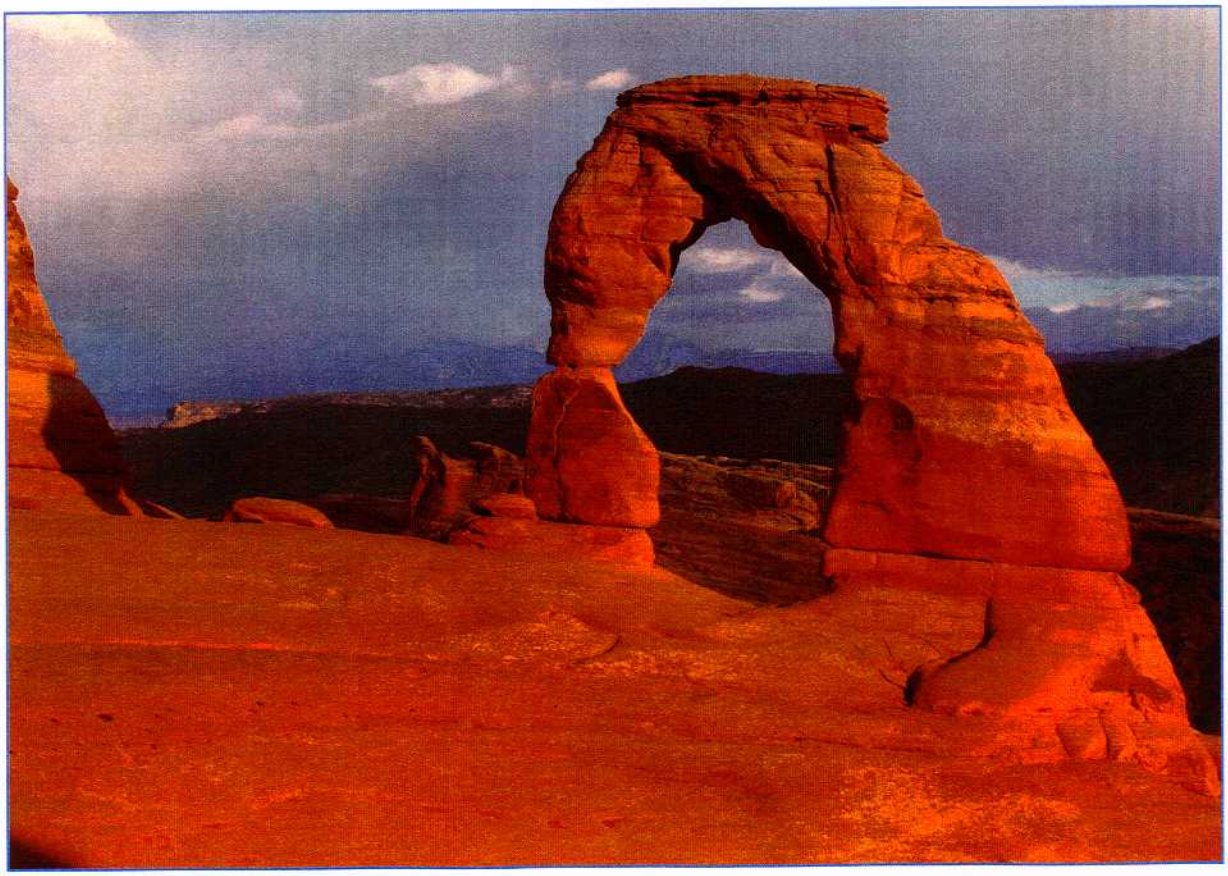
OFFICE OF SURFACE MINING

RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report
For the
Regulatory Program
Administered by the State
Of
Utah

For
Evaluation Year 2009
(July 1, 2008, through June 30, 2009)

(September 2009)



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I. Introduction

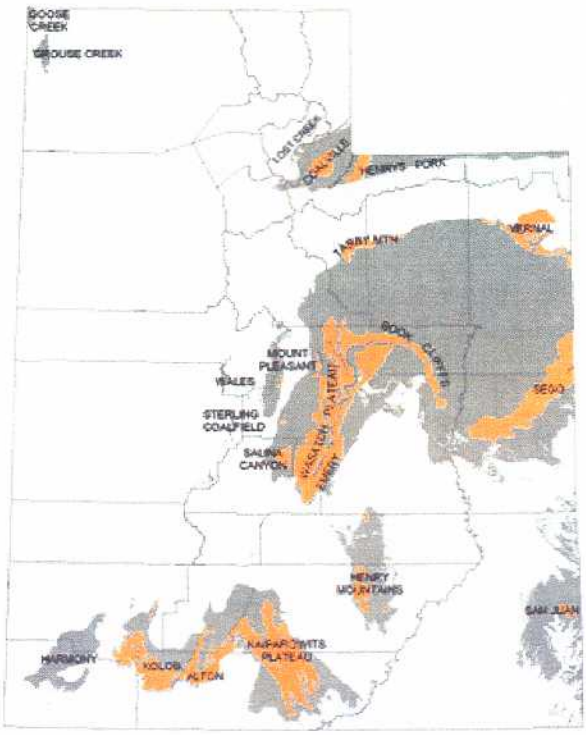
The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for the State regulatory programs that 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 July 1, 2008, through June 30, 2009. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Denver OSM Office.

The following list of acronyms is used in this report:

AML	Abandoned Mine Land
BLM	Bureau of Land Management
BOGM	Utah Board of Oil, Gas, and Mining
CFR	Code of Federal Regulations
DFD	Denver Field Division
DOGM	Division of Oil, Gas and Mining
DWRi	Utah Division of Water Rights
ESA	Endangered Species Act
EY	Evaluation Year
MOU	Memorandum of Understanding
MRP	Mining and Reclamation Plan
MSHA	Mine Safety and Health Administration
NEPA	National Environmental Policy Act
NTTP	National Technical Training Program
OSM	Office of Surface Mining
PHC	Probable Hydrologic Consequences
SITLA	State of Utah School and Institutional Trust Lands Administration
SMCRA	Surface Mining Control and Reclamation Act of 1977
SUWA	Southern Utah Wilderness Alliance
TIPS	Technical Innovation and Professional Services Program
UMA	Utah Mining Association
UPDES	Utah Pollution Discharge Elimination System
USFWS	United States Fish and Wildlife Service
USFS	United States Forest Service
WR	Western Region

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 mineable at this time. The demonstrated coal reserve base ranges from 5.4 to 14 billion tons. The Federal government holds most of Utah's coal resources. Utah coal fields are shown on the figure below (Utah Geological Survey web site, Coal & Coalbed Methane at http://geology.utah.gov, August 2006). In 2009, the Wasatch Plateau, Book Cliffs, and Emery Coal Fields were being actively mined.



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 steadily increased from the early 1970's and peaked in 1996 at 28.9 million tons. Production in calendar year 2008 was 26.3 million tons (Table 1). The majority of the coal production is produced by underground mining operations. In addition, Utah removed and reprocessed 484,947 tons of no value material in 2008 (OSM no value determinations for coal waste tonnage exempts permittees from the required SMCRA (abandoned mine lands) severance tax per ton of coal (waste) mined).

As of June 30, 2009, Utah had 23 active or temporarily inactive operations, four inactive operations, and seven abandoned sites that have disturbed a total of 3,014 acres. Each of these 34 sites is an inspectable unit (Table 2). Of the 27 non-abandoned operations, 11 were underground mines that use the longwall mining method, 10 were underground mines that use the room-and-pillar mining method, two were surface mining operations that extract coal from an underground mine refuse pile, and four were coal preparation plants/loadout facilities. As of June 30, 2009, Utah had also reclaimed 470 acres of disturbance for the seven abandoned sites. Utah's coal mining industry has a direct, significant impact on the local economies where mining occurs. Coal mining currently occurs in Carbon, Emery, and Sevier Counties. The Utah Department of Workforce Services reports that in 2008 mining companies (except oil and gas), including coal mining companies, employed on average 974, 666, and 518 persons in Carbon, Emery, and Sevier Counties. In Carbon County, coal mining companies represented three of the ten largest employers and one was the fourth largest employer. In Emery County, two out of the three largest employers were coal. In Sevier County, a coal mining company was the second largest employer. Coal mining employment remained relatively stable in 2008 for all three counties. See http://jobs.utah.gov/wi/regions/county.asp for more information on coal related employment in Utah.

The climate of the Wasatch Plateau and Book Cliffs Coal Fields is characterized by hot, dry summers, the late-summer (so-called *monsoon*) rains, and cold, relatively moist winters. Normal precipitation varies from six inches in the lower valleys to more than 40 inches on some high plateaus. The growing season ranges from five months in some valleys to only 2½ months in mountainous regions.

III. Overview of Public Participation in the Utah Program

Evaluation Process

OSM's WR-DFD and the Utah Department of Natural Resources' DOGM formed an Evaluation Team (the Team) to conduct annual evaluations of Utah's Coal Regulatory Program to determine how effective DOGM is in ensuring that coal mine reclamation is successful in preventing offsite impacts and providing service to its customers, and make recommendations for improving the administration, implementation, and maintenance of the Program. The Team structure is comprised of three to four core members each from the WR and DOGM. The Team cooperatively solicits public participation, selects and conducts joint inspections and evaluation topics, and reports, discusses, and tracks off-site impacts. This evaluation method fosters a shared commitment to the implementation of SMCRA.

Each year, the Team solicits comments or suggestions from persons and groups who may have an interest in coal mining and, specifically, an interest in the oversight process. On June 10, 2008 the Team mailed outreach letters to coal mining stakeholders (State, Federal, and local governmental agencies, coal mine permittees, environmental groups, consulting firms, and coal mining trade groups), soliciting input for topics to evaluate, as well as any questions or comments on previous oversight reports or the OSM/DOGM oversight process. In addition, DOGM posted a notice on its web page requesting suggestions for oversight topics from the public, industry, and environmental groups. No comments were received.

The Team has made a copy of the 2009 Annual Evaluation Summary Report available on both the OSM internet site at www.osmre.gov and the DOGM site at http://www.ogm.utah.gov. Additional data used by OSM in its evaluation of Utah's Program is available for review in the evaluation files maintained at the OSM-DFD. Contact James Fulton, Chief, DFD, at jfulton@osmre.gov or to (303) 293-5015.

Utah Program

The approved SMCRA program for the State of Utah is administered by DOGM. The BOGM is the policy making body for DOGM. The BOGM consists of seven members knowledgeable in oil, gas, mining, environmental, geology, and royalty matters. The BOGM convened eleven monthly meetings during this evaluation year. The meetings were all held in Salt Lake City, except for one held in Moab, Grand County, Utah.

The mission of the Utah Coal Program at the Division of Oil, Gas, and Mining is to regulate exploration for, and development of, coal in the State of Utah which:

- Supports the existence of a viable coal mining industry to meet the nation's energy needs; and

- Implements standards that safeguard the environment and protect public health and safety, and achieves the successful reclamation of land affected by coal mining activities.

IV. Major Accomplishments/Issues/Innovations in the Utah Program

Accomplishments

DOGM performed outreach to the public, operators, agencies, and stakeholders by providing opportunities to discuss issues.

- DOGM representatives meet with Emery County water user associations, Emery County Coal Operators, DWRi, USFS, BLM, Emery County Commission and other interested parties semi-annually to discuss water issues relating to coal mining in the Emery County area. The group discusses cumulative hydrologic impacts, DOGM's water monitoring database, potential water related impacts from coal mining and general issues related to coal mining. The water users provide updates on water availability and systems. In addition to general updates, this past year there were presentations on the Crandall Canyon Mine water discharge; water rights relating to the Colorado Endangered Fish Recovery Program; changes to the Utah Coal Mining Rules; impacts of mining at the North Water area above the SUFCO Mine; and the positions of longwall panels relative to surface water sources at the SUFCO, Skyline, Deer Creek, and Bear Canyon Mines.

DOGM performed outreach to citizens and communities by participating in programs that help to educate the public about mining.

- The BOGM sponsors an Earth Day Awards Program to recognize operators or individuals for going beyond what is required by regulation to protect the environment while providing society with essential natural resources. The Board recognized Canyon Fuel Company's Dugout Canyon, and Skyline mines in Carbon County and SUFCO Mine in Sevier County. Dugout Canyon and SUFCO mines completed wildlife habitat and water enhancement projects, while Skyline Mine used innovative means to avoid the need of building a second waste rock facility.

- The Division maintains information on their web site at http://www.ogm.utah.gov/ . Information includes: Water Quality Database, announcements of pending rules, mine information, contact information, links, technical information, amendment tracking information, and an FTP site.

DOGM provides leadership and outreach in the coordination with other State and Federal agencies involved in coal.

- DOGM participates in monthly interagency conference calls to coordinate permitting issues. Agencies who participate in these calls include the BLM, State Trust Lands,

OSM, USFWS, and the USFS. Utah's cooperative agreement is somewhat unique in that it requires the state to obtain federal agency concurrence rather than OSM performing this coordination effort as in other federal lands states.

- The DOGM and the Utah Department of Environmental Quality meet semiannually to review their MOU. The discussions include UPDES and other water related compliance issues concerning coal mines.

DOGM maintains a database and data processing for electronic permitting. Elements of the database include permit review tracking, automated inspection reports, document indexing, and annotation of digital photographs.

- Files and mining plans are being converted from paper to electronic PDF files. Electronic documents on DOGM's network are in an electronic filing system that makes documents electronically available to DOGM staff and the public. A secure access portal is available to view mine files for other agencies, companies, and the public (http://ogm.utah.gov/fs/filesbypermitinfo.php). Access is also available to the general public but is more restricted.

- Inspections and compliance information are tracked in the database;

- Staff permitting tasks are assigned, scheduled and tracked;

- Mine operators can track submittals, permits, and amendments status on line; and

- A relational database of people and companies that associates them with each other, permits, projects and other activities has been created and used for notifications, mailing lists, inspection reports, fees and other DOGM related work.

Issues

The following is a description of significant regulatory actions DOGM has addressed on mining operations during EY 2009. Some of the issues, actions, or tasks may be ongoing and DOGM continues to monitor them.

Crandall Canyon Tragedy

On August 6, 2007 a mine bump occurred at the Crandall Canyon Mine. The force of the bump was so intense that it blew the ventilation stoppings out more than a mile from the area where the miners were working. After the event six miners were missing. The subsequent rescue attempt within the mine moved slowly, because safety dictated the installation of rib supports consisting of 40-ton rock props, chain–link fence and steel cables to protect the rescue workers from further mine bumps. The safety precautions proved not strong enough to prevent a second burst from

fatally injuring three rescue workers. At that point, MSHA halted the rescue attempts inside the mine, while continuing the rescue work from the surface.[1]

On August 7, 2007, in an emergency attempt to rescue the men borehole drilling began from the surface of East Mountain down to the underground workings. Due to the nature of this rescue operation all drill pads and access roads were constructed under emergency provisions. On August 30th, MSHA officially called off the rescue effort. Permitting and reclamation of the seven drill pads and access roads began shortly thereafter. DOGM, along with other state and federal agencies, continues to work with the mine to coordinate reclamation activities.

The seven emergency drill pads and associated roads straddle the state and federal coal. The emergency access road was bladed through a designated roadless area of the Manti-LaSal National Forest and continued across SITLA land. Reclamation of drill holes, pads, and access roads required the cooperation of four agencies: BLM, SITLA, DOGM and USFS. DOGM was the project lead and coordinated the reclamation work with these agencies. The drill hole closure was conducted in 2007 as approved by all four agencies.

In the fall of 2007, 3.99 acres of the 7.91 acre East Mountain emergency drill hole disturbance were contemporaneously reclaimed, leaving 3.92 acres to be reclaimed in 2008. In 2008, two drill pads and the steep access road to the drill pads were reclaimed. All of the interested parties had experience with reclamation and all actively participated in outlining the reclamation methods to be used. All agencies had an opportunity to comment and were satisfied with the contemporaneous reclamation and final reclamation plans.

There was considerable concern between SITLA and USFS over reclamation of the ridge line access road on SITLA land due to the fact that SITLA had tried unsuccessfully to obtain access to these parcels through the NEPA process and did not want to see access cut off. The USFS was under NEPA obligation to close the emergency road to restore the area to its "roadless" condition. A compromise was reached to allow the access road to remain until field season 2009 to allow for access to evaluate the reclamation (and to allow for agency negotiation).

Horse Canyon Mine – Lila Canyon Extension

An application for this permit extension was received by DOGM in September of 1998. After six rounds of deficiencies, a permit was issued in May of 2001 and the Assistant Secretary of Land and Minerals Management (ASLM) approved the Mining Plan on November 5, 2001. SUWA filed an objection to the permit, and a subsequent hearing before the Utah BOGM on December 14, 2001 resulted in issuance of an order that reversed the Division's decision and remanded the permit back to DOGM, DOGM issued the permit again on May 18, 2007. On June 1, 2007, SUWA appealed the issuance of the permit to the BOGM. On December 10, 2007, the BOGM issued an Order of Dismissal of SUWA's appeal with prejudice. In a May 16, 2007 letter to the BLM and OSM-WR, SUWA asserted that the permit approved by DOGM is an entirely new document that postdates and replaces earlier versions of the permit, and that WR needs to thoroughly review and analyze the new permit before making any recommendations

[1] Extracted from Utah Mine Safety Commission Report and Recommendations to Governor Jon M. Huntsman, JR. January 2008.

regarding the mining plan. OSM-WR's review of the revised permit determined that only certain parts of the original 1998 permit were revised to incorporate additional information for hydrological, geological and environmental resources, and proposed mining and reclamation operations have not changed from the 1998 permit. By letter dated June 26, 2007, OSM-WR informed SUWA of the above determination, and stated that the permit issued by DOGM on May 18, 2007 does not meet any of the criteria of 30 CFR §746.18(d) for a mining plan modification. OSM-WR further stated that the November 5, 2001, mining plan approval is still in effect since it has not been modified, cancelled or withdrawn as provided under 30 CFR §746.17(b).

On September 11, 2007, SUWA filed with the U.S. District Court, District of Utah, Central Division a Complaint against the OSM and the BLM alleging that OSM-WR should have prepared a new mining plan for the mine and that BLM violated NEPA. The complaint also requested a Preliminary Injunction to stop the operator from conducting surface disturbances associated with the permit. On December 5, 2007, the Federal District Court issued an Order Denying SUWA's Motion for a Preliminary Injunction to stop the operator from conducting surface disturbances associated with the permit. Oral arguments were heard on August 19, 2008, in Salt Lake City, Utah. On November 13, 2008, the Federal District Court found that OSM-WR did not violate the Mineral Leasing Act by declining to prepare a new recommendation to the ASLM regarding whether the proposed mining plan should be approved. As a result, the court concluded that OSM-WR's actions were not arbitrary, capricious, an abuse of discretion, or contrary to the law. SUWA subsequently appealed the decision to the Federal District Court of Appeals, and the court has yet to render a decision.

UtahAmerican Energy, Inc. initiated construction activities in November 2008. Construction activities included the development of the main and secondary sediment controls, development of the mine office pad and leach field, coal storage pad, shop pad and rock tunnels.

Coal Hollow Mine (Alton Coal Development, LLC)

A new permit application for fee surface/fee coal (636 acres) was submitted to the Division on June 14, 2007. This proposed surface mine is located in the Alton Coal Field which currently has no coal mining activity. After receiving supplemental information in January 2008, the application was determined to be administratively complete on March 14, 2008. An informal conference was conducted June 16, 2008 after receiving 43 individual comments and four from interested organizations; in addition to three requests for an informal conference. The focus of the informal conference was to allow the public to comment on the public road relocation. Most commenters did not comment on the road relocation, but commented on the affect of mining on the environment and economy.

The permittee provided a revised application on December 2008 and the Division responded with deficiencies on April 20, 2009. The applicant responded on July 2, 2009 with an informal rebuttal to the Division's findings and the Division has since met with the applicant to work toward achieving a technically complete mining and reclamation plan. In the near future, the applicant is expected to provide a revision of the reclamation plan that will respond to the

Division's concerns. The BLM's Draft Environmental Impact Statement for adjacent federal leases will be released for public comment soon.

Kinney #2 Mine

A new permit application for the Kinney #2 Mine, Carbon Resources, LLC, was received February 29, 2008. The application is for an underground coal mine on 38 acres of fee surface and 453 acres of fee coal. The application was determined administratively complete on June 25, 2008. As requested an informal conference was held September 30, 2008. The Center for Water Advocacy filed two incomplete petitions to have the Kinney #2 Mine area determined as lands unsuitable for coal mining. The Division and applicant continue the review process towards a technically complete MRP.

COVOL

The Wellington Dry-Coal Cleaning Facility (COVOL) is a dry-coal cleaning facility used for cleaning coal. The Division determined this facility was required to be permitted under Utah Adm. Code R645 in March of 2006, after the facility was in operation. In March 2008 the Division determined the MRP complete. The Division and applicant continue the review process towards a technically complete MRP.

Bear Canyon Mine

In June of 2008, CW Mining, permittee and operator of the Bear Canyon Mine, sold their interests and operating agreements associated with the mine to Hiawatha Coal Company. Hiawatha Coal Company approached the Division of Oil, Gas, and Mining in July of 2008 for a permit transfer. The transfer was complicated by an involuntary bankruptcy petition filed by a creditor of CW Mining, and reluctance by the surety company to transfer the bond coverage.

Because of an August, 2008 ruling by Judge Judith A. Boulden of U.S. Bankruptcy Court for the District of Utah that seemed to affirm the sale of the Bear Canyon Mine to Hiawatha Coal Company, the Division proceeded with the permit transfer process. Hiawatha Coal Company could not produce a bond for the Bear Canyon Mine and the Division, after working with them in hopes of a successful resolution, issued a Cessation Order to the current operators, Hiawatha Coal Company, on February 5, 2009. Because the BLM was concerned with a loss of resource, and the company holding the bond in the name of CW Mining assured it would retain liability for reclamation until court proceedings were finalized, the order required the cessation of any additional surface disturbance and underground development mining but allowed for the continuation of underground mining in the current longwall mining panel until that activity was completed.

In April of 2009, the Bankruptcy Court declared that the sale of the mine and assets to Hiawatha Coal Company was not valid and the Trustee retains rights to the mine and all assets of CW Mining. Subsequently, the Division denied the permit transfer.

The Trustee is now acting as CW Mining and is the permittee for Bear Canyon. A bond is in place for CW Mining. The longwall panel is complete and mining activities have ceased at the mine. The Division has informed the Trustee of his obligations to abide by the terms and conditions of the MRP and Permit. The Trustee continues to battle in court for the physical operational control of the mine.

Legislative Coal Audit

The Utah Office of the Legislative Auditor General completed "A Performance Audit of Utah's Coal Regulatory Program" in late 2007. This audit identified 11 process improvements for DOGMs Coal Program. In a follow up to the 2007 audit, the Legislative Auditor General reported in January 2009 that nine of the 11 recommendations have been fully implemented. The other two recommendations are in the process of being implemented.

Program Amendments

UMA Rules Request: The UMA proposed rulemaking on five topics in November 2006. Subsequent to one year of informal rulemaking meetings and reports, the BOGM approved proposed rules on three topics on March 26, 2008. DOGM submitted a formal program amendment to OSM on May 28, 2008, and OSM published in the Federal Register on June 24, 2008 (73 FR 35607). OSM has worked extensively with the Solicitor's Office in EY09 and the program amendment should be final soon.

Remining Repeal Dates: The statute for the Coal Program was modified in the 2009 General Session of the Legislature regarding two provisions with repeal dates on lands eligible for remining. The repeal dates were deleted to match the corresponding changes to SMCRA. DOGM submitted a formal program amendment to OSM on May 19, 2009, and OSM published the proposed change in the Federal Register on July 7, 2009 (74 FR 32089).

Valid Existing Rights: Subsequent to OSM's request in February 2008 for extensive rule amendments pertaining to Valid Existing Rights, the BOGM on September 24, 2008 supported the commencement of an informal rulemaking process. DOGM and OSM have worked cooperatively during EY09 to draft and edit proposed rule amendments on Valid Existing Rights. DOGM expects such rules to be final with the Board in EY10, and a program amendment will then be sent to OSM.

Innovations

This year has continued to be one of change and regrouping at DOGM. The coal staff has lost a collective 75 years of experience due to retirements and reassignments; and three new full time employees have been hired. Reductions in State General Funds and limited Federal funds to the program has reduced staffing levels to 16 FTEs from the 23 that were budgeted for several years ago. In spite of these challenges, DOGM's permitting timeliness has remained relatively unchanged.

V. Success in Achieving the Purposes of SMCRA

The Team evaluates the number and extent of observed off-site impacts, the number and percentage of inspectable units free of off-site impacts, the number of acres that have been mined and reclaimed and which meet the bond release requirements and have been released for the various phases of reclamation, and the effectiveness of customer service provided by the State. Individual topic reports are available in the WR-DFD Office and provide additional details on how the following evaluations and measurements were conducted.

Off-site Impacts

An "off-site impact" is anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on resources (people, land, water, structures) outside the area authorized by the permit for conducting mining and reclamation activities.

Table 4 shows the number and type of off-site impacts that were observed and documented as having occurred during EY 2009, both for permitted sites and bond forfeiture sites.

Sites Where Reclamation Performance Bonds Have Not Been Forfeited

The Team assessed whether off-site impacts had occurred on each of the 27 non-forfeited mine sites that existed at some time during the evaluation period. The Team did so through the following 299 on-the-ground observations: 108 DOGM complete inspections including one OSM and DOGM joint complete inspection; 189 DOGM partial inspections (Table 9); and two special focus/topic evaluation observations discussed in section VII below. Based on the above, and DFD's monthly review of all DOGM inspection reports and enforcement actions, the Team finds that DOGM has met or exceeded the required inspection frequency on all inspectable units with the exceptions that one partial inspection was missed at the Des Bee Dove Mine in January due to inaccessibility, one complete inspection was replaced by a partial inspection at the West Ridge Coal Mine, and one complete inspection was replaced by a partial inspection at the reclaimed Gordon Creek #2, 7, & 8 mine because the site was inaccessible during part of the year.

For EY 2009, the Team documented one moderate hydrological off-site impact to a water resource and one minor hydrological off-site impact to a water resource resulting from active coal mining operations (Table 4). Ninety-three percent of Utah mines were free of off-site impacts. In comparison, the Team found 100, 96, 93, and 96 percent of the mines free of off-site impacts in EY's 2005, 2006, 2007, and 2008 respectively.

Sites Where Reclamation Performance Bonds Have Been Forfeited

Since 1981 when OSM approved the Utah permanent regulatory program, DOGM has forfeited reclamation performance bonds for seven mines. (The White Oak Mines #1 and #2 are counted with the bond forfeiture sites because the Division issued the determination to forfeit; however, bond forfeiture monies were never received. Monies were obtained from the Loadstar

Bankruptcy Trustee, Frontier Insurance, and a "General Settlement Fund" outside of the Lodestar bankruptcy estate.)

During EY 2009, DOGM conducted 9 complete and 11 partial inspections on the seven forfeited mines (see Table 9). One moderate land stability off-site impact to a water resource was observed. Table 4 (bottom half) shows that 86 percent of the bond forfeiture sites were free of off-site impacts. The Team previously found that 100 percent of these mines were free of off-site impacts in EY's 2005, 2006, and 2007, respectively, and 83 percent in EY 2008.

Reclamation Success

Sites Where Reclamation Performance Bonds Have Not Been Forfeited

For operations where reclamation performance bonds have not been forfeited, the Team used as the measure of reclamation success the disturbed acreage that had received bond release. Historically, the amount of bond release acreage in Utah is very low due to the following two factors:

- Most of the permitted operations are underground mines (Table 2). Underground mining operations are long-lived and remain active during the entire life of the operation because of their continued use as surface facilities. Although the surface disturbances for Utah mines are relatively small (2,427 acres for EY 2009 in Table 5), there are 174,470 permitted acres (which may include the area of land over the underground mine workings) for the 27 non-forfeited mines, or an average of 6,462 permitted acres per mine in Utah. While the legislative coal audit pointed out that the permit area may be defined as just the disturbed area, by rule the operator has the option to include what they would like, within reason, in their permit area. To date, only one application has been received asking to change their permit area. DOGM expects others to follow suit.

- The bond liability period is a minimum of 10 years.

Table 5 shows the permit acreage where DOGM partially released (Phases I and II) or totally released (Phase III) bonds during the evaluation year. For the 2,372 acres of total disturbance that had not yet received final (Phase III) bond release at the beginning of the evaluation year, DOGM granted a Phase I, bond release of 96 acres at the Hiawatha mine, and 95 acres received Phase II bond release at the Star Point Mine. An additional 55 acres were bonded and disturbed during the evaluation year at the Crandall Canyon, Dugout, Horse Canyon, and West Ridge Mines thus increasing the total number of disturbed acres to 2,427 as of June 30, 2009.

Customer Service

For EY 2009, DOGM conducted a Division-wide Stakeholder Satisfaction Survey (Utah self-evaluation). The results of the survey are discussed under section VII below.

VI. OSM Assistance

For the one-year grant period starting July 1, 2008, DOGM requested $2.4 million in assistance. The lack of any meaningful increase in the appropriation for regulatory grants over the past several years has made it impossible for OSM to fully fund most State regulatory programs, resulting in Utah receiving $2,029,409 (Table 8) or 84 percent of its request. Through a Federal lands cooperative agreement, OSM reimburses DOGM for permitting, inspection and other activities that it performs for coal mines on Federal lands (Table 7). Because most of the mines in Utah occur on Federal lands, Utah uses the option under the Federal Assistance Manual for Area-Weighted Average Option, which would call for OSM to provide funding at an 87.3 percent level of DOGM's total program costs. As described above the Federal appropriation has not allowed full funding. OSM also provided the Utah program with $3,644,687 in abandoned mine land reclamation funding. This amount represents 100 percent of required OSM funding for the Utah AML program (Table 8).

Through NTTP and TIPS, OSM offers free-of-charge technical training courses to State and Tribal employees. During EY 2009, eight DOGM employees (students) participated in six NTTP training opportunities, and two employees participated in two TIPS training opportunities. DOGM, in kind, provided one NTTP instructor.

OSM's Technical Librarian filled six reference requests, and provided 35 article reprints to Utah Staff.

DOGM submitted one TIPS Services request during the evaluation year for remote sensing imagery. WR remote sensing staff was not able to provide these images due to existing workload priorities. TIPS Services intends to complete the imagery request by December 31, 2009.

VII. General Evaluation Topic Reviews

Each year OSM and DOGM evaluate topics to determine whether DOGM is effective in ensuring reclamation success, preventing off-site impacts, and ensuring effective customer service. Results of all evaluation topic reviews are available at the WR-DFD Office. For EY 2009, the Team conducted three evaluation topic reviews.

Reclamation Success – Water Replacement and Mitigation of Subsidence-related Material Damage to Land or Structures

This evaluation was based on OSM Directive REG-8 for determining whether the DOGM is effective in ensuring reclamation success.

As a measure of Reclamation Success, the Team evaluated situations where mine-related subsidence has resulted in material damage to a water resource to determine if appropriate mitigation has been accomplished. This was done to determine whether the Utah program is successfully achieving timely restoration and repair or replacement of water supplies affected by mining and restoration of other resources impacted by mine subsidence. The Team focused on

situations where mine-related subsidence has caused material damage to surface lands or State-appropriated water supplies.

One instance of probable subsidence-related material damage to a land resource, and proven diminution of a State-appropriated water supply in Utah was identified and evaluated. It was caused by a longwall operation which employs planned subsidence of surface lands. Numerous seeps and springs on the overlying Forest Service administered land are used by cattleman to support the land use of rangeland. Cattle are present in this area for 20 days every other year. The springs also support wildlife and riparian habitat in the area. After undermining and subsiding the area, four springs went dry.

On May 19, 2006, DOGM made a finding of probable material damage in that longwall mining subsidence damaged the springs causing a diminution of water. This diminution of water may have functionally impaired the surface lands and negatively impacted the land's capability to support its current and reasonably foreseeable uses which would constitute material damage to the land resource. In this case, the current and reasonably foreseeable land uses are grazing and wildlife habitat. As of yet, the DOGM has been unable to make a finding that the land use is impaired because the same number of cattle are grazing the area for the same length of time (20 days every other year). In addition, DOGM has not observed any adverse impacts to wildlife resulting from dying riparian vegetation which would also require a finding of material damage. Nevertheless, because of the probability of damage to the land uses, the requirements of R645-301-525.510 apply and the permittee was required to provide a plan for mitigation and restoration of the water resources and the associated riparian area in accordance with water replacement requirements. In the meantime, DOGM continues to investigate whether material damage has actually occurred.

Background

The BLM issued the coal lease for this area with 20 stipulations from the surface management agency (the US Forest Service). Lease stipulation #17 states that: "The Lessees, at their expense, will be responsible to replace any surface water and/or developed ground-water source identified for protection, that may be lost or adversely affected by mining operations, with water from an alternate source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses (authorized by 36 CFR 251)."

The four impacted springs were not individually identified and combined into the general water right Supplemental Group for the use of stock watering in this area. However, that omission does not mean there are not valid water rights associated with the impacted springs. The DWRi has subsequently reevaluated the North Water Springs and determined that the water is appropriated because it contributes to existing downstream water rights. Specifically, because the Muddy Creek drainage above Emery is fully appropriated during most times of the year, all springs, streams and other sources of water which go to supply the existing water rights are considered to be appropriated water. Because the DWRi considers these springs to be appropriated water, the water replacement requirements at R645-301-731.530 apply.

Mitigation History

By letter dated May 22, 2006, DOGM informed the mining company that a finding of material damage was evident based upon a preliminary assessment of the onsite conditions and available spring monitoring data, and required it to repair the damage. Since then the company has explored various options for mitigating the loss of the springs. Piezometers and 4-inch wells installed in 2006 have been used to monitor groundwater levels and movement. Small scale slug tests indicated very low conductivity, suggesting that the alluvium is unlikely to sustain groundwater discharges of more than one gallon per minute. The company installed a grout curtain into the alluvium at 3-4 foot intervals to try to impede groundwater movement. However, the water simply ran around the curtain. The company recently proposed and attained approval for additional core drilling to determine the occurrence of ground water and elevations of potential aquatards within and immediately underlying the pertinent sandstone.

The current plan is to find a suitable source of ground water to pump to the dry spring areas to support wildlife, riparian habitat, and stock watering.

Conclusions

The Team continues to investigate the probability that material damage requiring mitigation has occurred at the mine. Because mine-related subsidence affected the springs resulting in a diminution of water that may have negatively impacted the land's capability to support its current and reasonably foreseeable uses, the mitigation requirements of R645-301-525.510 are being applied. Moreover, since the DWRi considers these springs to be appropriated water, the water replacement requirements of R645-301-731.530 also apply and DOGM is requiring the company to mitigate the subsidence related impacts at the mine. Interim mitigation measures provide stock water; however, they do not take into account the Forest Service lease agreement stipulation requiring replacement of water supplies necessary to maintain existing riparian habitat and wildlife use. Because the company's long-term mitigation plan has not yet been fully developed or implemented we are unable to complete this study at this time and it will continue into EY 2010. In the meantime, DOGM plans to meet with both the mining company and the Forest Service to review all available information concerning the probability of damage to the land uses, determine whether material damage actually occurred and, if confirmed, require the company to develop an appropriate long-term mitigation plan in a timely manner. The Team will then evaluate the appropriateness and effectiveness of the mitigation plan as required by R645-301-525.510 and R645-301-731.530, respectively.

Prevention of Off-site Impacts – Mitigating for Coal Mining Water Depletions and the Upper Colorado River Endangered Fish Recovery Program

This evaluation was based on OSM Directive REG-8 for determining whether the DOGM is effective in preventing off-site impacts.

OSM and DOGM jointly selected this oversight topic. Its purpose is to evaluate whether DOGM is implementing its approved regulatory program by ensuring that the Utah program is successful in preventing offsite impacts to endangered species as a result of mining activities.

The Utah Coal Program is required to comply with the ESA. Both the Federal Rules at 30 CFR 817.97(b) and Utah Rules at R645-301-358.100 state that "no underground mining activity shall be conducted which is likely to jeopardize the continued existence of endangered or threatened species listed by the Secretary or which is likely to result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act." Of particular concern are impacts to endangered Colorado River Fish, including the Colorado pikeminnow, razorback sucker, humpback chub, and bonytail fish that inhabit the lower warm water reaches of the Colorado, Green, Yampa, White, and Gunnison Rivers.

Currently, Utah participates in the Upper Colorado River Endangered Fish Recovery Program (established in 1988 by The Secretary of the Interior, Governors of Colorado, Wyoming, and Utah, and the Administrator of the Western Area Power Administration) as a way to offset water depletions, thereby providing a method to mitigate the impacts to endangered fish. As part of the recovery program, calculations must be performed to determine if consumption of water from coal mining is contributing or will contribute to water depletions, thereby affecting fish habitat.

Coal mine operators are required to calculate water losses to the Upper Colorado River Basin and, if necessary, pay a one-time fee that funds the Recovery Program. When water users agree to participate in the Recovery Program, the USFWS agrees to provide ESA compliance for the water user's project under the Recovery Program. There is no cost to the water user for projects involving water depletions less than 100 acre-feet per year. If the depletion is greater than 100 acre-feet per year, the project proponent must pay a one-time fee to receive ESA compliance. This fee is based on the average annual depletion of the project. Because the one-time fee is adjusted annually for inflation, it will vary from year to year. The fee for 2009 was $18.29 per acre-foot.

During the processing of a new permit application, a determination must be made as to the amount of water that will be depleted from the upper Colorado River Watershed as a result of the proposed coal mining activity. Historically, the permittee has calculated the individual components of water depletion losses by utilizing various equations (i.e. individual equations for evaporation, coal moisture loss, ventilation loss, dust suppression etc) and submitted them to the Division for review.

Existing coal mine operations have been required to revisit the water depletion calculations if a proposed change to the MRP has the potential to significantly increase the amount of depletion from the Colorado River Watershed.

There are no standard methods for calculating water depletions for underground coal mines. The Team investigated:

- Methods that the Colorado Division of Reclamation, Mining, and Safety uses to implement the Upper Colorado River Recovery Program to determine if there is an equally effective, but less complicated, method to calculate water depletions from coal mining.
- DOGMs current approach and calculations used in determining water depletions.

- Methods described in the Horse Canyon Mine MRP as an example of an existing coal mine.
- A more detailed understanding of implementation of the recovery program with the USFWS Salt Lake City Field Office.

Results

The team held a conference call with the Colorado Division of Reclamation, Mining, and Safety to ask how they calculated water consumption and specifically if they considered produced mine water as a depletion offset. MRP documents were provided by Colorado and showed the same basic categories of consumptive uses. According to representatives from the Colorado Division, no Colorado mines discharge mine water.

In March of 2009, OSM met with representatives from DOGM and reviewed the water depletions for the Horse Canyon Mine located in Carbon County and operated by UtahAmerica Energy, Inc. In Appendix 7-3 of their mine permit application addressing PHC, the mining company describes the following consumptive processes:

- Evaporation from ventilation
- Coal preparation
- Sediment Pond Evaporation
- Subsidence on springs
- Alluvial aquifer abstractions into mines
- Postmining inflow to workings
- Coal moisture loss
- Direct diversions

In their description for the Sediment pond evaporation calculation, the mining company explained that the holding time for rain and snow runoff that flows over disturbed areas of the operation is expected to be short. They reasoned that because of the short holding time, no significant evaporation loss is expected. Therefore, sediment pond evaporation would not be considered a consumptive mechanism. Regardless of the holding time, the mining company should have performed a calculation to prove that this is not a consumptive mechanism. The mining company has noted that they will report actual water depletion values annually in their Annual Report.

In reviewing this permit application, the Team concluded that the Division should have required the company to submit the calculations instead of relying on explained logic. However, the water depletion calculations and the permit commitment to report annual depletions for the Horse Canyon Mine appeared to be sufficient to determine the one-time fee to the Recovery Program to ensure compliance with the ESA.

Previously, the USFWS had not provided the Division with direction on whether or not groundwater discharged from underground mines was a consumption or offset. Many of Utah underground mines are initially dry and after several years of mining produce large quantities of water. The PHC section of the MRP examines the sources of ground water and the potential for

these resources to be impacted. A majority of the coal mines in Utah have demonstrated by dating methods that the encountered mine water is typically 'ancient' (10,000 years or older) and not connected to surface flows. The permittees argue that this water should be considered an offset to their Colorado River depletions. They also argue that but for their coal mining activity and resulting pumping activities, the encountered mine water would not enter the Colorado River system.

However, geologic and topographic conditions can vary widely within the Utah coalfields resulting in significantly different ground water systems. For example, an underground coal mine located in Emery County has demonstrated that their mining operation is encountering water from an alluvial ground water system that is in much greater communication with surface hydrology. In this case, the permittee cannot make the argument that the encountered mine water is 'ancient' and therefore the resulting discharge should offset their overall depletion value.

For some time, the Division has sought guidance from the USFWS on how to implement the Colorado River Fish Recovery Program. During a June 19, 2009 meeting between USFWS representatives and the Division, the USFWS verbally indicated that mine water discharge would be considered an 'offset' to a coal operations total water depletion value.

The Team has reviewed several methods for calculating water consumption from coal mining activities in compliance with the Colorado Endangered Fish Recovery Program. A staff-mining engineer concluded that the in-mine calculations were very subjective and valid calculation methods could vary greatly. As a result, the Division is currently in the process of producing a guidance paper (in consultation with the USFWS), with detailed descriptions of the different consumptive uses and acceptable methods for calculating those values. The analyses were designed to simplify and standardize the methods for these calculations. Utah categorized the consumptive uses into four main categories:

- Surface dust suppression
- Surface facility demands
- Surface water evaporation
- Underground suppression, production, and ventilation demands

The USFWS indicated that mine water discharge should be considered an 'offset' to a coal operations total water depletion value. Therefore, the USFWS would not see a need for further consultation under the ESA if a coal mining operation discharges more water than they are consuming. The exception to this practice would occur if the permittee discharged water that was not suitable for the Colorado River fish. In that case, the USFWS indicated that a revisitation of the depletion calculations would be warranted.

The USFWS suggested that all new mines consult on the amount of water they have secured in water rights instead of calculating consumptive uses. This amount of water would be considered the worst-case scenario. If consultation were completed on this depletion then the mine would likely not need to consult again unless additional water rights are obtained. The USFWS is reportedly in the process of producing a guidance letter on mine water offsets as well as the aforementioned issues discussed above.

Conclusions

As a result of the evaluation of the Horse Canyon Mine's water depletion calculations, the Team concludes the following:

- The calculation methods examined in conjunction with this Special Focus Topic are in compliance with the applicable requirements of Utah State Rule R645-301-358. The Division has an effective method in place to determine water depletion calculations.

Based on this finding, the Team recommends the following:

- DOGM should develop a guidance document for compliance with the Colorado Endangered Fish Recovery Program and:
- Include standard methods for calculating water consumption from coal mining activities. This will ensure consistency and accuracy when performing these calculations.
- Recommend that all new mines do a one-time consultation on their total anticipated life of mine water consumption or water rights.
- USFWS consultation is not needed for any mine currently discharging fish suitable mine water resulting in a depletion offset.

Customer Service – Division-wide Stakeholder Satisfaction Survey (Utah self-evaluation)

DOGM implemented a customer satisfaction survey during EY09 to evaluate performance at the Division and Program levels. In conjunction with the Governor's Balanced Scorecard effort to measure and evaluate agency performance, DOGM developed the customer satisfaction survey based upon an Oregon model. The purpose of the survey was to evaluate the current level of customer satisfaction and to foster improved customer service in the future.

The customer satisfaction survey included the period of July 1 to September 30, 2008. For the Coal Program, the results on a 1 to 5 scale, with 5 being the highest, were as follows:

Timeliness of Services: 3.91
Accuracy of Information: 3.64
Helpfulness of Employees: 3.82
Expertise of Employees: 3.91
Availability of Information: 3.36
Composite: 3.73

There were 11 responses to the Coal Program survey in 2008, so the goal for 2009 is to increase the survey participation.

EY 2009 UTAH EVALUATION TEAM MEMBERS

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Appendix 1

Tabular Summary of Core Data to Characterize the Utah Program

These tables present data pertinent to mining operations and State and Federal regulatory activities within Utah. They also summarize funding provided by OSM and Utah staffing. Unless otherwise specified, the reporting period for the data contained in all tables is the same as the evaluation year. Additional data used by OSM in its evaluation of Utah's performance is available for review in the evaluation files maintained by the Denver OSM Office.

When OSM's Directive REG-8, Oversight of State Programs, was revised in December 2006, the reporting period for coal production on Table 1 was changed from a calendar year basis to an evaluation year basis. The change was effective for the 2007 evaluation year. However, with Change Notice REG-8-1, effective July 1, 2008, the calendar year reporting period in Table 1 for coal produced for sale, transfer or use was reestablished for the 2008 evaluation year. Consistent with that change, the coal production figures for 2006, 2007 and 2008 reported on Table 1 have been recalculated on a calendar year basis so that all three years of production reported in the table are directly comparable. This difference in reporting periods should be noted when attempting to compare coal production figures from annual evaluation reports originating both before and after the December 2006 revision to the reporting period.

The Table 5 format also changed effective EY 2007 as a result of the December 2006 revision to OSM Directive REG-8. The Utah Reclamation Status Table was used to determine the acreage numbers, including the number of new acres bonded and disturbed during EY 2009 and the bond release acreage sums, shown on Table 5. The Reclamation Status Table also represents the cumulative number of acres disturbed and reclaimed by permitted mining operations in Utah since the approval of the Utah Permanent Regulatory Program in January of 1981. The cumulative number of acres disturbed at the end of the evaluation year (3,014 acres) is derived by subtracting cumulative Phase III bond release acreage (173 acres of Phase III release from December 1981 through EY 2008) from the total cumulative disturbed acreage from active, temporary inactive, and inactive sites (3,187 acres). DOGM tracks and reports evaluation year bond release data to the DFD during quarterly meetings that are held throughout the evaluation year.