OFFICE OF SURFACE MINING

RECLAMATION AND ENFORCEMENT

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

For
Evaluation Year 2010
(July 1, 2009, through June 30, 2010)

(September 2010)

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I. Introduction

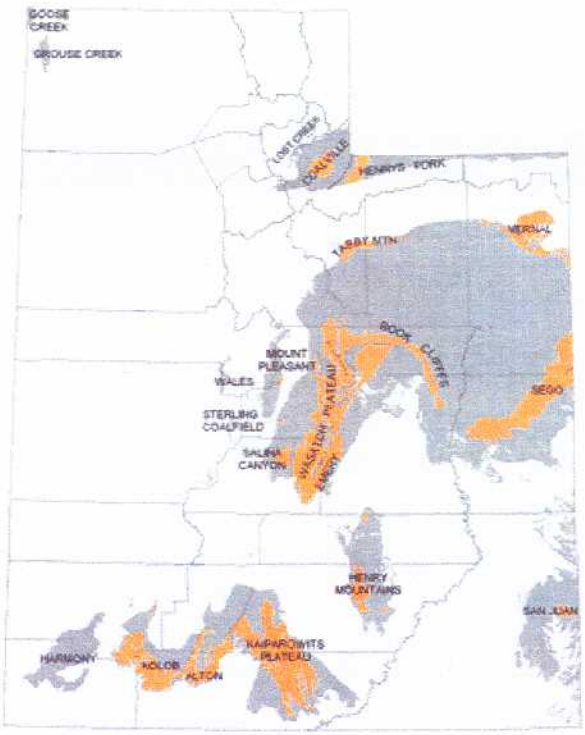
The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for the State regulatory programs that 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, 2009, through June 30, 2010. 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
AOC	Approximate Original Contour
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
EA	Environmental Assessment
EY	Evaluation Year
IHCO	Imminent Harm Cessation Order
MOU	Memorandum of Understanding
MRP	Mining and Reclamation Plan
MSHA	Mine Safety and Health Administration
NEPA	National Environmental Policy Act
NOV	Notice of Violation
NTTP	National Technical Training Program
OSM	Office of Surface Mining Reclamation and Enforcement
SITLA	State of Utah School and Institutional Trust Lands Administration
SMCRA	Surface Mining Control and Reclamation Act of 1977
SUWA	Southern Utah Wilderness Alliance
TDN	Ten-Day Notice
TIPS	Technical Innovation and Professional Services Program
UDWR	Utah Division of Wildlife Resources
UMA	Utah Mining Association
UPDES	Utah Pollution Discharge Elimination System
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USFS	United States Forest Service
WEP	Wildlife Exclusionary Periods
WR	OSM's Western Regional 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 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 2010, 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 2009 was 24.7 million tons (Table 1). The majority of the coal production is produced by underground mining operations. In addition, Utah removed and reprocessed 472,962 tons of no value material in 2009 (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, 2010, Utah had 18 active or temporarily inactive operations, 11 inactive operations, and six abandoned sites that have disturbed a total of 3,014 acres. Each of these 35 sites is an inspectable unit (Table 2). Of the 29 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 six were coal preparation plants/loadout facilities. As of June 30, 2010, Utah had also reclaimed 470 acres of disturbance for the six 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 as of August 2009 mining companies (except oil and gas), including coal mining companies, employed on average 1,299 and 678 persons in Carbon and Emery Counties. Sevier County employed 570 persons as of May 2010. In Carbon County, coal mining companies represented three of the ten largest employers and one was the third 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. A slowdown in coal mining activity spawned by the Crandall Canyon Mine disaster and the recession pushed employment down in Emery County; however, employment increased in both Carbon and Sevier Counties.

See http://jobs.utah.gov/jsp/wi/utalmis/default.do 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 October 27, 2009, 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. Comments regarding the Alton Coal Project (Coal Hollow Mine) were received from the National Park Service and the Five County Association of Governments. The Team has responded to these comments and will provide additional information as needed.

The Team has made a copy of the 2010 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 sixteen

hearings and two Informal Conferences during this evaluation year. The meetings were all held in Salt Lake City, except for one that was held in Vernal, Uintah 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 and the USFWS cooperated to develop an Upper Colorado River basin guidance document which will be instrumental in protecting the endangered species in the upper Colorado River Basin.

- The USFWS and DOGM have developed an agreement on site-specific standards and procedures to protect the Colorado River fish species. The purpose of this agreement is to establish species-specific standards and procedures to protect federally listed Colorado River fish species from impacts related to coal mining operations in the upper Colorado River basin of Utah. The species-specific standards and procedures have been described in a letter and are designed to fulfill the requirements under the 1996 Biological Opinion on Surface Coal Mining and Reclamation Operations (1996 BO), satisfying the responsibilities of DOGM and the USFWS. The standards and procedures will provide minimum permitting and performance standards for protection and enhancement of the federally endangered Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), bonytail (*Gila elegans*), and razorback sucker (*Xyrauchen texanus*) and their designated critical habitat (Colorado River fish species) when coal operations occur in the Green and Colorado River basins and are greater than 10 miles from designated critical habitat. The vast majority of coal mining occurs in headwater areas, far from designated critical habitat. Impacts to the fish species from these operations are limited to water depletions and possible water discharges. Standards and procedures that relate to water depletions are in accord with the Recovery Program and are consistent with USFWS consultation processes for other industries (agriculture, oil and gas developments, etc.). Standards and procedures that relate to possible water discharges are consistent with state water quality requirements.

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 presented 2010 Earth Day Awards to six companies. Receiving the awards were Anadarko Petroleum, Energy West Mining Company, Georgia Pacific Gypsum, Questar Exploration and Production Company, Rio Tinto/Kennecott Utah Copper, and Simplot Phosphates. In Coal mining, the Board recognized Energy West Mining Company for the innovative use of environmental technology (directional drilling) in aiding the North Emery Water Users Special Services District in permitting and constructing the Elk Springs water project.

- 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, SITLA, OSM, USFWS, DWRi, UDWR, USACE 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 2010. Some of the issues, actions, or tasks may be ongoing and DOGM continues to monitor them.

Crandall Canyon Ten-Day Notice

On August 6, 2007 a mine bump/collapse occurred at the Crandall Canyon Mine, which took the lives of six miners. Three rescue workers were killed during a rescue attempt. 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 emergency drill holes, pads, and access roads have now all been reclaimed with the exception of the main ridge line access road across Forest Service and SITLA Property. After considerable negotiation the parties have now reached agreement on the need to reclaim this road and it will be reclaimed during the fall of 2010.

Because the Crandall Canyon Mine was shut down in such an unexpected manner, the provisions for mine water discharge had not been adequately addressed. Water began discharging from the mine portals shortly after they were sealed. A Division Order (C/015/032-DO 08A) was issued on April 22, 2008 requiring Genwal to make requisite permit changes and update the MRP to include a plan for the discharge of post-reclamation mine water in accordance with R645-301-551, R645-301-731.521, and R645-301-751. The level of iron in the water started to exceed the UPDES discharge parameters and soon began to stain Crandall Creek, the receiving stream. On August 11, 2009 the Division issued a violation to the mine for failure to minimize the disturbance to the hydrologic balance. The mine was required to stop discharging water that

exceeded the UPDES permit so a treatment facility was built that would treat the water before it was discharged into Crandall Creek.

On November 9, 2009, after having conducted an inspection at the site, OSM issued two Ten Day Notices (TDN's) for 1) failure to conduct operations only in accordance with the approved permit, (which pertained to the water treatment facility); and for 2) failure to maintain adequate bond coverage at all times (which also pertained to not having bond for perpetual treatment of the mine water discharge).

By letter to the Office of Surface Mining dated November 23, 2009, DOGM explained the emergency informal approval of the permit amendment allowing construction of a water treatment facility at the Crandall Canyon mine. Also on November 23, 2009, the DOGM issued Division Order C/015/0032-DO09A requiring Genwal Resources to increase the bond held for the site.

The water treatment facility was informally allowed to be constructed before Genwal Resources had submitted a complete permit revision application package. Water was not to enter the facility until DOGM received the requisite engineering details and approved the plan. DOGM was concerned that any further corrective action, or notice of violation, would only delay efforts to treat the water and abate the underlying problem.

Division Order C/015/0032-DO09A required the bond to be increased within 60 days of receipt. Utah American Energy Inc. asked to meet with the Division and contested the requirement to post bond for perpetual treatment of the water citing the lack of regulatory basis for doing so. Utah American Energy Inc. has not yet posted additional bond necessary to cover the costs of long-term treatment or reclamation of the treatment facility. Annual operation and maintenance costs are very high and the bond held is currently inadequate to cover such costs over any period of time.

By letter dated December 3, 2009, OSM accepted DOGM's response to the TDN's. However, Genwal Resources has failed to meet the conditions of Division Order C/015/0032-DO09A. The bond held for the Crandall Canyon mine remains inadequate to cover the anticipated costs of long-term water treatment and reclamation. OSM is currently investigating the need for Federal intervention into this very serious situation. While Genwal Resources has made progress in permitting a treatment facility at the Crandall Canyon mine site, the requirements of Division Order C/015/032-DO08A have not been completely satisfied either, as plans for the long term treatment of mine water discharge are still pending. The Division is currently drafting a Division Order that will combine the requirements of the previous two Division Orders (08A and 09A) and clarify requirements necessary for Genwal Resources to achieve compliance. This issue remains ongoing.

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 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. In May of 2009 the rock tunnels were developed to the point where they encountered coal and the first coal was brought to the surface and dumped on the coal pad. Surface design changes were approved on June 9, 2010 and the mine continues to build infrastructure in preparation for full scale production.

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 June 16, 2009 with an initial response to the Division's findings and on August 27, 2009 the Division received Alton Coal's complete response to the Technical Analysis. Supplemental information was also provided to the Division on October 8, 2009. Finally on October 15, 2009, the Division approved the application. Shortly after the decision was rendered, on November 18, 2009 an appeal was filed to the Board of Oil, Gas & Mining by a consortium of environmental groups (Sierra Club, Southern Utah Wilderness Alliance, National Parks Conservation Association and Natural Resources Defense Council). Several hearings have been held before the board over the last few months where the petitioners were allowed to provide their arguments as to why the permit should not be issued and the Division provided a defense of its position. On August 3, 2010, the Board ruled in favor of the Division and Alton Coal Development on all counts. In the mean time, the applicant Alton Coal Development has applied for coal leases on adjacent federal lands. 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. The applicant has been given until September 1, 2010 to submit a response to the outstanding deficiencies.

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 review process towards a technically complete MRP continued until August 31, 2009 at which time approval was granted and a permit was issued. This site added an inspectable unit to Utah's total.

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 try to sell the property to a viable mining company. A sales agreement has been signed by Rhino Energy and the Division is waiting for the sale to be closed, so that a transfer of the permit can occur.

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 have been carried forward as far as they can and are beyond the Division's ability to change. The audit is considered to be complete and no further action is needed at this time.

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 worked extensively with the Solicitor's Office in EY09 and the program amendment became final on September 1, 2009 per the Federal Register (74 FR 45116).

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). This program amendment became final on December 7, 2009 per the Federal Register (74 FR 63988).

Valid Existing Rights: Subsequent to OSM's request in February 2008 for rule amendments pertaining to Valid Existing Rights, the BOGM on September 24, 2008 supported the commencement of an informal rulemaking process. DOGM and OSM worked cooperatively during EY 2009 and EY 2010 to draft and edit proposed rule amendments on Valid Existing Rights. DOGM presented the proposed rules in EY2010 to the BOGM and they were adopted by the Board on July 28, 2010 after a public rulemaking process. A formal program amendment will be submitted to OSM.

Ownership and Control: OSM requested extensive state rule amendments in October 2009 pertaining to Ownership and Control. The BOGM on January 27, 2010 supported the commencement of an informal rulemaking process. DOGM nearly completed an initial set of draft rules in EY2010. DOGM will work with OSM to reach agreement on the necessary rule amendments and proceed with the rulemaking process with the BOGM in EY2011.

Innovations

The Division continues to function with a reduced staff of 16 FTE's and a continued reduction in State General funds and Federal funding. New employees have been trained and are quickly able to contribute to the efforts of the coal regulatory program. In spite of these challenges, DOGM's permitting timeliness has remained relatively unchanged or has slightly improved.

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.

In order to validate the credibility of State Regulatory programs and enhance Federal oversight improvement efforts, OSM announced in November of 2009 that it would immediately increase the number of oversight inspections in EY 2010. OSM also began conducting independent unannounced oversight inspections. OSM scheduled and conducted these inspections at independently selected mine sites. Independent inspections provide observations and insight into the effectiveness of State regulatory programs by evaluating the current compliance status of mines in each state.

The DFD conducted eight joint complete and three joint partial inspections of coal mining operations in Utah during EY 2010, in addition to one independent unannounced inspection. This was a significant increase in the number of inspections conducted by the DFD over the previous evaluation year. The number of enforcement actions taken by both Utah and DFD also increased in EY 2010. Specifically, during EY 2009 DOGM issued seven NOV's and three IHCO's, while the DFD did not issue any enforcement actions or TDN's. During EY 2010, the number of NOV's issued by DOGM increased to 12 and one IHCO was issued. In addition, two TDN's were issued to the State by the DFD as a result of a Federal inspection. No enforcement actions were taken by DFD as a result of the one independent unannounced inspection that was conducted, and site conditions indicated that DOGM is effectively implementing and enforcing its program.

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 2010, 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 29 non-forfeited mine sites that existed at some time during the evaluation period. The Team did so through the following 308 on-the-ground observations: one independent OSM inspection; 108 DOGM complete inspections; including eight OSM and DOGM joint, complete inspections; 196 DOGM partial inspections (Table 9); and three 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 complete inspection was missed at the Trail Mountain Mine during the third quarter of 2009, and one complete inspection was missed at the Cottonwood/Wilberg Mine during the fourth quarter of 2009 due to Inspector illness. Also, two complete inspections were replaced by partial inspections at the reclaimed Gordon Creek #2, 7, & 8 Mine because the site was inaccessible during the winter months.

For EY 2010, the Team documented one minor land stability off-site impact to a land resource and one moderate 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 96, 93, 96 and 93 percent of the mines free of off-site impacts in EY's 2006, 2007, 2008, and 2009 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 six 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 2010, DOGM conducted 8 complete and 9 partial inspections on the six forfeited mines (see Table 9). It did not observe any off-site impacts. Table 4 (bottom half) shows that 100 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 2006 and 2007, 83 percent in EY 2008, and 86 percent in EY 2009.

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 (2,340 acres for EY 2010 in Table 5), there are 165,887 permitted acres (which may include the area of land over the underground mine workings) for the 29 non-forfeited mines, or an average of 5,720 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 two applications have 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 2,427 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 14 acres at the Des-Bee-Dove Mine; simultaneously released both Phase II and Phase III bond on 14 acres at the Cottonwood/Wilberg Mine; and granted Phase III bond releases for eight acres at the Star Point Mine and 74 acres at the Horse Canyon Mine. An additional nine acres were bonded and disturbed during the evaluation year at the Dugout, SUFCO, and West Ridge Mines thus reducing the total number of disturbed acres to 2,340 as of June 30, 2010.

A review of data in the EY10 Utah Reclamation Status Table (see Appendix 1) indicates that since the Utah Permanent Regulatory Program was approved in January of 1981, 35 percent (1,065 of 3,014 acres) of the total disturbed acreage on all mine sites has been backfilled and graded. In addition, DOGM has granted Phase III bond release on a total of 357 acres. This successfully reclaimed acreage is 14 percent (357 of 2,544 acres) of the total disturbed acreage on active, temporarily inactive, and inactive operations and includes sites that have received full Phase III bond release, but does not include bond forfeiture sites.

OSM concludes that reclamation of mined land in Utah is successful based on the Team's review of the EY10 Utah Reclamation Status Table and DOGM's routine monthly inspections that include reclamation success evaluations of the reclaimed lands.

Sites Where Reclamation Performance Bonds Have Been Forfeited

As shown in Table 5, DOGM has completed initial reclamation on all six bond forfeiture sites. Reclamation may be adequate on some of the sites for DOGM to terminate its jurisdiction on them, but it has not yet developed procedures and policy to do so.

Customer Service

For EY 2010, DOGM conducted a Stakeholder Satisfaction Survey of the Emery County Water Users Meetings (Utah self-evaluation). In addition, DOGM conducted their second annual survey of customer satisfaction to evaluate performance at the Division and Program level and to foster improved customer service in the future. The results of those surveys are discussed under section VII below.

VI. OSM Assistance

For the one-year grant period starting July 1, 2009, 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 $2,037,196 (Table 8) or 85 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 88.1 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 $3,970,533 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 2010, five DOGM employees (students) participated in five NTTP training opportunities, and one employee participated in a TIPS instructor-led training opportunity. DOGM, in kind, provided one NTTP instructor.

OSM's Technical Librarian filled 10 reference requests, and provided 21 article reprints to Utah Staff. OSM's Technical Library web site can be accessed at http://www.techtransfer.osmre.gov/NTTMainSite/osmlibrary.shtm.

DOGM submitted one TIPS Services request for remote sensing imagery in EY 2009. WR remote sensing staff was not able to provide these images during EY 2010 due to existing workload priorities. TIPS Services hopes to address the imagery request in EY 2011.

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 2010, 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 cattlemen to support the land use of rangeland. Cattle are present in the area for approximately 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 preliminary finding of probable material damage in that longwall mining subsidence damaged the springs causing a diminution of water. This diminution of water has functionally impaired the surface lands and negatively impacted the land's capability to support its current and reasonably foreseeable uses which seems to constitute material damage to the land resource. In this case, the current and reasonable 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. 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.

However, no official study has been conducted to that end. 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 groundwater 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 of R645-301-731.530 also 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 indicate very low hydraulic 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 then conducted additional core drilling to determine the occurrence of groundwater and elevations of potential aquatards within and immediately underlying the pertinent sandstone. This drilling project showed that while some groundwater was present in the area, it was not found in feasible quantities to produce.

The company recently submitted a plan to pump water from a nearby spring to the four damaged spring locations. The project would take roughly half of the flow from the existing spring and divert it via solar pump and pipeline to the damaged spring locations. The remainder of the flow would be allowed to flow along its natural path, continuing to support wildlife and riparian habitat in its present location. This spring water currently flows overland a short distance before

infiltrating back into the colluvium. This plan is currently under review by both DOGM and the USFS.

Conclusions

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, because the DWRi considers these springs to be appropriated water, the water replacement requirements of R645-301-731.530 also apply. DOGM is requiring the company to mitigate the subsidence related impacts at the mine. Interim 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. The long-term mitigation plan recently submitted by the company appears to accomplish the requirements of the Utah program's rules as well as the coal lease agreement stipulations for this situation. However, this plan is currently under DOGM and USFS review and has not yet been implemented in the field. At this time, the Team must await DOGM and USFS approval and company implementation of a long-term mitigation plan. We will then evaluate the appropriateness and effectiveness of the mitigation plan as required by the lease agreement stipulations, R645-301-525.510, and R645-301-731.530.

Prevention of Off-site Impacts – Wildlife Exclusionary Periods and Impacts to Wildlife During Periods of Exclusion

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 since current mining operations are having a difficult time balancing the need for construction activity with the need to protect fish, wildlife, and their habitat. The purpose is to evaluate whether DOGM is implementing its approved regulatory program by ensuring that the Utah program is successful in preventing offsite impacts by enforcing a *Protection and Enhancement Plan* to minimize disturbances and adverse impacts to fish and wildlife as a result of mining activities.

The Utah Coal Program is required to enforce a *Protection and Enhancement Plan.* The Utah Administrative Code at R645-301-333 (and similar language in the Federal Rules at 30 CFR 780.16(b)) states that a mining and reclamation plan must include:

> "A description of how, to the extent possible, using the best technology currently available, the operator will minimize disturbances and adverse impacts to fish and wildlife and related environmental values during coal mining and reclamation operations, including compliance with the Endangered Species Act of 1973 during coal mining and reclamation operations, including the location and operation of haul and access roads and support facilities so as to avoid or minimize impacts on important fish and wildlife species or other species protected

by state or federal law; and how enhancement of these resources will be achieved, where practicable.

This Description will:

Be consistent with the requirements of R645-301-358; Apply, at a minimum, to species and habitats identified under R645-301-322; and Include protective measures that will be used during the active mining phase of operation. Such measures may include the establishment of buffer zones, the selective location and special design of haul roads and power lines, and the monitoring of surface water quality and quantity."

The use of "wildlife exclusionary periods," developed by the UDWR, is recommended as a best technology to minimize disturbances and adverse impacts to fish and wildlife. WEPs, also known as seasonal and spatial buffers, address certain critical life periods specific to each wildlife species, including important mating, reproduction, and nesting periods. Exclusionary periods can be seasonal, meaning that disturbances should be limited to certain times of the year; or spatial, meaning that disturbances must be limited to a certain distance away from an important wildlife area. These buffers differ between species because some species are more sensitive to disturbance than others. As a best technology currently available to minimize disturbances, exclusionary periods are ideal because they *avoid* disturbances to wildlife rather than *minimize* them. However, it is often difficult for an operator to avoid certain areas when conducting mining activities. This evaluation explored the use of wildlife exclusionary periods as an effective way to minimize disturbances and adverse impacts to fish and wildlife on mining lands. The Team chose a population of four mines that includes active mines and areas where exploration activities are progressing, so that we could better understand the complex situations where wildlife exclusionary periods could be utilized, and if these plans are the most effective way of minimizing disturbance to wildlife.

Findings and Results

A. Mine Number 1 – Emery Deep Mine

The mine was required to implement a Protection and Enhancement Plan for burrowing owls after a sighting occurred during an EA in 2008. The burrowing owl was using an active prairie dog colony site for nesting. Burrowing owls often return to nest in the same burrow each spring after their winter migration. It was concluded that the owls could be negatively affected from expected subsidence from underground mining during their most critical life period (March through June). Fledging burrowing owls may not be mobile at the time of subsidence and could fall into cracks or be abandoned as the adults vacate the burrow.

The mine committed to monitor the area during and after subsidence to determine if adverse effects from mining had occurred. Additionally, the mine constructed seven artificial burrows within the permit area. Two of these burrows were intentionally placed in the subsidence zone so that the company could test the effects of subsidence on the burrows. The entrances to these burrows were closed to prevent owls from nesting in them during the test period. The first

burrow was placed in the subsidence zone at the mound where the owl was sighted during the EA.

Abandoned prairie dog mounds were utilized for construction of the artificial burrows. Nesting boxes (made from sprinkler boxes) were placed 4 feet below ground surface. The nests have an artificial floor with holes drilled to facilitate drainage. Sections of corrugated 4-inch pipe (8 to ten feet long) with a ninety degree bend created the tunnels to the nest. Perching posts were also placed near some of the sites.

Adding these burrowing owl nesting dens is an example of an enhancement plan that minimizes impact to wildlife by providing substitute habitat for the impacted species. In the near future, the mining company will be able to determine if the integrity of the burrows will remain after subsidence occurs, and if the perches that were constructed near the burrow entrance are being utilized by the wildlife.

In addition, DOGM biologists and OSM technical support staff have volunteered to participate in the survey by video-recording the integrity of the 7 artificial burrows and 7 natural burrows prior to and after planned subsidence using a modified borehole camera and DVD recorder. The pre and post-subsidence videos will be compared to determine if the natural or artificial burrows have been impacted by the planned subsidence.

B. Mine Number 2 – Deer Creek Mine

This mine has experienced multiple situations where WEPs were implemented. The mine planned to construct facilities in Huntington Canyon. This canyon is part of a migration route for big game species, specifically deer and elk. Because of migration, no construction work was allowed in this area from December 1 to April 15 (wintering and calving periods). The mine began construction in 2006, and completed the facilities in 2008, having endured 3 seasons of exclusionary periods. The mine simply avoided activity in this area to minimize the impact to wildlife.

This mine also faces the issues associated with helicopter-assisted drilling. Typically, the total disturbance time for drilling an exploration hole at this site is seven days, and rarely exceeds ten days. Because of the limited availability of water from nearby springs that is essential for drilling operations, the mine has a narrow window of opportunity for drilling. Each May, the mining company conducts raptor surveys to determine if there are any active raptor nests near the drilling sites. If an active nest is found inside the half-mile spatial buffer area created to protect the raptor species, the mine must reroute the helicopter flight paths. Additionally, this mine often has to consider calving elk that occupy areas that may be planned for drilling. Drilling activities may occur no sooner than the first week in July to seasonally protect the elk. DOGM biologists routinely consult with the Forest Service's big game biologist to determine the exact location where the elk are calving. If the biologists, through consultation, determine that the elk are not calving at or near the proposed drill site location and would not be disturbed by the drilling activity, mining companies may initiate their drilling programs at an earlier date. Site visits are often conducted to determine occupancy of a known species' habitat.

C. Mine Number 3 – Lila Canyon Mine

This mine must adhere to exclusionary periods when initiating construction and final reclamation projects. The exclusionary period for Bighorn sheep lambing is May 1 through June 15, and the exclusionary period for raptors occurs between February 1 and July 15, their nesting season.

Rocky Mountain bighorn sheep habitat is located within this mine's permit boundary. According to the UDWR, they spend all year along the escarpments in the Lila Canyon area of the Book Cliffs. They are sighted from the mine office on a regular basis. There is not enough available water for the sheep, so the mine, with the assistance of the BLM, has committed to install two guzzlers with the help of the UDWR by October of 2010.

The disturbance area is also within range of golden eagles. During the EA process, it was determined that there was a high probability that all nests within a half-mile radius of the surface facilities have a high probability of being abandoned by indirect disturbance associated with mining activities. Raptor surveys were initiated in 1998 and continue annually with the exception of 2004. A one half-mile buffer zone was inventoried around areas of potential development. An active golden eagle nest was identified during a spring 1999 raptor survey. There seemed to be enough nest sites in the area to accommodate the population base; the limiting factor appeared to be available prey base. For this reason, the operator has committed to enhancing 93 acres of habitat, which will mitigate impacts caused by surface disturbance activities. This will be managed by the BLM. The mining company, Utah American Energy Inc., has also agreed to participate in a Utah Partners in Conservation Development project sponsored by UDWR that will provide for an additional 1500 acres of eagle prey base and Bighorn sheep habitat.

During the evaluation, the Team spotted a golden eagle nest on the cliff edge, but it did not appear to be active. This nest was previously identified and calculated to be 1500 feet away from the facilities area. The Team saw a pair of golden eagles flying near the nest, but the eagles did not seem interested in the nest. The previous day, an aerial raptor survey was conducted, and no active nests were identified.

The difficulty with this site is that it is nearly impossible to conduct mining operations and avoid disturbing golden eagle habitat. For this reason, a *take permit* may be required if there is the potential for impacting a nest. The operator has committed to coordinating with the USFWS, UDWR, and DOGM to avoid the "take" of golden eagles. The mine will continue to conduct helicopter raptor surveys each spring and the operator will contact the USFWS and DOGM immediately if raptors are observed nesting or tending to nests.

D. Mine Number 4 – Skyline Mine

This mine faces the issues associated with helicopter-assisted drilling. Unlike the Deer Creek Mine, this mine uses water that is stored in a tank for drilling. Horses are used to haul the water tank to the drilling site. However, helicopters are still utilized to get the drill to the desired location. Drilling activity is not restricted by spring flow, so it is easier to schedule.
In 2002, the mine was required to adhere to a wildlife exclusionary period for Northern

goshawks. The mine had to ensure that the helicopter flight paths were not within the half-mile spatial buffer for the goshawks. In the spring of 2005, surveys were conducted in the North Lease area prior to longwall mining to determine if any goshawks or Northern Three-toed Woodpeckers were present. The mine committed to implementing a suitable protection method. Because this is a deep mine, there is the potential for loss of cliff habitat for breeding, nesting, and roosting due to subsidence. The mine continues to conduct baseline and monitoring helicopter surveys of raptors and nests associated with cliff habitat.

Conclusions

Based on this evaluation, the Team has determined that WEPs are the most effective way of minimizing disturbances to wildlife. DOGM has done a thorough job ensuring that WEPs are adhered to and that each mine is held accountable to these WEPs. DOGM is effectively implementing its approved regulatory program since the wildlife exclusionary periods examined in conjunction with this special focus topic are in compliance with the applicable requirements of Utah State Rule R-645-301-333.

Currently, the only official document containing recommended spatial and seasonal buffers is the Utah Field Office Guidelines For Raptor Protection From Human and Land Use Disturbances prepared by Laura A. Romin and James A. Muck (2002). This document contains buffer recommendations for raptor species in Utah. The Division is not aware of any other documents that provide guidance for the protection of other specific wildlife species from human and land disturbances.

DOGM is encouraged to continue their efforts in authoring a guidance document for the use of protection and enhancement methods as a best technology to minimize disturbance to wildlife during mining and reclamation activities. This document will improve consistency and provide guidance to minimize impacts to wildlife for every mine.

Customer Service – Stakeholder Satisfaction Survey of the Emery County Water Users Meetings re: Usefulness of the Meetings and the Communication Process; Second Annual Division-wide Stakeholder Satisfaction Survey (Utah self-evaluations)

As part of the 2010 OSM Evaluation of the Utah Coal Mining Regulatory program, the Division distributed a Stakeholder Satisfaction Survey at the February 2, 2010, meeting of the Emery County Water Users. Twenty-three surveys were returned to DOGM at the meeting, and the Division did not receive any responses by mail or other means. Comments on the surveys addressed notification for the meeting, preference for quarterly meeting frequency, and request for an "educational item" at each meeting. The resulting averages for the survey, on a 1 to 5 scale with 5 being the highest, were as follows:

Meeting planning:	4.2
Meeting location:	4.4
Meeting topics:	4.1

Meeting frequency/duration 4.2
Meeting participation: 4.1

DOGM also conducted their second annual survey of customer satisfaction during EY 2010 to evaluate performance at the Division and Program level and to foster improved customer service in the future. The survey included the period of July 1 through August 31, 2009. The results of the survey for the Coal Program, on a 1 to 5 scale with 5 being the highest, were as follows:

Timeliness of Services: 3.80
Accuracy of Information: 3.79
Helpfulness of Employees: 3.93
Expertise of Employees: 3.73
Availability of Information: 3.64
Composite Rating: 3.78

VIII. OSM National Priority Review Topics

Approximate Original Contour Evaluation

Introduction

OSM selected implementation by States of AOC and backfilling and grading provisions as a national priority oversight topic. The OSM – WR evaluated the State programs in Alaska, Colorado, Montana, New Mexico, North Dakota, Utah and Wyoming. WR evaluated 20 percent of the mines up to a maximum of five mines in each State. The evaluation included active and reclaimed mines that were determined to be representative of typical conditions in the State. The evaluations were based on the State's regulations. The evaluations focused on: 1) State AOC interpretation and permitting documentation; 2) State processes for on-the-ground verification of backfilling and grading; and 3) OSM field verification that backfilling and grading are following the approved mine/operations plan.

Evaluation Methodology Used by the Western Regional Office Team

The National Priorities Review AOC group provided the WR evaluation team baseline questions to standardize the evaluations nationwide. The answers to the baseline questions provide information on how the State interprets its AOC provisions. Also, the baseline questions provide a framework to enable field verification of backfilling and grading activities at the specific mine site.

Approximate Original Contour Evaluation

During each State AOC oversight evaluation, the WR Team met with the State permit coordinator to discuss policies relating to implementation of AOC. The team attempted to understand the systematic measures the State employs to incorporate AOC in the permit and to approve and verify backfilling and grading in the field. The team also asked whether there has been public comments or complaints related to AOC and the outcome of any public involvement.

The Team reviewed provisions pertinent to AOC within each permit. The review focused on backfill and grading practices, stream channel reconstruction, hydrology, special conditions such as retention of bluff features, valley fills, and prime farmlands or alluvial valley floors. The Team examined data that compared pre and post-mining conditions, including terrain figures, slope and aspect comparisons, and watershed densities. The Team also considered AOC determinations in context of the post-mining land uses. Finally, the Team reviewed documentation and justification for variances from AOC, including approvals for excess spoil.

Field Evaluation

A WR Team member met with the State permit coordinator to identify areas on the mine site that have been reclaimed to AOC. They also identified representative areas, including drainages, slopes with multiple aspects, and planar surfaces, to be included in the field evaluation. The OSM representative then verified elevations by walking transects. Reconstructed channels and the overall topography were observed. Relevant locations and elevations were recorded using GPS equipment (Trimble GeoXH).

Utah State Findings Summary

The OSM WR Team reviewed DOGM's program for implementation of AOC at three reclaimed underground mines: 1) Willow Creek Mine; 2) Star Point Mine; and 3) Des-Bee-Dove Mine. A team representative field verified AOC at the Willow Creek Mine and Star Point Mine. Because these mines were underground facilities, AOC and field verification reviews were limited to evaluation of reclamation at face-up and remined areas.

AOC Findings

There are historical agreements related to AOC reclamation between the State and OSM. Utah and OSM evaluated highwall elimination and retention as a part of AOC restoration in the formal report "Utah Regulatory Program Oversight Evaluation, Evaluation Year 2000" (November 26, 2001) to identify improvements to the Utah regulatory program. This document is inclusive of five years of historical data for the years 1996 to 2001. The State has not received any comments or citizen complaints relating to AOC or post-mining land use directed to the State program or OSM. Nor are there any outstanding required amendments or 30 CFR 732 letters related to AOC or post mining land uses associated with AOC waivers.

The State conducts frequent inspections and the operator is required to submit an annual report which shows backfilling and grading activities. Utah uses "Coal Regulatory Program Directive, Approximate Original Contour (AOC) Requirements, Tech-002" (July 1, 1997) for evaluating and determining compliance with AOC requirements during permit reviews, revisions and technical evaluations. Utah's permitting process for AOC and post-mining terrain involves a detailed technical analysis of new permits and permit revisions that results in either approval or a deficiency letter sent to the operator with a detailed description of the deficiencies of the respective permit/revision (Technical Analysis and Findings Review Guide, Revised October 13, 2009). Each approved permit reclamation plan adequately reflected Utah's interpretation of backfill and grading to AOC. There were sufficient maps and cross sections to enable the

reviewer to compare pre-mining to post-mining terrain and comparisons of pre to post-mining watershed hydrology on disturbed areas. There were no variances to AOC in any of the permits reviewed by the Team.

The State conducts frequent inspections to verify that the operator is conducting backfill and grading according to AOC and verifies the quantities of reclaimed lands reported in the operator's annual report. The State uses its revision and inspection process to evaluate any problems encountered with backfill and grading at mines. The performance of backfill and grading of disturbed lands to AOC is used as criteria for Phase 1 bond release. The State and OSM conduct cooperative inspections to verify that lands have been reclaimed to AOC. After conducting a detailed review, OSM found that the State of Utah's process for evaluation of mining permits is adequate to ensure that backfilled and graded areas will be reclaimed to AOC and that further follow-up action is not needed.

Field Verification Findings

The OSM Western Region Team conducted a field verification of lands reclaimed to AOC at the Willow Creek and Star Point Mines on March 23, 2010. Field conditions at both mines included clear skies and open ground.

Both mines inspected by the OSM Team were pre-law underground mines and thus did not have significant areas of disturbance. The Willow Creek Mine had pre-law spoil piles that had been remined, used as stockpile locations, and then were reclaimed to a pre-mining drainage area. The Star Point Mine was also reclaimed to resemble the pre-mine drainage area. It was difficult to completely evaluate whether both mines were reclaimed to pre-mine condition given the lack of pre-mine data as both mines existed prior to the passage of SMCRA. There did not appear to be any systematic problems with the State's process for verification and inspection of AOC.

Bond Adequacy Oversight Evaluation

Introduction

OSM selected state implementation of bond adequacy as a national priority oversight evaluation topic. The purpose for conducting the evaluation was to review the effectiveness of state regulatory authorities in implementing and enforcing their state rules, regulations, and policy and guidance documents related to bonding and to determine the adequacy of the states' bond amount calculations, which set the amount of the bond held by the state. OSM's National Priority Work Plan for conducting the evaluation recommended that OSM – WR staff evaluate 20 percent of all coal mines, up to a maximum of five (5) mines per state regulatory program to include reviewing bond adequacy for new and renewed permits, revisions to permits, phased bond releases and bond forfeitures. The WR reviewed three permits in Utah.

The evaluation included permits which utilize full-cost conventional bonds for one or more phases of reclamation. In states that have alternate bonding systems, the evaluation was to focus on field reviews of proper reclamation of bond forfeiture sites to assure the sites were reclaimed in accordance with the approved plans.

The bond adequacy work plan entailed three aspects for evaluating bond adequacy. The first aspect was to determine how each state calculated bond amounts for non-forfeited bonds associated with specific permits. The second aspect was to review permit revisions to determine whether the states are properly evaluating bond adequacy as part of the permit revision application process required by 30 CFR 800.15(d). The third aspect was to evaluate recently-forfeited sites if the state has experienced any bond forfeitures since OSM last conducted an in-depth study of bond forfeitures or the adequacy of bond calculations in each state.

Summary – Bond Adequacy Oversight Evaluation

Twenty-two (22) separate permit bond-adequacy evaluations were completed (19.13%) of the 115 active permits in WR primacy states (count per 2009 Reg-8 Evaluation Report summary). OSM Directive TSR-1, "Handbook for Calculation of Reclamation Bond Amounts" (OSM Bonding Handbook) was the standard by which a state bond calculation was determined adequate for identifying the costs to be considered and included in each calculation. The WR review focused on a pre-determined, randomly selected (by FOD or State) new permits, renewed permits, permit revisions or phased bond releases. As used in the OSM Work Plan, the term "bond adequacy" means, the amount of bond posted for a permitted operation is at least equal to the calculated bond amount by the state for it to complete reclamation should forfeiture occur.

Within WR, all states use some form of the OSM Bonding Handbook calculation method to determine full-cost conventional bond amounts.

There are no alternate bonding systems in any of the WR states. There have been no recent bond forfeitures, with the last bond forfeiture having occurred in 2000. Since the last bonding oversight reviews in about 1995, none of the states has undergone procedural changes in the way they calculate bond amounts. There are no recent bond forfeitures to evaluate in the Western Region.

This oversight evaluation did not include a review of actual bonding instruments to determine if the amount of bond held by a state was equal to or greater than the amount determined by their bond cost calculation. When reviewing the identified permits, it was noted that four WR states issue a single permit to cover an entire mine, and three states issue multiple permits that cover specific areas within a single mine.

Evaluation Methodology Used by the Western Region Bonding Oversight Team

WR staff began each state bonding program evaluation by reviewing (1) the state guidance documents or policies, (2) each mine's operation plan to determine the mining method and planned progression of mining over both the permit term and the life of mine, the types of equipment being used, and the extent of facilities and other mining-related disturbance, (3) the reclamation plan to determine the reclamation process and identify structures approved to remain in place or to be removed after mining, and finally, (4) the permittee's reclamation cost estimate and the state's bond amount calculation to determine the bond amount posted, if it was made available.

WR staff reviewed the types and volumes of material to be moved (although these were not verified), the type and amount of demolition, the types of equipment proposed for use, the costs (labor, equipment, demolition, etc.), and generally looked to see that the costs were reflective of the requirements detailed in the approved reclamation plan. OSM determined the state bond cost calculations were reasonable for each permit reviewed, with wage rates comparable to the Davis Bacon wage rates or the state's rates. The amount of each bond amount calculation was evaluated either by an independent calculation by WR staff or by the spot checking of costs including hourly costs, wage rates, and demolition costs, as well as the volumes, items or counts associated with each unit cost. The reclamation plan dictated the extent of what costs were included in the overall bond amount calculation, including but not limited to, backfilling, grading, topsoiling, type and amount of vegetation, failure rate of vegetation, retention fees associated with a phased bond release, removals or downsizing of structures, long- or short-term monitoring, and other requirements to restore the land to its approved reclamation status once mining has been completed.

For the purpose of this state oversight evaluation, OSM assumed, but did not verify, that the volumes of material to be moved in each state's bond amount calculation were correct. This was also true for the acres to be covered with topsoil or substitute material, and those which will have various types of vegetation.

WR staff was provided with a number of pre-written questions in the Bonding Oversight Work Plan which guided each engineer through a fairly standardized evaluation process of each state regulatory program methodology and to determine the adequacy of each state's bond cost calculation for each permit reviewed. The Bonding Work Plan included specific questions which directed the WR staff to collect information on how each state determines its bond amounts compared to how OSM would evaluates the adequacy of each state's bond cost calculations, when using their regulations and guidance documents, and finally, how the public is involved with the state's reclamation cost estimating process.

Bond Amount Calculation Adequacy Oversight Evaluation

During each state's bond adequacy oversight office visit, the WR Bonding Team engineers met with the state permit coordinators, supervisory staff, and engineers to discuss programmatic policies relating to the state's interpretation and implementation of their bond calculation procedures, as well as the specifics of each permittee's reclamation cost estimate. OSM reviewed the procedures employed by each state to approve and verify bond amounts, and determine if there has been any public commentary or complaints relating to the adequacy of bond amounts. The WR engineers reviewed language within each permit as it relates to the state program regulations, rules and guidance for calculating bond amounts. This review focused on several aspects of each permit, including information found in the operations plan, the reclamation plan and in the reclamation cost estimates to determine what had been considered for and included in each state's bond amount calculation, and whether the amount of the bond reflected what was approved in the reclamation plan of each permit.

The sources of cost factors used in the reclamation cost estimates and bond amount calculations were evaluated for reasonableness, as were the raw hourly costs for equipment and labor,

demolition and materials. The types and amounts of "Indirect", administrative or other add-on costs calculated by a state were, for the most part, similar to the types and purposes of costs suggested in the OSM Bonding Handbook. Utah's "Technical Directive - Calculation Guidelines for Determining Reclamation Bond Amounts" nearly replicate the concepts and procedures outlined in OSM's "Handbook for Calculation of Reclamation Bond Amounts."

Except for a single instance of permit review for which the adequacy of the bond amount could not be determined, all bonds reviewed by WR engineers seemed reasonable and similar to the independently-determined OSM estimates. Even with the differences in what a state considered as "Indirect", administrative or other add-on costs, the estimates had differences of no more than about 10% of what WR engineers calculated independently.

Consistently across reviews in all WR states, there are no outstanding required program amendments or 30 CFR 732 notifications related to bond adequacy. Neither OSM Field Offices nor any state offices have received any citizen complaints related to bond adequacy in recent years. None of the states had changed their reclamation bond cost estimation methodology since the last comprehensive OSM review. Other than Utah, none of the reviewed states have postmining pollutional discharges. Utah has a single instance where they very recently have required a permittee to calculate the cost to remediate a discharge into a stream.

Comments made to the state staff were minor considerations about specific line items that might potentially affect their bond estimate amounts, and should to be evaluated in their next upcoming review of the bond amount. In Utah, there is a need to retain copies of their supporting documentation for each reclamation cost estimate verified by their staff, and the bond amount calculation made by their staff.

During each office visit, the WR staff interacted with the state staff involved with, or doing permit reviews and calculation of bond amounts. The WR staff found in about half the evaluated states, there is limited technical staff to do permit review and calculation of bond amounts. A number of the WR states are actively undergoing furloughs and layoffs. In a couple of states, the staff is relatively new and asked basic questions about OSM's procedure to calculate bond amounts, the types of things considered and why that information was included. In the State of Utah, a WR engineer and the state engineer worked together to complete the bonding oversight evaluation, the purpose being to train the state engineer (who until then worked as an inspector) in the methods OSM uses to evaluate a permittee's reclamation cost estimate, the nuances to look for as part of that review, and the process of calculating the bond amount. WR staff did offer to provide technical assistance in evaluating reclamation cost estimates and calculating bond amounts as they are submitted in the future to states in the region.

Not all "Indirect" costs are calculated by the WR states in the same manner as that suggested by the OSM Bonding Handbook. However, in all cases, the same types of costs are included as Indirect, administrative or other add-on costs, or simply as part of the direct cost calculation. In some cases, the state determines an actual cost, rather than percentage for a specific type of add-on cost, such as mobilization/demobilization. In other cases, costs including profit, overhead and labor benefit costs are included in the hourly direct costs, thus these are not added later as an Indirect-type cost.

OSM found that all WR states have procedures in place to ensure the thorough and comprehensive calculation of bond amounts for all phases of reclamation, and bond amounts are re-evaluated by state staff as part of each Annual Report, revision, renewal, midterm or request to release review. In most cases, the bond amount calculations were substantiated by detailed information explained in operation and reclamation plans, including things such as mining projections, mining methods, pit dimensions, facilities maps, and details such as equipment haul distances, equipment productivity factors, and sources of costs including seed and labor rates. Following evaluation of the documentation, WR engineers asked Bonding Work Plan pre-written questions aimed at evaluating the state's procedures for determining adequate reclamation bond amounts used in support of each posted bond (or other bonding instrument) amount.

In the WR states, the amount of held bond may exceed the amount of the state's bond amount calculation. In some cases, permittees post a bond (or other bonding instrument) in an amount higher than the actual calculated amount of the bond to allow for any increases in the calculated bond amount due to future permit revisions that might occur. This practice of "over-bonding" allows permittees to re-evaluate the reclamation cost estimate, and states to recalculate the bond amount without the permittees having to resubmit their bonding contractual agreements to their corporate offices for approval each time there is an incidental increase in the bond amount. This practice remains at the discretion of the permittee.

Utah Bond Adequacy Findings

In Utah, The OSM bonding oversight review team reviewed the state's bond cost calculations, the operation plan and the reclamation plan for the Coal Hollow Mine, Lila Canyon/Horse Canyon Mines, and Star Point Mines 1 & 2.

DOGM has developed Directives "Calculation Guidelines for Determining Reclamation Bond Amounts (Tech-007)" to provide guidance in preparing their bond cost calculations and "Requirements for Phased Bond Release (Tech 006)" to determine how much of the bond should be released through phase releases to ensure monies are retained to complete all required reclamation.

The bond cost calculations Directive (guidance document) suggests the bond amount be evaluated at the time of renewal, mid-term, and if costs or mining procedures dramatically change during the permit term. Bond amounts are based on the worst-case scenario as detailed in the operations and reclamation plans, but the DOGM is authorized to routinely evaluate the bond adequacy and require adjustments as needed.

As with OSM's reclamation cost calculating methodology, Utah's Indirect costs are a percentage of the calculated Direct costs. An escalation factor is included in each bond calculation. The directive for phased-bond release provides guidance on how to estimate the amount of bond to be retained to cover the remainder of reclamation.

While performing the bonding oversight, OSM engineers provided training to DOGM staff, explaining what is considered when calculating a complete, mine-wide reclamation bond calculation.

There are no outstanding required program amendments or 30 CFR 732 notifications related to bonding. Neither the OSM Field Office, nor the DOGM have received any citizens complaints related to bond adequacy in the past 3 years. Before the current bond cost estimator began to evaluate bond adequacies, the engineer person in charge of bond cost calculations held the position for 20 years and the methodology did not change during that time. There have been no bond forfeitures in recent years.

The permittee's reclamation cost estimate and the operation and reclamation plans contained sufficient detail to calculate a bond amount. Utah's methodology is in compliance with their bond adequacy regulations.

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Cover Page Photo: Des Bee Dove Mine; 2010 Excellence in Surface Coal Mining Reclamation Awards; National and Good Neighbor Award Nominee.

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 2010 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 DOGM tracks and reports evaluation year bond release data to the DFD during quarterly meetings that are held throughout the evaluation year.