DOGM project that the AOC alternative will not have much, if any, application in the State.

B. Issues

During the next evaluation period, OSM and DOGM members of the oversight team will continue to monitor DOGM's progress in resolving the following issues.

1. Public Participation

As the result of their review of citizen complaints during the last evaluation period, OSM and DOGM concluded that communication on water quality problems at coal mines could be improved between DOGM and the Utah Department of Environmental Quality (DEQ), the Utah Pollutant Discharge Elimination System permitting authority. During this evaluation period, OSM and DOGM further concluded that the October 16, 1990, memorandum of understanding (MOU) between DOGM and DEQ does not promote effective enforcement of water quality standards at coal mines because:

- the MOU lacks a provision that requires DEQ to inform DOGM when DEQ becomes aware of a violation of the Utah Pollutant Discharge Elimination System permit or of the water quality standards at 40 CFR Part 434, and

- although DOGM continues to cite water quality violations, the MOU lacks specificity as to which agency is responsible for issuing violation notices when reports and inspections justify such actions.

OSM and DOGM members of the oversight team recommended revisions to the MOU and forwarded them to DOGM management for consideration.

2. Highwall Elimination and Retention As a Part of AOC Restoration

In the highwalls inventory, OSM and DOGM identified deficiencies in highwall reclamation plans in about one-fifth of the mine permits. In order to resolve these deficiencies, DOGM will have to require the permittees to revise their permit reclamation plans. As a first step, the team recommends that early in the 1998 oversight evaluation year DOGM prepare a prioritized schedule for requiring the permittees to revise their permits.

As the result of field evaluations conducted last evaluation year, OSM and DOGM identified one post-May 3, 1978, highwall that will not be completely eliminated in the reclamation process as

required by the Utah regulatory program. OSM and DOGM agreed that (1) , if the highwall were completely backfilled, it would not be stable and (2) the highwall should not have been permitted for construction. During this evaluation year, the team also identified cut-slopes on two mines that may not be able to be completely eliminated. OSM and DOGM team members raised these issues to OSM and DOGM managers for possible administrative action (e.g., issuance of violation notices).

OSM and DOGM evaluated the highwall elimination and retention topic under the primary oversight objective for determining whether minesite reclamation is successful. OSM and DOGM found that minesite reclamation on a portion of one mine, and possibly two others, will not be entirely successful because highwalls and cut-slopes created there after May 3, 1978, will not be completely eliminated. Also, approximately one-fifth of the permits have reclamation plan deficiencies concerning highwall reclamation. Until the permittees revise their permits to resolve these deficiencies, OSM and DOGM will not be able to fully assess the degree of success of highwall reclamation in the State.

3. Surface and Ground Water Protection

During the last two evaluation periods, OSM and DOGM analyzed water monitoring data for one mine in response to allegations by citizens and water user associations that the mine is adversely impacting the hydrologic balance outside of the permit area. OSM and DOGM concluded that flow in one spring has significantly decreased, but they have not yet concluded what impact the mine is having on the spring. OSM and DOGM will continue to analyze monitoring data to determine whether the reduced spring flow is the result of mining, reduced precipitation, an earthquake, or a combination of these or other factors.

In the existing CHIA for the mine and in some of the other pre-1993 CHIA's for other mines, DOGM did not establish criteria to measure material damage to the hydrologic balance outside of the permit area. The OSM and DOGM members of the oversight team recommended that, as the permits for these existing mines are revised, or when the monitoring data for these mines change significantly, or when new permits within the CHIA are developed, DOGM update these CHIA's to include material damage concepts like those included in the post-1992 CHIA's.

OSM and DOGM evaluated the surface and ground water protection topic under the primary oversight objective for determining whether offsite impacts were being prevented. OSM and DOGM did not find any significant offsite impacts to surface or ground water that were occurring as a result of the mine, but they had not yet determined whether significantly decreased flows in one spring were caused by the mine. Because this determination had not been made, OSM and DOGM could not conclude that the mine was not causing significant impacts to offsite water resources.

4. Permitting of Coal Mine Access and Haul Roads.

On July 3, 1995, DOGM sent to OSM a letter which included policy statements on the permitting of public roads. OSM agreed with the policy clarification and terminated a proceeding under 30 CFR Part 733 to substitute Federal enforcement for that part of the State program concerning the permitting of coal mine access and haul roads.

OSM and DOGM reviewed a permit that DOGM had issued during the evaluation period to determine whether DOGM was implementing its July 3, 1995, permitting policy. OSM and DOGM concluded that DOGM did not comply with the policy because, in deciding not to require a road to be permitted, DOGM did not make written findings as to whether:

- the road was maintained with public funds or in exchange for taxes or fees,
- the road would be a primary coal haulage road constructed or reconstructed in a manner similar to other public roads of the same classification, and
- impacts from mining on the road would be significant under Utah's definitions for "affected area" and "surface coal mining operations".

The OSM and DOGM members of the oversight team recommended that DOGM reassess the permit by making written findings on the above-described criteria.

OSM and DOGM evaluated the roads permitting topic under the primary oversight objective for determining whether offsite impacts were being prevented. In the absence of written permit findings, OSM and DOGM could not determine whether DOGM was regulating road impacts as intended by the approved Utah regulatory program.

B. Innovations

For the second year, persons from OSM and DOGM continued to work as a self-directed team to evaluate and assist DOGM in the administration, implementation, and maintenance of the approved Utah regulatory program. During the evaluation period, the team consisted of six program and permitting specialists (three each from OSM and DOGM) and five scientists (two from OSM and three from DOGM). The team continued to make progress in working together toward a common goal of improving the Utah regulatory program.

The Director, DOGM, and Chief, Denver Field Division, continued 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 joined with other interested parties to form the Hydrology Outreach Committee. The Committee, which meets frequently, describes itself as "a consortium of local, State and Federal

government, consultants and industry representatives examining the interrelationships of water and mining, and promoting cooperation among water users."

## 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 offsite 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 Division office.

### A. Offsite Impacts

Table 4 shows the number and type of offsite impacts that OSM and DOGM documented as having occurred during the evaluation period.

OSM and DOGM compiled this information from 320 observations they made. These observations included 8 OSM and DOGM joint, complete inspections; 116 DOGM complete inspections; and 196 DOGM partial inspections. As explained in section IV.B.4 above, OSM and DOGM also jointly conducted a minesite evaluation to assess whether offsite impacts had occurred at one minesite as the result of DOGM not permitting a road. Because the results of this evaluation were inconclusive, OSM and DOGM did not count this evaluation as an offsite impact observation.

From these offsite impact observations, OSM and DOGM found five incidents of offsite impacts to water resources and no offsite impacts to people, land, and man-made structures. For all five incidents, DOGM cited the operators with notices of violation. Although all five 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 offsite impacts is an indication that Utah is effective in preventing offsite impacts to water, people, land, and man-made structures.

### B. Bond Releases

Table 5 shows the acreage released partially (phases I and II) or totally (phase III) from bond during the evaluation period. Of the 2,605 acres of total disturbance that had not yet received final (phase III) bond release at the end of the evaluation period, only 71 acres of this total received any type of bond release during the evaluation period. During the 16 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 30 permitted operations, 24 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, 1997, OSM funded the Utah program in the amount of $1.40 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 provided funding was high (82.7 percent, table 8).

On September 13, 1996, OSM entered into a memorandum of understanding with DOGM that gave DOGM $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 used 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.

On August 19, 1997, OSM entered into a memorandum of agreement with DOGM that gave DOGM $6960 to buy computer hardware and software that will be used to set up an electronic permitting system. This system will allow persons to use the Internet to electronically retrieve formats for permit applications, to submit permit applications, and to access permit application and permit information such as DOGM technical analyses, probable hydrologic consequences analyses, and cumulative hydrologic impact assessments.

Under its Technical Training Program and Technology Transfer Program, OSM offers free of charge a variety of courses, workshops, and forums to State and Tribal employees. During the evaluation period, six DOGM employees attended the following Technical Training Program courses: Evidence Preparation and Testimony, Bonding Workshop - Cost Estimation, Instructor Training Course, Erosion and Sediment Control, and Wetlands Awareness. During the evaluation period, six DOGM employees attended the following Technology Transfer Program workshop and forum: Advanced Applied Statistics Workshop and Computer Applications for Electronic Permitting Interactive Forum.

## VII. Oversight Topic Reviews

In the time period from October 1, 1996, through September 30, 1997, OSM and DOGM evaluated the following topics: public participation, highwall elimination and retention as a part of AOC restoration, surface and ground water protection, and permitting of coal mine access and haul roads. Written reports for all of these topics are available for review in the OSM Denver Field Division office. OSM's and DOGM's analyses of all of these topics will continue into the next evaluation period.

## Appendix. Tabular Summary of Core Data Characterizing the Utah Program

The following tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize Utah staffing and OSM funding. Unless otherwise specified, the reporting period for the data contained in all tables is October 1, 1996, to September 30, 1997.

## TABLE 1

| COAL PRODUCTION (Millions of short tons) | | | |
|---|---|---|---|
| **Period** | **Surface mines** | **Underground mines** | **Total** |
| 1994 | 0.03 | 21.03 | 21.06 |
| 1995 | 0.07 | 24.57 | 24.64 |
| 1996 | 0.03 | 27.32 | 27.35 |

[A]Coal 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, 1997)

| Coal mines and related facilities | Number and status of permits | | | | | | | | Insp. Unit[D] | Disturbed acreage[A] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Active or temporarily inactive | | Inactive | | Abandoned | | Totals | | | | | |
| | | | Phase II bond release | | | | | | | | | |
| | IP | PP | IP | PP | IP | PP | IP | PP | | IP | PP | Total |
| **STATE and PRIVATE LANDS** | **REGULATORY AUTHORITY: UTAH** | | | | | | | | | | | |
| Surface mines | _ | 1 | _ | _ | _ | _ | _ | 1 | _ | _ | 202 | 202 |
| Underground mines | 1 | 2 | _ | 2 | _ | _ | 1 | 4 | _ | 40 | 35 | 75 |
| Other facilities | _ | 2 | _ | _ | _ | _ | _ | 2 | _ | _ | 516 | 516 |
| **Subtotals** | 1 | 5 | _ | 2 | _ | _ | 1 | 7 | _ | 40 | 753 | 793 |
| **FEDERAL LANDS** | **REGULATORY AUTHORITY: UTAH** | | | | | | | | | | | |
| Surface mines | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Underground mines | _ | 19 | _ | 1 | _ | _ | _ | 20 | _ | _ | 1731 | 1731 |
| Other facilities | _ | 2 | _ | _ | _ | _ | _ | 2 | _ | _ | 81 | 81 |
| **Subtotals** | _ | 21 | _ | 1 | _ | _ | _ | 22 | _ | _ | 1812 | 1812 |
| **ALL LANDS[B]** | | | | | | | | | | | | |
| Surface mines | _ | 1 | _ | _ | _ | _ | _ | 1 | _ | _ | 202 | 202 |
| Underground mines | 1 | 21 | _ | 3 | _ | _ | 1 | 24 | _ | 40 | 1766 | 1806 |
| Other facilities | _ | 4 | _ | _ | _ | _ | _ | 4 | _ | _ | 597 | 597 |
| **Totals** | **1** | **26** | _ | **3** | _ | _ | **1** | **29** | _ | **40** | **2565** | **2605** |

**Average number of permits per inspectable unit (excluding exploration sites)** ..... 1

**Average number of acres per inspectable unit (excluding exploration sites)** ..... 87

Number of exploration permits on State and private lands: .. 2 On Federal lands: 0 [C]

Number of exploration notices on State and private lands: ... 0 On Federal lands: 6 [C]

IP: 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 | | | | 0 | 2 | 142 | | | | 0 | 2 | 142 |
| Renewals | | | | 5 | 8 | 689 | | | | 5 | 8 | 689 |
| Incidental boundary revisions | | | | 2 | 2 | 346 | | | | 2 | 2 | 346 |
| Amendments | | | | 2 | 3 | 0[B] | | | | 2 | 3 | 0[B] |
| Revisions (exclusive of incidental boundary revisions) | | | | 102 | 78 | | | | | 102 | 78 | |
| Transfers, sales and assignments of permit rights | | | | 7 | 7 | | | | | 7 | 7 | |
| Small operator assistance | | | | 0 | 0 | | | | | 0 | 0 | |
| Exploration permits | | | | 2 | 2 | | | | | 2 | 2 | |
| Exploration notices[C] | | | | 6 | 0 | | | | | 6 | 0 | |
| Totals | | | | 126 | 102 | 1177 | | | | 126 | 102 | 1177 |

Number of midterm permit reviews completed that are not reported as revisions 6

[A] Includes only the number of acres of proposed surface disturbance.

[B] Amendments (significant permit revisions) added 3245 acres to permitted acreage but none to disturbed surface acreage (i.e., all proposed disturbance was underground).

[C] 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 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEGREE OF IMPACT | | minor | moderate | major | minor | moderate | major | minor | moderate | major | minor | moderate | major |
| TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE | Blasting | | | | | | | | | | | | |
| | Land Stability | | | | | | | | | | | | |
| | Hydrology | | | | | | | 4[A] | 1[A] | | | | |
| | Encroachment | | | | | | | | | | | | |
| | Other | | | | | | | | | | | | |
| | Total | | | | | | | 4[A] | 1[A] | | | | |

Total number of permits or minesites with observed off-site impacts:
Permits 4 or Minesites 4

Total number of permits or mine sites evaluated:
Permits 30 or Minesites 30

Total number of observations made to evaluate minesites or permits for off-site impacts 320

[A]For 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 | ●Approximate original contour restored<br>●Topsoil or approved alternative replaced | 71[A] |
| Phase II | ●Surface stability<br>●Establishment of vegetation | 0[A] |
| Phase III | ●Post-mining land use/productivity restored<br>●Successful permanent vegetation<br>●Groundwater recharge, quality and quantity restored<br>●Surface water quality and quantity restored | 0[A] |
| | Total number of disturbed acres at end of last review period (September 30, 1996)[B] | 2585[C] |
| | Total number of acres disturbed during this evaluation year | 20 |
| | Number of acres disturbed during this evaluation year that are considered remining | 0.00 |

[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).

[C] Total does not include 287 acres for which bond forfeiture proceedings were ongoing at end of last review period and forfeited bonds were collected in current review period.

# TABLE 6

## STATE BOND FORFEITURE ACTIVITY
### (Permanent Program Permits)

| | Sites | Dollars | Acres |
|---|---|---|---|
| Bonds forfeited as of September 30, 1996 [A] | 1 | | |
| Bonds forfeited during EY 1997 | 1 | | |
| Forfeited bonds collected as September 30, 1996 [A] | 1 | 38,000 | 1.5 [B] |
| Forfeited bonds collected during EY 1997 | 1 | 1,850,000 | 287.4 [B] |
| Forfeiture sites reclaimed during EY 1997 | 0 | [C] | |
| Forfeiture sites repermitted during EY 1997 | 0 | | |
| Forfeiture sites unreclaimed as of September 30, 1997 | 2 | | |
| 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] Disturbed acres.

[C] Cost of reclamation, excluding general administrative expenses.

## TABLE 7

| UTAH STAFFING (Full-time equivalents at end of evaluation year) | |
|---|---|
| Function | EY 1997 |
| Regulatory Program | |
| Permit review | 13.0 |
| Inspection | 7.0 |
| Program administration | 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 | 1.40 | 82.7 |
| Small operator assistance | 0.00 | 0.0 |
| **Totals** | 1.40 | |