

OFFICE OF SURFACE MINING
Albuquerque Area Office

Annual Evaluation Report
for the
New Mexico Abandoned Mine Land Reclamation Program

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

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Cover Photo: Carbonate Hill, New Mexico



TABLE OF CONTENTS

TABLE OF CONTENTS	2
INTRODUCTION	3
PART I. GENERAL INFORMATION	4
New Mexico AML Program History	4
Program Staffing	5
Grants and Financial Information	6
PART II. PROGRAM ACCOMPLISHMENTS	6
Protection of Bats/Habitat	6
New Mexico EY-2010 Submissions	6
Program Accomplishments to Date	7
Summary of EY-2010 Projects	7
Project Status as of August 15, 2010	8
Principle No. 1 – On-the-ground reclamation	12
Jones Mine Safeguard Project (coal)	12
Carbonate Hill Mine Safeguard Project (non-coal)	12
Organ II Mine Maintenance Project (non-coal)	13
Real de los Cerrillos Maintenance Project (non-coal)	13
Principle No. 2 – Accomplishments under the AMLIS inventory	13
PART IV. AML INVENTORY SYSTEM	13
Table-1 EY-2010 Accomplishments	15
Table-2 Cumulative AML Accomplishments as of June 30, 2010	16
PART V. SUMMARY AND RECOMMENDATIONS	17
PROJECT PHOTORAPHS	18

INTRODUCTION

This annual evaluation report is produced by the Office of Surface Mining Reclamation and Enforcement (OSM) in fulfillment of its statutory responsibility under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). OSM was established by the passage of SMCRA on May 2, 1977. Title IV of this law placed a fee on active coal mines of 35 cents per ton of surface mined coal and 15 cents per ton of underground mined coal. Monies collected are placed in a fund called the Abandoned Mine Reclamation Fund. This fund is used to reclaim coal mines abandoned prior to the enactment of SMCRA. Under certain conditions, this fund may also be used to reclaim abandoned non-coal mines and some post-SMCRA mines.

OSM is responsible for approving State and Tribal Abandoned Mine Lands (AML) Reclamation Programs to carry out the goals of Title IV of SMCRA. The primary goal of AML Programs approved under SMCRA is to mitigate the effects of past coal mining by reclaiming coal mines and coal processing facilities abandoned prior to August 3, 1977. SMCRA provides for reclamation of both coal and non-coal mines; however, coal mines with physical hazards have funding priority. Emphasis is placed on first correcting the most serious problems endangering public health, safety, general welfare, and property. Once this is accomplished, secondary emphasis is placed on restoration of land and water resources and the environment previously degraded by past coal mining practices.

OSM has responsibility under SMCRA for approving State and Tribal AML Programs, to carry out the goals of Title IV of SMCRA, administering the Abandoned Mine Reclamation Fund by awarding grants to States and Tribes, to cover the administration and reclamation costs of running their AML Programs, and annually evaluating the effectiveness and accomplishments of the AML Programs. The OSM Western Region's (WR) Albuquerque Area Office (AAO) awards AML grants to the New Mexico AML Program and, through oversight, annually monitors the AML Program's expenditures, performance and accomplishments.

The purpose of this report is to assess the effectiveness and report on the accomplishments of the New Mexico Mining and Minerals Division, Abandoned Mine Lands Reclamation Program (NMAML). The annual report consists of OSM's oversight findings based on field inspections, data provided by NMAML, and meetings with the NMAML Program during the 12-month evaluation period beginning July 1, 2009 and ending June 30, 2010 (EY-2010). It also documents the activities and accomplishments of the NMAML during this period.

In past annual evaluation reports, OSM found the NMAML to be an excellent and well managed State Program. As a result of this year's oversight activities, OSM again did not find any issues or concerns with the NMAML Program and therefore does not see fit to make recommendations for improvement. NMAML has continued to be responsive to OSM's needs and has made procedural adjustments to comply with both the 2006 revisions to SMCRA and the 30 CFR regulations as amended in 2008, which implement SMCRA.

This year's oversight activity involved the following State and Federal personnel:

NM-AML

John Kretzmann, Program Mgr./P.E.
Randall Armijo, Environ. Coordinator

OSM-AFO

Robert Postle, AAO Mgr.
Vernon Maldonado, AML Pgm. Spec.

Lloyd Moiola, Project Manager
Mike Tompson, Civil Engineer, P.E.
John Guranich, Civil Engineer, P.E.
Zoe Isaacson, Reclamation Spec.

Dan Martinez, Grants Specialist

PART I. GENERAL INFORMATION

The State of New Mexico contains a diversity of ecosystems ranging from high, steeply sloping mountainous areas to semiarid plains and arid desert. Vegetative communities and wildlife are equally diverse across the state. Average rainfall ranges from a high of approximately 20 inches per year to a low of about six inches depending on elevation. New Mexico's coal resource underlies approximately one-fifth of the state's surface (over 15 million acres) and totals over 40.6 billion short tons of coal. A significant amount of pre-law mining has occurred within the State, leaving numerous high priority hazards within the New Mexico abandoned mine inventory. The state of New Mexico has a long and interesting mining history. Whether from mineral mining or coal mining, numerous physical hazards in the form of mine equipment and structures, portals, and vertical shafts exist throughout the State.

Land ownership in New Mexico is approximately 34.1% Federal (BLM, USFS, NPS) and 11.6% State Trust Land for a total of 45.7% public lands (55,566 sq. mi.). The highest concentration of AML hazards occurs on this public land. Public land is increasingly being developed for open space public recreation such as camping, biking, hiking, campgrounds, etc. Population demographics and increased access to mining areas within the State are continually changing and this change is causing the State to readjust its priority/urgency for addressing several mining areas and associated mine hazards.

New Mexico AML Program History:

New Mexico received primacy under SMCRA on December 31, 1980. New Mexico's AML Program was subsequently approved by the Secretary of Interior on June 17, 1981. Since then the NMAML has been working to reclaim both its high priority coal and non-coal inventory. Although the State has not yet certified completion of its high priority coal reclamation, the bulk of the high priority coal reclamation has been completed. Life threatening hazards from abandoned non-coal mines have occasionally superseded the urgency posed by coal mines. Recent regulatory changes in federal laws have necessitated that New Mexico place higher priority on funding reclamation of abandoned coal mine sites and hazards than on those hazards associated with abandoned non-coal sites. However, NMAML is still authorized to use certain types of funds for non-coal reclamation.

The State's inventory of un-reclaimed mines is substantial and total estimated reclamation cost of reclaiming all known mine related hazards exceeds the amount of AML funds currently available and projected to be available to New Mexico. Therefore, New Mexico continually struggles to prioritize its most important safety and environmental hazards.

New Mexico estimates that there are over 15,000 abandoned coal and non-coal mine features within the State that remain to be addressed. In EY-2007, New Mexico AML updated its cost

estimates for completing just the Priority-1, Priority-2 and Priority-3 “coal” hazards in their AMLIS inventory. No new sites were added to the inventory during EY-2010. NMAML Program’s last official cost estimate to fully reclaim the Priority-1 and -2 coal hazards in its inventory is approximately \$13.8M and for Priority-3 coal approximately \$12.1M. Collectively the total cost estimated to address all coal priorities is about \$25.9M (in 2007 dollars).

NMAML also has reclamation jurisdiction over several abandoned uranium sites in New Mexico. Some of these have been the focus of attention in the State and the State has been investigating reclamation efforts in cooperation with the US EPA, the Army Corps of Engineers and the Bureau of Land Management. One such project is currently in the design phase in the Grants Mineral Belt area. In addition, the State is considering reassessing its inventory of abandoned non-coal sites and associated costs for reclamation of those sites. NMAML has also been involved in partnership efforts with the USFS and BLM in order to secure additional funds to reclaim some of the many abandoned sites on federal lands, including some near the Mexico border.

New Mexico’s Energy Minerals and Natural Resources Department has an excellent web site that provides current information on the Department, including the New Mexico AML Program. The site can be accessed at: <http://www.emnrd.state.nm.us/MMD/AML/AMLmain.htm>

Program Staffing:

The NMAML is in the New Mexico Mining and Minerals Division, of the New Mexico Energy, Minerals and Natural Resources Department. The NMAML is under the direction of Mr. John Kretzmann, Program Manager. The NMAML consists of nine (9) full time employees plus the equivalent of one additional support staff employee within the Mining and Minerals Division. The NMAML Program staffing level was nine (9) FTE’s during the past 25 years. Three (3) of these positions are partially funded (cost share) by other programs within the Mining and Minerals Division. Staffing levels increased by one FTE during EY-2009, by the addition of an additional Reclamation Specialist. Although the funding levels have substantially increased since passage of the 2006 SMCRA Amendment, NMAML does not anticipate any significant increase in staffing in the near future.

OSM has prepared preliminary funding estimates for all AML programs nationwide. The table below shows OSM’s most recent funding projection data for New Mexico over the next fifteen years, from all funding sources.

Projected Funding Level for NMAML by Year (in Millions)													
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
\$5.0	\$4.7	\$5.2	\$5.2	\$5.0	\$1.9	\$1.9	\$1.9	\$2.2	\$2.2	\$1.9	\$1.9	\$1.9	\$40.9

* These figures do not include deobligated funds from previous grants that may be applied for.

Based on the cost estimates reflected in OSM’s AMLIS database as of August 2010, the New Mexico AML Program has spent over \$21,348,329.00 to address high priority-1 and -2 coal and non-coal hazards within the State since the Program was created in 1981 (Table-2). This figure represents actual on the ground construction costs and does not include the substantive cost of

project design and development, so actual program expenditures are substantively higher than \$21 M. Because New Mexico has historically done the project design and development work in-house, these costs are part of New Mexico’s program administration costs and are therefore difficult to separate out. Performing design and development in-house offers huge cost efficiencies to the NMAML Program. More recently, due to the increased funding and associated increase in workload, NMAML has started to contract out some of its design and project development work.

Grants and Financial Information:

The following AML grants were active during the evaluation period:

Grant Number	Grant Period	Amount
S07AP12403	07/01/07 to 06/30/10	\$1,500,000.
S08AP12751	07/01/08 to 06/30/11	\$5,668,717.
S09AP15297	07/01/09 to 06/30/12	\$4,759,634.
S10AB20005	07/01/10 to 06/30/15	\$4,641,068.

PART II. PROGRAM ACCOMPLISHMENTS

Protection of Bats/Habitat:

The NMAML continues to make a dedicated effort to identify and protect bat populations that use abandoned mines for habitat. New Mexico AML evaluates its large underground mines for the presence of bat populations and where such populations are significant; installs bat gates and bat cupolas as necessary to provide for bat access while restricting public access (see photos in the Appendix to this report). Engineering designs for their bat compatible closures often include secure (locked) but removable access panels, to allow follow-up studies on the effectiveness of the bat-compatible closures. Access for owls and small mammals has been incorporated into recent designs. In addition, the Program continues to contract with the University of New Mexico to perform professional follow-up studies on bat use of mine voids, bat populations and species diversity.

This evaluation period, NMAML installed several bat compatible closures at the Carbonate Hill reclamation and safeguard project. The underground mine workings contain significant bat populations and the mine workings provide excellent bat habitat. The fungus infection that is causing mass extermination of bat populations in the Northeast U.S. does not appear to have spread to New Mexico; however, precautions to prevent its transfer are in place.

New Mexico EY-2010 Submissions:

During EY-2010, the OSM-AAO reviewed and approved grant applications, grant close out reports and project packages submitted for funding. OSM also issued Findings of No Significant Impact (FONSI) and Authorizations to Proceed (ATP) for the Queen of Guadalupe (non-coal), Dillon Canyon (coal), Cerrillos Bonanza Creek safeguard (noncoal), and the Bunker Hill Mine Safeguard and Reclamation Project (noncoal).

Program Accomplishments to Date:

The NMAML Program was approved in June, 1981. As of June 2010, NMAML has been in operation for 29 years. In that time it has completed over 177 AML reclamation projects and has closed or safeguarded approximately 3,500 hazardous mine features. Among these were some of the most hazardous features in the State. Although many serious hazards still exist, certainly lives have been saved and injuries prevented because of this work.

Despite its best efforts to safeguard abandoned sites, NMAML reported one abandoned mine related fatality to OSM during EY-2010. The body of a Magdalena man was found at the bottom of a 65-foot mine shaft in Patterson Canyon about 4-1/2 miles south of Magdalena the last week of September 2009. Police think he was trying to work the mine and may have filed a claim, or was about to file a claim and that he probably got down in the mine and couldn't get out. Although NMAML strives to close abandoned mines to keep the general and often times unwary public from harm's way, it is difficult for the State to protect prospectors from the dangers of abandoned mines.

Substantial environmental degradation is also associated with abandoned mines left unreclaimed. The more than 177 reclamation projects completed as of July 2010 have certainly had a positive environmental effect on the State. These positive environmental effects can be measured in terms of protection of cultural and historic property, wildlife enhancement and protection of habitat, revegetation and associated decreases in erosion, improvements in water quality and air quality and overall a discernable improvement in the quality of life for the citizens of New Mexico.

Summary of EY-2010 Projects:

The following tables list projects that were either completed or in some phase of project development during EY-2010. Project development means site characterization, obtaining biological, archaeological or cultural / historic clearances for National Environmental Policy Act (NEPA) compliance and project design engineering and contract designs / specifications. It also includes work or planning being done in cooperation with other government agencies and activities being performed under professional agreements.

Project Status as of August 15, 2010

Program Activity	Status
Construction	
Bunker Hill Mine Safeguard (non-coal)	Bids opened July 2010: SMCRA funds to be used to safeguard shaft (and US Forest Service funds to stabilize historic cabin over shaft in separate project)
Carbonate Hill Mine Safeguard (non-coal)	Construction completed in April 2010
Cerrillos Central/Bonanza Creek Mine Safeguard – Phase I (non-coal)	FONSI received in June; Bid advertisement expected to begin shortly
Jones Mine Safeguard (coal)	Construction complete in May 2010 to safeguard subsidence, adits, and a shaft and reclaim small gob piles
Lake Valley Phase IV Mine Safeguard (non-coal)	Bids received in May 2010; Construction scheduled to start in August
Organ Phase II Maintenance (non-coal)	Construction completed in May 2010 to fill eight shafts formerly safeguarded with cable net
Queen of the Guadalupe (non-coal)	Bids received in May 2010; Contract paperwork being processed
Real de Dolores Maintenance (non-coal)	Bids received in June 2010 for construction of a rock retaining wall to protect a bat cupola; Contract paperwork being processed
Socorro West Maintenance II (includes maintenance at Water Canyon project site) (non-coal)	Bids received in May 2010; Construction scheduled to start in August
Sugarite Gob Reclamation – Phase VII (coal)	Bids received in April 2010; Construction started in June
Design Phase	
Bradley Mine Safeguard (non-coal)	In-house design underway for first phase
Diamond No. 2 Uranium Mine (non-coal)	In-house design underway
Harding Pegmatite Mine Safeguard (non-coal)	In-house design underway; Environmental assessment underway; SHPO clearance received
Vermejo Park Ranch – Dillon Canyon Coal Mine Reclamation Project- Phase I (coal)	Plan to issue task order in new on-call engineering contract to complete design for first phase of work at Swastika Mine and Dutchman Canyon; River Ecosystem Restoration Initiative state funds applied to support construction of first phase of work at Swastika Mine and Dutchman Canyon

Project Status as of August 15, 2010 (continued)

Program Activity	Status
Project Development	
Bingham Mine Safeguard (non-coal)	Reconnaissance complete; archaeological surveys complete, awaiting report
Burro Peak Mine Safeguard (non-coal)	Includes radium/uranium mines in populated area south of Silver City; Reconnaissance complete; Developing RFP for engineering services at White Signal AUMs near Burro Peak
Carrizalillo Hills (non-coal)	In-house reconnaissance (BLM is working on reconnaissance in other areas for possible border area projects)
Cooke's Peak Mine Safeguard (non-coal)	BLM has completed site reconnaissance; BLM funding secured; Mapping underway
Cleveland Mine Safeguard (non-coal)	Reconnaissance complete; Bat surveys underway; Archaeological survey planned shortly
Gallup Chiaramonte Mine (coal)	Environment Department plans to issue NOV to City of Gallup for unpermitted discharge to groundwater; AML plans to design and fund construction of closure of the existing drop inlet into the mine
Madrid Anthracite Mines (coal)	Archaeological report completed; SHPO clearance for mine openings, not for gob piles
Rogersville Coal Reclamation (coal)	FONSI received; Working on realty issues
San Pedro Mine Safeguard - Phase I (non-coal)	Archaeological survey complete; research and report being prepared by OAS; Bat surveys underway
Poison Canyon Uranium (non-coal)	Golder Associates completed abandoned uranium mine site assessments of Barbara J group of mines; BLM funding secured and design and cleanup standards being finalized (Need EA, tribal consultations and FONSI); Design on hold pending finalization of standards; Projects for the Mesa Top group and Spencer Mine to be developed under future PSA
Vermejo Park Ranch Coal Reclamation Engineering (coal) - Dillon Canyon	Need to issue RFP for design and construction administration for other phases of construction at Brilliant, Tin Pan Canyon, Seeley Canyon, Gardiner North, Gardiner, and Gardiner Canyon

Project Status as of August 15, 2010 (continued)

Program Activity	Status
Project Initiation	
Bonito Lake Maintenance (non-coal)	Repair of breached closures needed
Boston Hill Phase II (non-coal)	Reconnaissance complete; Considering RFP for community planning services
Caballo Mountains (non-coal)	Preliminary reconnaissance
Cerrillos Gravel Pit (non-coal)	Closure of deep shaft under shed needed
Dawson Reclamation (coal)	Determining land ownership
Gila USFS Mine Safeguard (non-coal)	Worked with Forest Service to provide Biological Assessment.
Granite Mountain Mine Safeguard (non-coal)	On hold
Hatch Mine Safeguard (non-coal)	Preliminary reconnaissance
Hachita Mine Safeguard (non-coal)	Preliminary reconnaissance
Kingston Mine Safeguard (non-coal)	Reconnaissance and realty underway
La Petaca Mine Safeguard – Phase III (non-coal)	Preliminary reconnaissance
Lone Mountain Ranch Mine Safeguard (non-coal)	Preliminary reconnaissance; working on ROE
Mogollon Mine Safeguard (non-coal)	ROE problems, on hold
Oscura Maintenance (coal)	Reconnaissance for project to safeguard adit and possibly reclaim gob piles
Petaca USFS Mine Safeguard (non-coal)	Working with Forest Service to provide Biological Assessment
Ruidoso Silver Plume Mine Safeguard (non-coal)	Preliminary reconnaissance on US Forest Service land; Adjacent landowner may backfill openings
San Mateo (non-coal)	On hold
San Pedro Mine Safeguard – Phase I (non-coal)	Archaeological report, NEPA underway; ROE problems
Sierra Ricas (non-coal)	Preliminary reconnaissance
Spencer Uranium Mine (non-coal)	BLM interested in project to reclaim mine site and will probably provide funding for construction; Preliminary reconnaissance
Tierra Amarilla Coal Mine (coal)	Consent to Entry obtained
Vermejo Park Ranch – Koehler Mine (coal)	Plan to issue RFP for professional services for NEPA and engineering
Yankee Canyon Gob Reclamation (coal)	ROE issues, on hold
Zuni 27 USFS Mine(non-coal)	Archaeological letter report has been cleared by SHPO; AMLP may fund construction for this USFS project; Need FONSI

Project Status as of August 15, 2010 (continued)

Program Activity	Status
Professional Services Agreements	
Abandoned Uranium Mine Preliminary Site Assessment (non-coal)	Interra continuing with site assessments
Beneficial Use Study (coal)	Golder Associates completed final draft report and will issue final report shortly
Gallup Coal Field Inventory (coal)	Tetra Tech is continuing site reconnaissance of abandoned coal mines in the Gallup coal field
Madrid Community Planning (coal)	Dekker/Perich/Sabatini held public meetings in Madrid in May and July 2010; Third meeting planned; Coordinating planning effort with local civic groups, Santa Fe County, NM DOT and other stakeholders
On-call Engineering Services contracts (coal and non-coal)	Proposals received in April 2010; Contract negotiations nearing completion with three shortlisted firms: URS, Kleinfelder and Water and Earth Technologies
Photogrammetric Engineering Services (coal and non-coal)	Notices-to-Proceed issued to T.R. Mann and Wilson & Co.
State Fair Exhibit Upgrade (coal and non-coal)	Exhibit Design Associates starting work to design a new AML safety exhibit in the Natural Resources building
Uranium Legacy Project (non-coal)	Professional services agreement with Golder Associates for on-call engineering services at abandoned uranium mines, focused on mines in the Poison Canyon/Barbara J mines area; Site assessments complete; Archaeological report nearing completion; Design awaits finalization of cleanup and engineering standards; BLM funding secured for construction
Vermejo Park Ranch Coal Engineering Services (Dillon Canyon) (coal)	Professional services agreement with Water and Earth Technologies for engineering services at abandoned coal mine sites in Dillon Canyon complete; FONSI received for all phases of work in Dillon Canyon
Yankee-Vukonich Stream Maintenance (coal)	Ranchland Hands continues monitoring of work to stabilize base of reconstructed stream

PART III. ENHANCEMENT AND PERFORMANCE REVIEWS

OSM-AAO and NMAML have agreed that the oversight work plan by default will annually evaluate the following two topics or principles for annual review unless a special program area is identified by OSM for nationwide evaluation:

- Principle 1:** On-the-ground reclamation is achieved in a timely, cost-effective manner.
- Principle 2:** Progress in entering Program accomplishments into AMLIS.

The goal of these two principles is to document on-the-ground reclamation work accomplishments in terms of quality and quantity relative to NMAML’s inventory of mine hazards. There are no performance standards for AML reclamation set forth in SMCRA. OSM inspects field reclamation and may occasionally offer suggestions or recommendations for improvement.

Principle No. 1 – On-the-ground reclamation

In evaluating Principle 1, NMAML and AAO inspected reclamation sites, grants files, NEPA Documents, and contract specification documents. This year the AAO conducted site inspections of the Carbonate Hill Mine safeguard project (non-coal), Organ II Mine Maintenance Project (non-coal), Jones Mine Safeguard Project (coal), and the Real de los Cerrillos Maintenance Project (non-coal) project. The scope of work for each these three projects is discussed individually below.

Representatives from the NMAML Program sponsored and led AAO on two site inspection tours of three AML projects. No programmatic problems were identified as result of the EY-2010 oversight in the course of these inspections. State personnel were very knowledgeable about the construction work and reclamation details performed at each site. All inspections were complete inspections of all work done at these sites.

For EY-2009 oversight, OSM also inspected the Orogrande Mine Safeguard Project Phase-II. During the inspection, the State identified some damage to a steel-mesh wire mine closure due to vandalism. The NMAML Program repaired the damage during EY-2010, so OSM is making note of this work task/accomplishment as well. Repairing damage to mine safeguards due to vandalism is an ongoing part of the Program's annual work in one form or another.

Jones Mine Safeguard Project (coal):

The Jones Mine is located in San Juan County, approximately seventeen miles north of Farmington, New Mexico. This project involved the backfilling of four subsidence pits and one open shaft. Coal waste piles were used as backfill material and excess material was graded covered with topsoil/cover material from on-site. The final topography was sloped and blended into the surrounding terrain and proper site drainage(s) were constructed. The entire site disturbance encompassed only about 2.5 acres. Total cost of the project is \$8,500.

Carbonate Hill Mine Safeguard Project (non-coal):

The project is on BLM public land approximately five miles southwest of the village of Road Forks, New Mexico in Hidalgo County. Project construction was 100 percent funded by BLM and project design and administration was performed by the NMAML Program. OSM approved a FONSI on this project after the NEPA work was done by NMAML. The project involved the following scope of work:

- Backfilling of six shafts, one adit and one pit using mine waste material;
- Fencing three shafts with barbed wire strand fence;
- Construction of bat closures in two adits placed inside of corrugated steel pipe culverts;
- Construction of a bat cupola with corrugated steel pipe riser and polyurethane foam plug at one shaft.
- Construction of bat cupolas on concrete footings at four mine shaft openings;
- Construction of a polyurethane foam plug at one mine opening; and,
- Seeding of all disturbed areas.

Total cost of the project is \$225,346.

Organ II Mine Maintenance Project (non-coal):

This project is a maintenance project of a previously reclaimed site in Dona Ana County, New Mexico that encountered vandalism and subsidence issues. The site is about 10 miles northeast of Las Cruces, NM. The project involved the backfilling and safeguarding of eight (8) shafts. Previously installed cable netting was removed from five of the shafts and disposed of inside the shafts or recycled. It also required removal and disposal of wood beams and steel pipe from one of the shaft openings. The total cost of the project was \$5,372.

Real de los Cerrillos Maintenance Project (non-coal):

This project site is about 20 miles south of Santa Fe, New Mexico on the east side of the I-25 interstate highway. The project involved backfilling of six shafts on private land near Cerrillos, New Mexico. The shaft had subsided since originally being backfilled in 1997. Total cost of the project was \$9,159.

Principle No. 2 – Accomplishments under the AMLIS inventory

AMLIS accomplishments during EY-2010 are listed below in Tables-1 and Table-2. Accomplishments specifically for EY-2010 are in bold blue print in both tables so that the changes from last evaluation period can be readily identified. The main items addressed from a hazard standpoint include 32 vertical openings, 4 portals, 0.5 acre of gob piles, and 0.5 acre of subsidence. Some lesser priority hazards were also addressed such as a small highwalls and some mine subsidence areas.

Since the program started in 1981, NMAML has completed \$21,596,706.00 (see Table-2 below) worth of AMLIS related construction work. This amount accounts for construction costs but does not include the project development work done by NMAML in-house, which would substantially increases the overall cost.

NMAML continues to make significant strides with regard to its AMLIS coal inventory. NMAML is working down its AMLIS inventory and responsibly setting its priorities and giving strong attention to prioritizing its coal inventory.

PART IV. AML INVENTORY SYSTEM

New Mexico has a significant amount of mining related hazards within the state. These mine hazards are the result of both coal and mineral mining within the State's long history of mining. The most serious of the remaining hazards within the state are associated with mineral mining. Because very little surface coal mining occurred in the State prior to SMCRA, most reclamation work involves the reclamation of underground mine hazards. Although the acreage associated with underground mining is small relative to that typically encountered with surface mining, the numbers of hazards encountered in underground mining are high and the danger associated with these hazards is extreme.

The AMLIS database contains an inventory of priority-1, -2, and -3 hazards associated with abandoned coal mines and a list of non-coal abandoned mines that have been funded (or

completed). The following two tables show AMLIS accomplishments for EY-2010 and cumulative accomplishments to date as of the end of EY-2010. These tables are updated annually by the State and are included in OSM's annual evaluation reports. The first table lists the work for the year in question and the second table is a running tabulation of all accomplishments under AMLIS to date. Both tables provide cost information for each of the AMLIS keyword elements.

NMAML is also working on obtaining funding agreements or cooperative agreements with the US Forest Service (USFS) and the Bureau of Land Management (BLM). NMAML is currently working out an agreement with BLM for site analysis northwest of Grants, New Mexico near Ambrosia Lake to address uranium mine related hazards.

Table-1
New Mexico AML Reclamation Program
EY-2010 Accomplishments¹

PROBLEM TYPE AND DESCRIPTION	COMPLETED EY 2010	COSTS
Benchs	0.0 acres	\$0.
Clogged Stream Lands	0.0 miles	\$0.
Dangerous Highwalls	0 (count)	\$0.
Dangerous Impoundments	0 (count)	\$0.
Dangerous Piles & Embankments	0 (count)	\$0.
Dangerous Slides	0 acres	\$0.
EF-Equipment/Facilities	0 (count)	\$0.
Gasses: Hazardous / Explosive	0 (count)	\$0.
Gob (coal waste piles)	0.5 acres	\$4,000.00
Highwalls	0 feet	\$0.
Hazardous Equipment & Facilities	0 (count)	\$0
Haul Roads	0.0 acres	\$0.
Industrial/Residential Waste	0 acres	\$0.
Mine Openings	0 (count)	\$0.
Other	0 (count)	\$0.
Portals	4 (count)	\$18,000.00
Pits	0.0 acres	\$0.
Polluted Water: Agric. & Indust.	0 (count)	\$0.
Subsidence	0.5 acres	\$4,000.00
Spoil Areas	0 acres	\$0.
Surface Burning	0.0 acres	\$0.
Slurry	0.0 acres	\$0.
Underground Mine Fires	0.0 acres	\$0.
Vertical Openings	32 (count)	\$222,376.95
Water Problems	0 (count)	\$0.
EY-2010 TOTAL COSTS		\$248,376.95

Note: This table is based on a Problem Type Unit and Cost Detail Report from the Abandoned Mine Land Inventory System. Neither AMLIS nor this table contains an inventory of un-reclaimed non-coal hazards. .

¹ Carbonate Hill Mine Safeguard (non-coal), Oregon Phase II Maintenance (non-coal), Real de los Cerrillos (non-coal), and the Jones Mine (coal).

Table-2
New Mexico Abandoned Mine Reclamation Program
“Cumulative” AML Accomplishments as of June 30, 2010

PROBLEM TYPE AND DESCRIPTION	COMPLETED TO DATE	COSTS
Benches	3.0 acres	\$7,301.
Clogged Stream Lands	2.23 miles	\$571,818.
Dangerous Highwalls	8 (count)	\$62,580.
Dangerous Impoundments	0 (count)	\$0.
Dangerous Piles & Embankments	21.5 acres	\$2,154,994.
Dangerous Slides	0 acres	\$0.
EF-Equipment/Facilities	12 (count)	\$31,635.
Gasses: Hazardous / Explosive	0 (count)	\$56,563.
Gob (Coal Waste Piles)	145.0 acres	\$3,796,841.
Highwalls	0 feet	\$0.
Hazardous Equipment & Facilities	18 (count)	\$124,037.
Haul Roads	10.0 acres	\$255,184.
Hazardous Water Bodies	0.0 acres	\$0.
Industrial/Residential Waste	0 acres	\$0.
Mine Openings	4 (count)	\$122,140.
Other	0 (count)	\$163,052.
Portals	569 (count)	\$2,625,759.
Pits	2.0 acres	\$3,890.
Polluted Water: Agric. & Industrial	4 (count)	\$13,400.
Polluted Water: Human Consumption	1 (count)	\$34,710.
Subsidence	38.35 acres	\$4,647,972.
Spoil Areas	260.0 acres	\$134,910.
Surface Burning	35.0 acres	\$760,406.
Slurry	2.0 acres	\$421,782.
Underground Mine Fires	168.0 acres	\$234,983.
Vertical Openings	1,069 (count)	\$5,372,749.
Water Problems	0 (gal./min.)	\$0.
CUMMULATIVE PROGRAM TOTAL		\$21,596,706.00

Note: This table is based on a Problem Type Unit and Cost Detail Report from the Abandoned Mine Land Inventory System. Neither AMLIS nor this table contains an inventory of un-reclaimed non-coal hazards. Non-coal hazards in New Mexico are not all inventoried in AMLIS. New Mexico AML estimates that an additional 2,000 un-reclaimed portals and 14,000 vertical openings exist in New Mexico that still require hazard abatement (safeguarding) or reclamation.

PART V. Summary and Recommendations:

The NMAML staff and management maintained ongoing communication with OSM as needed throughout the evaluation period. The Program is considered to be an integral part of OSM's oversight and inspections process. Past oversight evaluations consistently found the NMAML to be an exemplary AML Program. OSM's 2010 review again determined that the NMAML is placing an emphasis on coal reclamation, doing excellent reclamation and safeguarding work, and making rapid progress in working down its AMLIS inventory of priority hazards. All reclamation work inspected during EY-2010 is of high quality, timely, and consistent with contract specifications.

No problems or concerns currently exist with regard to the function or management of the NMAML Program. OSM continues to be impressed by the level of productivity exhibited by the NMAML Program and congratulates the staff and management for its many accomplishments under SMCRA. OSM does not have any recommendations to offer for Program improvement at this time.

Based upon present and past OSM's oversight of the New Mexico AML Program, the following programmatic observations are made:

- The NMAML Program has operated as a partner in meeting mutual environmental goals and challenges of SMCRA Title IV. The NMAML Program has always been willing to provide assistance to other State and Tribal Programs and has established a cooperative, productive relationship with OSM.
- The NMAML Program has conscientiously strived to revise its goals and objectives consistent with the intent of the new regulatory requirements of the 2006 SMCRA amendment.
- The NMAML Program has consistently worked to improve reclamation technology and the designs of its engineered structures.
- The NMAML consistently makes cost-effective use of its AML funds while achieving quality reclamation. Attention is paid to details, contractors are required to fulfill all contract specifications in the field, and NEPA compliance is fully satisfied both prior to and during construction and avoidances areas for cultural and historic resources and for endangered plants are routinely observed.
- The NMAML Program and staff are highly regarded by other AML Programs and OSM.
- NMAML Program has also demonstrated considerable talent in working with both environmental groups and community groups to merge the public's demand for historic and cultural resource preservation with the Programs objective to safeguard and reclaim abandoned mine hazards within the State.
- NMAML Program has worked with land owners as well as Federal and State agencies to secure access to abandoned mine sites and to reach agreement with strategies for reclamation and safeguarding of abandoned mine hazards.

In conclusion, OSM is proud to have NMAML as an active partner in fulfilling the mandate of Title IV of the SMCRA.

PROJECT PHOTORAPHS



Carbonate Hill Mine – Overview Looking East



Carbonate Hill – Steel & Concrete Shaft Closure
with Bat Cupola and Owl Perch



Carbonate Hill – Designed Bat Cupola
With Removable Gate Over
Vertical Shaft Closure

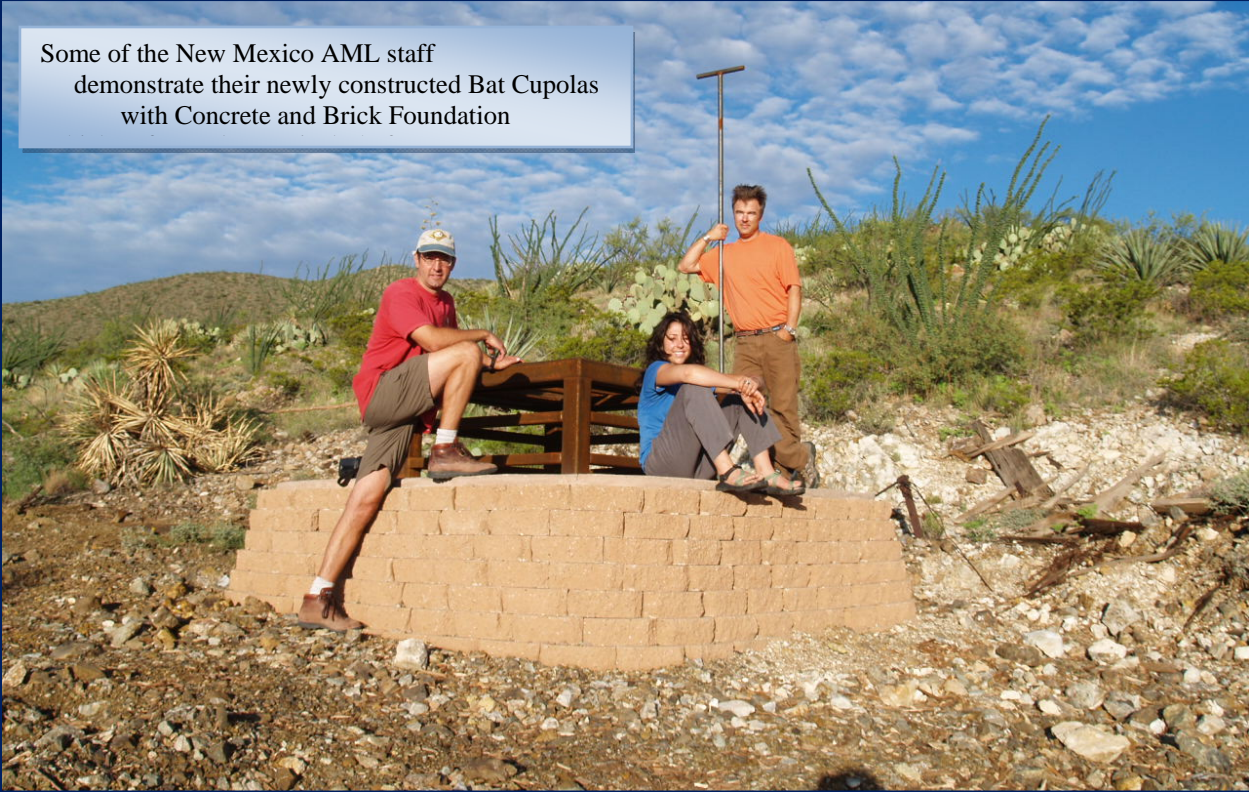


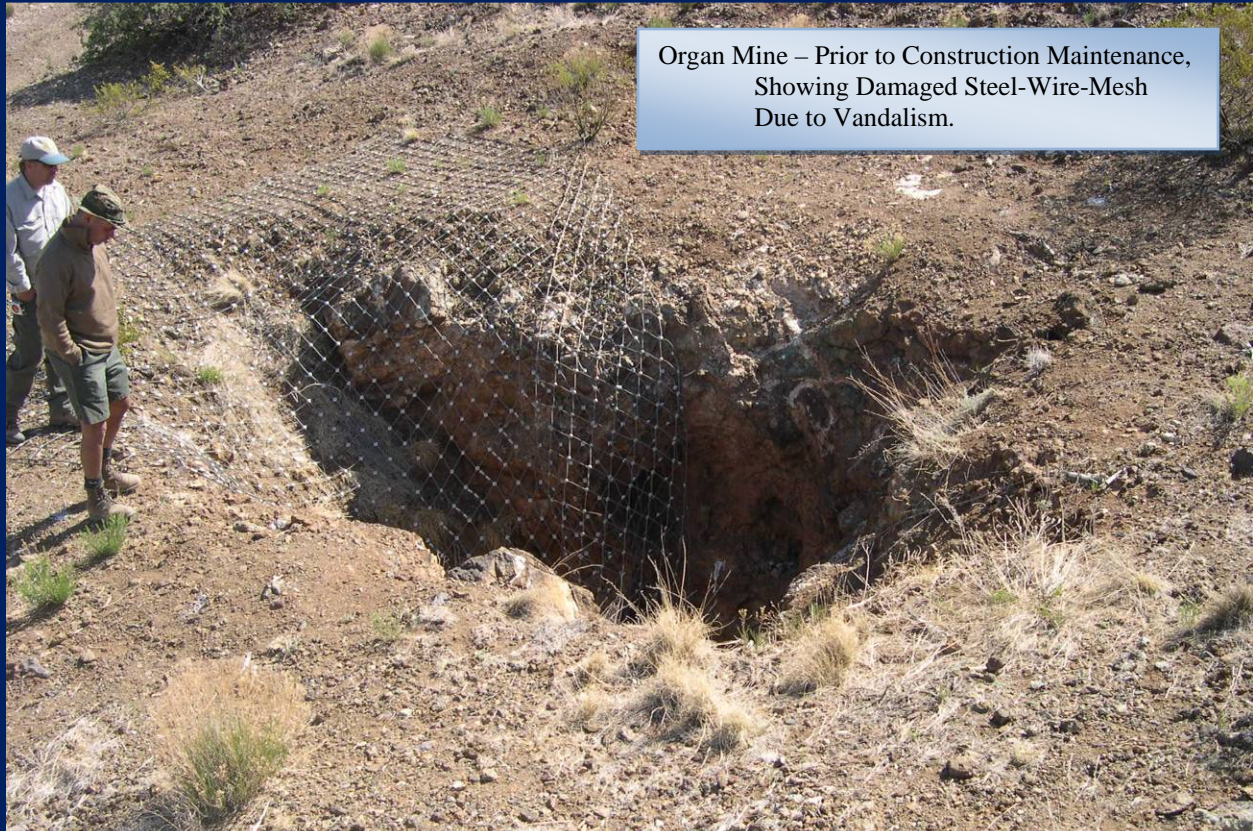
Carbonate Hill – Culvert with Bat Gate
type Airflow Closure

Carbonate Hill – Air Flow Culvert Closure



Some of the New Mexico AML staff demonstrate their newly constructed Bat Cupolas with Concrete and Brick Foundation



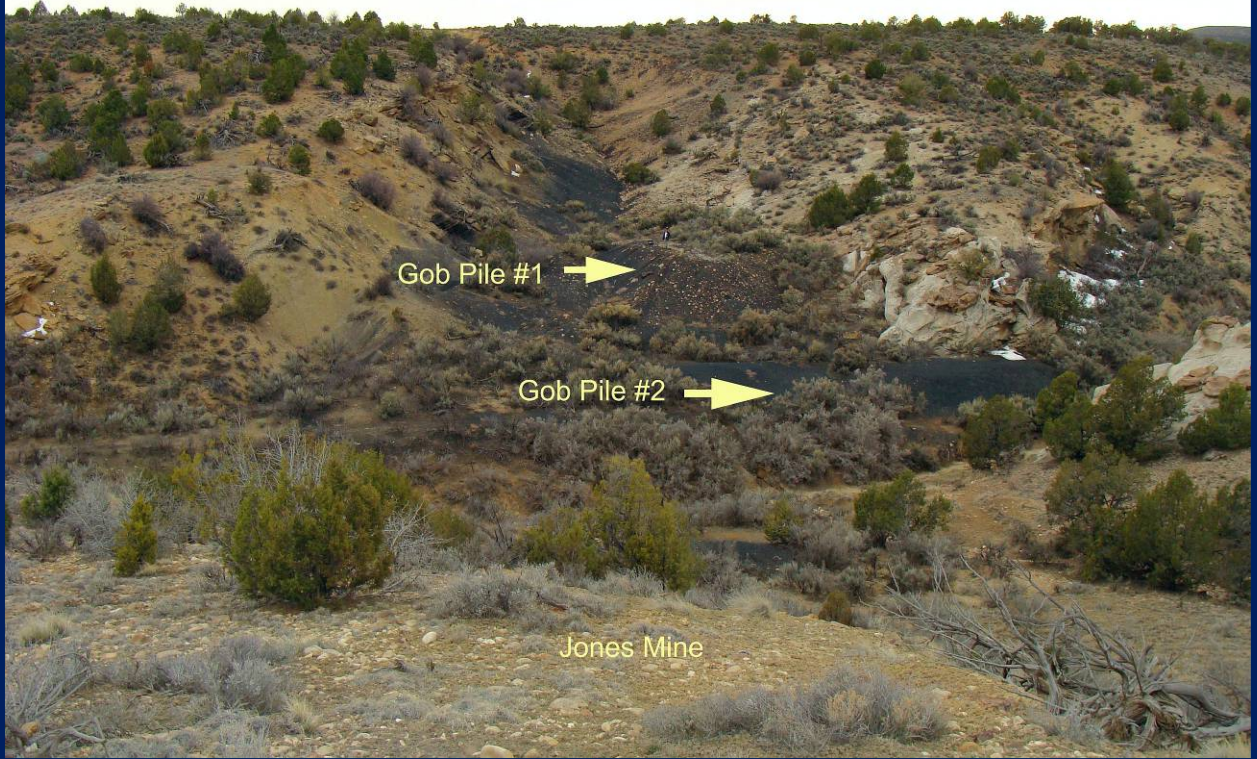


Organ Mine – Prior to Construction Maintenance, Showing Damaged Steel-Wire-Mesh Due to Vandalism.



Oregan Mine – Showing Backfilled Shaft After Construction Maintenance

Jones Mine – Site Overview
Prior to Construction



Jones Mine – Pre-Construction
View of Open Vertical Shaft.



Jones Mine – During Construction



Jones Mine – Post Construction

