

OFFICE OF SURFACE MINING
Albuquerque Area Office

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

Evaluation Year 2011
(July 1, 2010 through June 30, 2011)

Cover Photo: Sugarite State Park, New Mexico

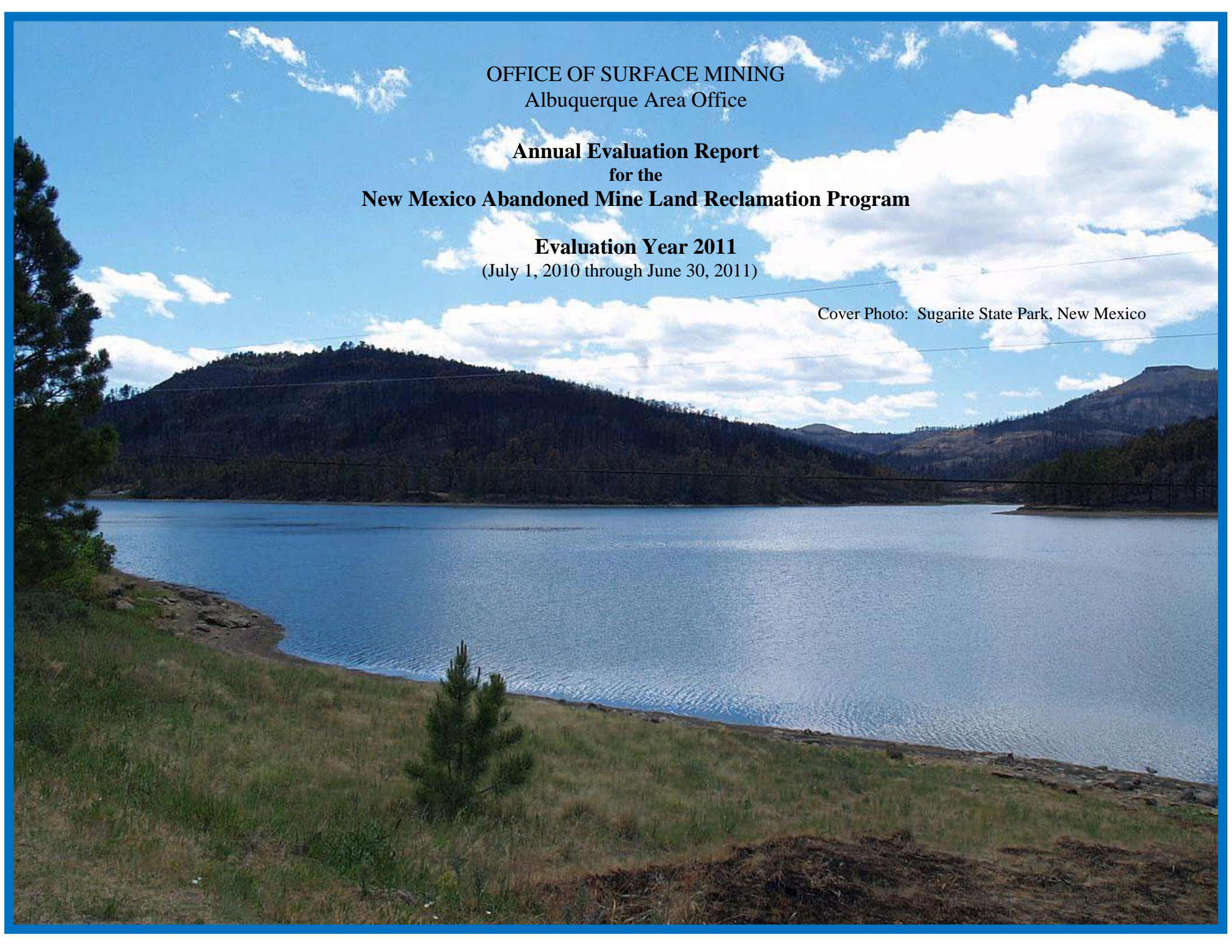


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INTRODUCTION

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).

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, 2010 and ending June 30, 2011 (EY-2011). It also documents the activities and accomplishments of the NMAML during this period.

PART I. GENERAL INFORMATION

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 (before August 1977) mining has occurred within the State, leaving numerous high priority hazards within the New Mexico abandoned mine inventory. The state of New Mexico has numerous physical hazards associated with past mining activities. These hazards exist in the form of mine equipment and structures, portals, and vertical shafts left unreclaimed because of unregulated non-coal mineral mining and coal mining. Although most of the more significant physical hazards in the State are attributable to non-coal mining, Title IV of SMCRA was written to give priority nationwide to addressing hazards associated with abandoned coal mines.

New Mexico AML Program History:

Since the NMAML Program was approved in June 17, 1981 it has been working to reclaim and safeguard both its high priority coal and non-coal inventory. Although it may take years before the State can certify that all of its high priority coal reclamation is completed, the majority of its high priority coal inventory, tracked by the AMLIS database, has been addressed.

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. New Mexico's estimate of the total cost needed to address all currently know coal priorities is well over \$25.9M .

In December 2006, SMCRA was revised to place even greater emphasis on addressing mine hazards associated with abandoned coal mines vs. those associated with abandoned non-coal

mines. However, SMCRA still authorizes the use of certain types of AML funds for non-coal reclamation.

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 Program is part of the New Mexico Mining and Minerals Division, New Mexico Energy, Minerals and Natural Resources Department. NMAML is under the direction of Mr. John Kretzmann, Program Manager. NMAML consists of nine (9) full time employees plus the equivalent of one additional support staff employee within the Mining and Minerals Division. Three (3) of these positions are partially funded (cost share) by other programs within the Mining and Minerals Division.

Grants and Financial Information:

Of the grants awarded to NMAML, the following grants remained active during EY-2011:

Grant Number	Grant Period	Amount
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.
S11AF20023	07/01/11 to 06/30/14	\$4,880,409.

OSM monitors all grants through to close-out. NMAML is diligent about keeping OSM informed of grant expenditures and submitting its grant reports. NMAML also runs any unusual expenditure items by OSM for prior approval before committing funds, to ensure that there are no problems and that the proposed costs are considered to be eligible costs under SMCRA.

There is a good ongoing professional relationship between OSM and the State's grants and financial personnel. Because of this close working relationship, no concerns regarding the use of funds have been identified. Both OSM and the State have experienced difficulties with regard to adjusting to the use of the new FBMS accounting system/database. The State has led the way in mastering entry of data into the system. Consequently, OSM has asked New Mexico's grants/financial personnel to assist with training some other AML Programs in how to setup their accounts and enter data into the system. OSM appreciates the State's eager willingness to assist both OSM and the other Programs as there are functions within the System that the State uses that are not used by OSM. States use the system to set up accounts and to enter data, whereas OSM relies on the system more to generate reports and to filter data. The State's assistance in this regard has been a real asset.

PART II. PROGRAM ACCOMPLISHMENTS

New Mexico EY-2010 and 2011 Project Submissions:

OSM-AAO reviewed and approved grant applications, grant close out reports and project

packages submitted for funding during EY-2011. OSM-AAO has issued Findings of No Significant Impact (FONSI) and Authorizations to Proceed (ATP) with construction for the Harding Pegmatite (non-coal), Cerrillos Bonanza Creek safeguard (noncoal), Dillon Canyon (coal), and the Bunker Hill Mine Safeguard and Reclamation Project (noncoal). Two of these four projects, the Harding Pegmatite and the Cerrillos Bonanza Creek projects, started construction in late 2011 after June 30, the end of the EY-2011 evaluation period. The other two projects are expected to start construction sometime during 2012 and 2013.

In addition to these four projects, NMAML continued into the next phase (Phase VII) of the Sugarite Coal Gob reclamation Project and also has continued to work with the community of Madrid, New Mexico on a community planning project, which NMAML has funded in an attempt to ultimately address storm water runoff concerns stemming from coal gob piles on and immediately East of the city. In addition, NMAML continues to partnership with the Bureau of Land Management (BLM) and Navajo AML to develop plans to address numerous environmental concerns associated with uranium mining in some of the abandoned mine areas of Western New Mexico that are commonly referred to as the Grants Mineral Belt. BLM has budgeted several hundred thousand dollars for legacy uranium mine remediation in the vicinity of Grants, NM.

The Grants Mineral Belt consist of legacy uranium mines and processing facilities that extends along the southern margin of the San Juan basin in Cibola, McKinley, Sandoval, and Bernalillo counties as well as Tribal lands. There are three mining sub-districts located within the Grants Mining District – Ambrosia Lake, Laguna and Marquez. At least 96 mine sites and 5 mill sites exist within the Grants Mineral Belt.

Program Accomplishments to Date:

The NMAML Program was approved in June, 1981. As of June 2011, NMAML has been in operation for 30 years. In that time it has completed over 179 AML reclamation projects and has closed or safeguarded approximately 3,500 hazardous mine features. Based on the cost estimates reflected in OSM's AMLIS database as of August 2011, since the NMAML Program was created in 1981 it has expended over \$23,000,000.00 on reclamation and safeguard construction costs, to address high priority-1 and -2 coal and non-coal hazards within the State (see Table-2). Although many serious hazards still exist, certainly lives have been saved and injuries prevented because of this work.

Summary of EY-2011 Projects:

The following tables list projects that were either completed or in some phase of project development during EY-2011. Project development means site characterization, obtaining biological, archaeological or cultural/historical 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, 2011

Program Activity	Status
<i>Construction</i>	
Cerrillos Central/Bonanza Creek Mine Safeguard – Phase I (non-coal)	St. Cloud Mining Company started construction in June 2011; Santa Fe County
Harding Pegmatite Mine Safeguard (non-coal)	Runyan Construction started construction in June 2011; Taos County
Madrid Maintenance 2011 (coal)	Runyan Construction filled a subsidence hole with concrete in June 2011 (AML staff filled another subsidence opening with polyurethane foam in June); Santa Fe County
Rogersville Coal Reclamation Phase I and Phase II (coal)	Phase one consisted of a small construction project to backfill two shafts and one adit during March 2011, and Phase II was completed in June 2011 and consisted of gob pile reclamation; Santa Fe County
Lake Valley Phase IV Mine Safeguard (non-coal)	Construction completed in February 2011 by Pioneer Industries and consisted of the closure of thirty-one shafts and adits.
Real de Dolores Maintenance (non-coal)	Construction of a rock retaining wall to protect a bat cupola completed in September 2010; Santa Fe County
Queen of the Guadalupe (non-coal)	Runyan Construction completed a bat cupola closure on a shaft in October 2010; Eddy County
Bunker Hill Mine Safeguard (non-coal)	Johnson Environmental used Polyurethane Foam to close a shaft near Red River in October 2010; Taos County
State Fair Exhibit Demolition (coal and non coal)	Demolition of old State Fair exhibit completed in March 2011; Design of the new exhibit completed in June, and installation will be complete in August 2011; Bernalillo County
Socorro West Maintenance II (includes maintenance at Water Canyon project site) (non-coal)	St. Cloud Mining Company completed construction of shaft closures near Magdalena in October 2010; Socorro County
Sugarite Gob Reclamation – Phase VII (coal)	Samcon Construction completed construction of most of the project in June 2011, with hydroseeding completed in July 2011.
<i>Design Phase</i>	
Bradley Mine Safeguard (non-coal)	In-house design complete for first phase
Diamond No. 2 Uranium Mine (non-coal)	In-house design underway
Cerrillos Gravel Pit Shaft (non-coal)	Design for closure of deep shaft under a shed underway; needs EA; Santa Fe County
Vermejo Park Ranch – Dillon Canyon Coal Mine Reclamation Project- Phase I (coal)	Water and Earth Technologies completed design and specifications in May; Construction services to be procured using RFP, which is under development; Colfax County
Lake Valley Maintenance 2011	In-house design underway for structure to keep tumbleweeds from clogging a culvert bat gate; Sierra County
Oscura Maintenance (coal)	Design of culvert bat gate for adit complete; waiting for BLM access issues to be resolved.

Project Status as of August 15, 2011 (continued)

Program Activity	Status
<i>Project Development</i>	
Bingham Mine Safeguard (non-coal)	Reconnaissance complete; archaeological surveys complete, needs EA
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 completed; archaeological survey underway; bat surveys underway
Cleveland Mine Safeguard (non-coal)	Reconnaissance complete; Bat surveys complete; Archaeological survey and report complete; needs EA
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
San Pedro Mine Safeguard - Phase I (non-coal)	Archaeological survey complete; research and report being prepared by OAS; Bat surveys complete; needs EA
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; McKinley County
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
Cerrillos Central Phase II	Bat surveys complete; archaeological clearance complete; needs EA
Tierra Amarilla Coal Mine (coal)	Archaeological clearance complete; needs EA and design
Zuni 27 USFS Mine(non-coal)	Archaeological letter report has been cleared by SHPO; Need FONSI; Cibola County

Project Status as of August 15, 2011 (continued)

Program Activity	Status
<i>Project Initiation</i>	
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
Dawson Reclamation (coal)	Determining land ownership
Gila USFS Mine Safeguard (non-coal)	Worked with Forest Service to provide Biological Assessment.
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
Ruidoso Silver Plume Mine Safeguard (non-coal)	Preliminary reconnaissance on US Forest Service land; Adjacent landowner may backfill openings
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
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
Cochiti Albemarle Adit Maintenance (non-coal)	Maintenance required at cable net closure due to rock fall; Sandoval County

Project Status as of August 15, 2011 (continued)

Program Activity	Status
<i>Professional Services Agreements</i>	
Abandoned Uranium Mine Preliminary Site Assessment (non-coal)	Interra contract complete December 2010 with final report; Statewide
Construction Phase Engineering Services for the Swastika Mine/Dutchman Canyon Project	Water and Earth Technologies selected; Colfax County
Gallup Coal Field Inventory (coal)	Tetra Tech has completed the final report and database; McKinley County
Madrid Community Planning (coal)	Dekker/Perich/Sabatini has completed major portion of community planning project; Continues to work to coordinate outreach to stakeholders and agency partners; Santa Fe County
Madrid Low Impact Stormwater Study, Design, Construction and Monitoring Services (coal)	RFP for hybrid contract advertised; Proposals due August 19, 2011; Santa Fe County
On-call Engineering Services contracts (coal and non-coal)	Kleinfelder completed investigations of possible shallow mine workings in Madrid and assessment of coal bore holes on Vermejo Park Ranch; Water and Earth Technologies completed design of Swastika Mine/Dutchman Canyon Project in May; URS conducting preliminary surface hydrology study in Madrid; Santa Fe and Colfax Counties
Photogrammetric Engineering Services (coal and non-coal)	T.R. Mann and Wilson & Co. photogrammetry and mapping services; statewide
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
Beneficial Use Study (coal)	Golder Associates issued final report in September 2010; Colfax and McKinley Counties

PART III. ENHANCEMENT AND PERFORMANCE REVIEWS

OSM 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.

PRINCIPLE NO. 1 – ON-THE-GROUND RECLAMATION

In evaluating Principle 1, NMAML and AAO inspected a sample of current AML reclamation sites, grants files, NEPA Documents, and contract specification documents. Representatives from the NMAML Program sponsored and led OSM on two site inspection tours for oversight purposes. This year the AAO inspected the following reclamation sites, as a sample of the projects reclaimed during the evaluation period:

- Sugarite Coal-gob Reclamation Project – Phase VII (coal project).
- Madrid Coal Reclamation Project.
- Rogersville Coal Reclamation Project
- Pre-bid tour of the Harding Pegmatite (non-coal) project.
- Pre-construction tour of the Dillon Canyon/Vermejo Park Ranch Reclamation project.

The scope of work for the first four of these Projects, which were constructed in EY-2011, are individually discussed below. In addition, OSM attended a pre-construction tour of the Dillon Canyon project area, and two community meetings for the Madrid Community Planning Project.

No program issues/problems were identified as result of the EY-2011 oversight inspections. State personnel were very knowledgeable about the construction work and reclamation details performed at each site we visited.

Sugarite Coal-Gob Reclamation Project – Phase VII (coal):

Sugarite is the site of several extremely large coal-gob piles that lie inside of Sugarite Canyon State Park. The coal-gob piles are located on both sides of the access road and Chicoria Creek, which parallel each other in a north south direction. The in-place reclamation of the large steep gob-piles has been done in phases and has involved mainly hand labor. The first phase started in 1999. The current phase VII is on the East side of the road and the creek and the toe of the pile approaches the creek in most locations along the channel. The intent of the project is to stabilize the coal-gob piles, to minimize the extent of erosion of coal-gob into the creek and to improve the visual aspects and wildlife utility as a benefit to the State Park by establishing vegetation on two previously reclaimed (2001 and 2002 AML projects) piles that now require maintenance and/or revegetation and/or other stability enhancements. NMAML's approach to reclaiming these piles has evolved since 1999 based upon experimental plots done as part of the reclamation effort. The program's efforts are substantially improved based upon that research and the later

projects are easily identifiable as they reflect much greater vegetative cover and diversity. Estimated cost of the phase VII project was budgeted for \$791,022.

Sugarite Canyon lies just a few miles east of Raton, New Mexico, in Colfax County. Sugarite Canyon is a unique point of interest in that it is the site of the only known footprint of Tyrannosaurus Rex ever discovered in the world. T-Rex roamed the perimeters of vast mudflat swamps in this region during the Cretaceous Era, 65 to 135 million years ago. The reclamation work done at this site has spanned several years and has been done in-phases (in-situ reclamation). The work is done under contract and the NMAML program maintains a person onsite to oversee the contract work and specifications. The current phase VII involved the following activities:

- Installation of straw bale and coir roll terraces,
- Installation of sediment barrier dams
- Incorporation of soil amendments in specific locations
- Installation of a temporary watering system
- Planting of live cuttings and 13,500 containerized seedlings
- Hydro-seeding
- Paving of hiking trails with crusher fines that were used for construction access

During the most recent inspection of the project, it was evident that the recent Raton fire approached the periphery of the overall reclamation project at Sugarite and also at the neighboring project at Yankee Canyon that was completed a few years ago. Both projects experience some damage from the forest fire but it was a small percentage of the overall project areas. The NMAML Program Manager indicated that he plans to do some maintenance work to address the damage caused by the fire.

Madrid Coal Reclamation/Safeguard Project (coal):

This project is located in Santa Fe County, in Madrid, NM. NMAML has done several projects in this mining town in the past. This evaluation period, the Program filled a subsidence hole with concrete and another subsidence opening with polyurethane foam in June 2011. A subsidence hole near a private residence had opened into an underground mine void. NMAML filled the hole with 3.3 cubic yards of concrete. Total cost of the project is \$2,850.

Rogersville Reclamation/Safeguard Project (coal):

This project site is about 20 miles southeast of Santa Fe, New Mexico on the east side of the I-25 interstate highway on private land near Cerrillos, New Mexico. This project involved the safeguarding and reclamation of two mine shafts, one open mine adit and the reclamation of associated coal waste piles. The mine sites reclaimed are known as the Rogersville Mine and the Miller Mine. Both are located in Santa Fe County, northwest of the town of Madrid, New Mexico. The project was completed in two phases. Phase one consisted of a small construction project to backfill two shafts and one adit during March 2011, and Phase II was completed in June 2011 and consisted of gob pile reclamation; Santa Fe County. Also, a small subsidence pit was excavated and then properly backfilled and mounded. Inspection of the site during the summer of 2011, demonstrated that the safeguarding was completed and all mine related hazards were removed. The reclamation of the gob coal-waste piles was completed and NMAML was

experimenting with the use of wood-strips (wood –strand mulch) for stabilization rather than straw mulch. Topsoil was salvaged and redistributed over the final grade. There were a few signs of plant germination, despite the extreme heat and how recent the work was completed.

Harding Pegmatite Safeguard Project (non-coal):

OSM attended the pre-bid tour of the project site. Several contractors were in attendance as the State required mandatory attendance in order to submit a contract bid. This project involves the safeguarding of several adits with bat compatible closures that will also allow human access to authorized personnel with a key. The mine is owned by the University of New Mexico and is used as a training station by the geology department. Construction at the site had not started at the time of this report.

Lake Valley, Phase IV - Mine Safeguard Project.

This project is located in the ghost town of Lake Valley in Sierra County, New Mexico. Lake Valley is 17 miles south of Hillsboro, NM. It is a heavily mined-out area spanning 200 acres. The project is a continuation of three previous phases of the overall project that had already involved the closure of over 250 mine openings. The scope of work for this phase-IV of the project consisted of the closure of an additional thirty-one shafts and adits, which involved 5 steel mesh closures, 3 toroid plug closures, 10 horizontal bat gates, 1 airflow closure, 1 decline/bat gate closure, 2 bat cupolas, 1 puff plug closure, 1 earth fill closure as well as several other items/closures to cumulatively total thirty-one closures. The work was performed by Pioneer Industries, Inc. Disturbed areas were seeded and temporary access roads were removed and seeded. Bids for the project were received in May 2010, the contract was awarded to Pioneer Industries which commenced construction in August 2010 and completed work in early February 2011. Final construction costs were \$433,840.

Queen of Guadalupe Safeguard Project (non-coal).

This project is located on US Forest Service land within the Lincoln National Forest, in Eddy County, New Mexico, approximately 38 miles southwest of Carlsbad, NM. The project involved the safeguard closure and reclamation of two mine shafts that presented a hazard to the public and to wildlife. One shaft was a 20-foot deep open mine prospect that was backfilled and the other was a 200-foot deep vertical shaft that was safeguarded with a metal bat gate or cupola. Another feature used a PUF closure with a corrugated steel pipe riser. The main opening connects to an underground cave system, so the closures were designed to preserve the existing bat population and the potential for bat hibernation habitat. The project was completed in October 2010 by Runyan Construction. The USFS provided \$58,300 to NMAML toward the design and construction of this project.

Socorro West Maintenance Project – Phase II (coal)

The project site is located 17 miles west of Socorro, NM in Socorro County. The project lies on both public and private land. This project consisted of the backfilling of two small shafts, a toroid tire plug closure of a stope opening, a horizontal bat compatible closure of a stop opening, a PUF plug closure of a shaft and of a subsidence area, and installation of steel flat bar at four shafts with horizontal bat gates. The work was completed in three months ending October 2010, under contract with St. Cloud Mining Company at a total cost of \$99,969.

Bunker Hill Mine Safeguard Project (non-coal).

The Bunker Hill Mine is located in Taos County, about 3.5 miles southwest of Red River, NM. Bids for the project opened July 2010. The project was completed in October 2010. It consisted of plugging one mine opening with a PUF closure as well as constructing drainage channels and water bars nearby. The site is on US Forest Service land. The mine opening has an associated head frame and was located inside of an historic cabin which required some stabilization as part of the project. The work was performed under contract with Johnson Environmental of Alamogordo, NM at a cost of \$35,443.

PRINCIPLE NO. 2 – ACCOMPLISHMENTS UNDER THE AMLIS INVENTORY

AMLIS accomplishments during EY-2011 are listed below in Tables-1 and Table-2. Accomplishments specifically for EY-2011 are in bold blue print in both tables so that the changes from last evaluation period can be readily identified. During EY-2011, NMAML spent \$1,461,720. on project construction. The main items addressed from a hazard standpoint include 35 vertical openings, 8 portals, 1.0 acre of gob piles, 0.04 acre of subsidence and 7 acres of dangerous piles and embankments. Some lesser priority hazards were also addressed such as mine subsidence areas.

Since the program started in 1981, NMAML has completed \$23,058,427.00 (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 increase 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 by setting its priorities and giving strong attention to prioritizing its coal inventory. NMAML awarded a contract to Tetra Tech of Albuquerque, NM to update the coal mine inventories originally completed in the early 1980s. During the earlier inventories, only the actual mine openings were recorded. NMAML plans to add data for gob piles, historic structures, subsidence and any other mine-related features to the AMLIS database. The objective is to gather information that will be used to prioritize sites that need to be safeguarded and which sites need maintenance due to either natural causes or vandalism.

Another local company, Golder Associates, was hired to sample gob materials as part of the coal waste beneficial use/reuse study and also completed geotechnical surveys to identify, map and characterize mine openings and other mine associated hazards in the Poison Canyon area of the Ambrosia Lake uranium mining district.

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 public hazards encountered in underground mining are high and the danger associated with these hazards is often 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. The first table lists the accomplishments based upon EY-2011 program activities. The second table lists the cumulative accomplishments of NMAML to date, as of the end of EY-2011. These tables are updated annually by the State and are included in OSM's annual evaluation reports. Both tables provide cost information for each of the AMLIS keyword elements.

Table-1
New Mexico AML Reclamation Program EY-2011 Accomplishments¹

PROBLEM TYPE AND DESCRIPTION	COMPLETED EY 2011	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 (coal)	7 acres	\$791,021.63.
Dangerous Slides	0.0 acres	\$0.
EF-Equipment/Facilities	0 (count)	\$0.
Gasses: Hazardous / Explosive	0 (count)	\$0.
Gob (coal waste piles)	1	\$9,980.10
Highwalls	0 feet	\$0.
Hazardous Equipment & Facilities	0 (count)	\$0
Haul Roads	0.0 acres	\$0.
Industrial/Residential Waste	0.0 acres	\$0.
Mine Openings	0 (count)	\$0.
Other	0 (count)	\$0.
Portals	8	\$99,908.13
Pits	0.0 acres	\$0.
Polluted Water: Agric. & Indust.	0 (count)	\$0.
Subsidence	0.04 acres	\$29,897.55
Spoil Areas	0.0 acres	\$0.
Surface Burning	0.0 acres	\$0.
Slurry	0.0 acres	\$0.
Underground Mine Fires	0.0 acres	\$0.
Vertical Openings	35	\$530,912.55
Water Problems	0 (count)	\$0.
EY-2011 TOTAL COSTS		\$1,461,719.96

¹ Lake Valley Phase IV (non-coal), Socorro West Phase II Maintenance (non-coal), Rogersville Phases I-II (coal), Madrid Maintenance 2011 (coal), Bunker Hill (non-coal), Queen of the Guadalupes (non-coal), and Sugarite Gob Reclamation Phase VII (coal).

Table-2
New Mexico Abandoned Mine Reclamation Program
“Cumulative” AML Accomplishments as of June 30, 2011

PROBLEM TYPE AND DESCRIPTION	COMPLETED TO	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	28.5 acres	\$2,946,016.
Dangerous Slides	0 acres	\$0.
EF-Equipment/Facilities	12 (count)	\$31,635.
Gasses: Hazardous / Explosive	0 (count)	\$56,563.
Gob (Coal Waste Piles)	146.0 acres	\$3,806,821.
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	577 (count)	\$2,725,667.
Pits	2.0 acres	\$3,890.
Polluted Water: Agric. & Industrial	4 (count)	\$13,400.
Polluted Water: Human Consumption	1 (count)	\$34,710.
Subsidence	38.39 acres	\$4,677,870.
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	1,104 (count)	\$5,903,662.
Water Problems	0 (gal./min.)	\$0.
CUMMULATIVE PROGRAM TOTAL		\$23,058,427.00

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. OSM's 2011 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-2011 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.
- 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.

Bunker Hill – Historic Mine Building



Bunker Hill – Vertical Shaft Frame



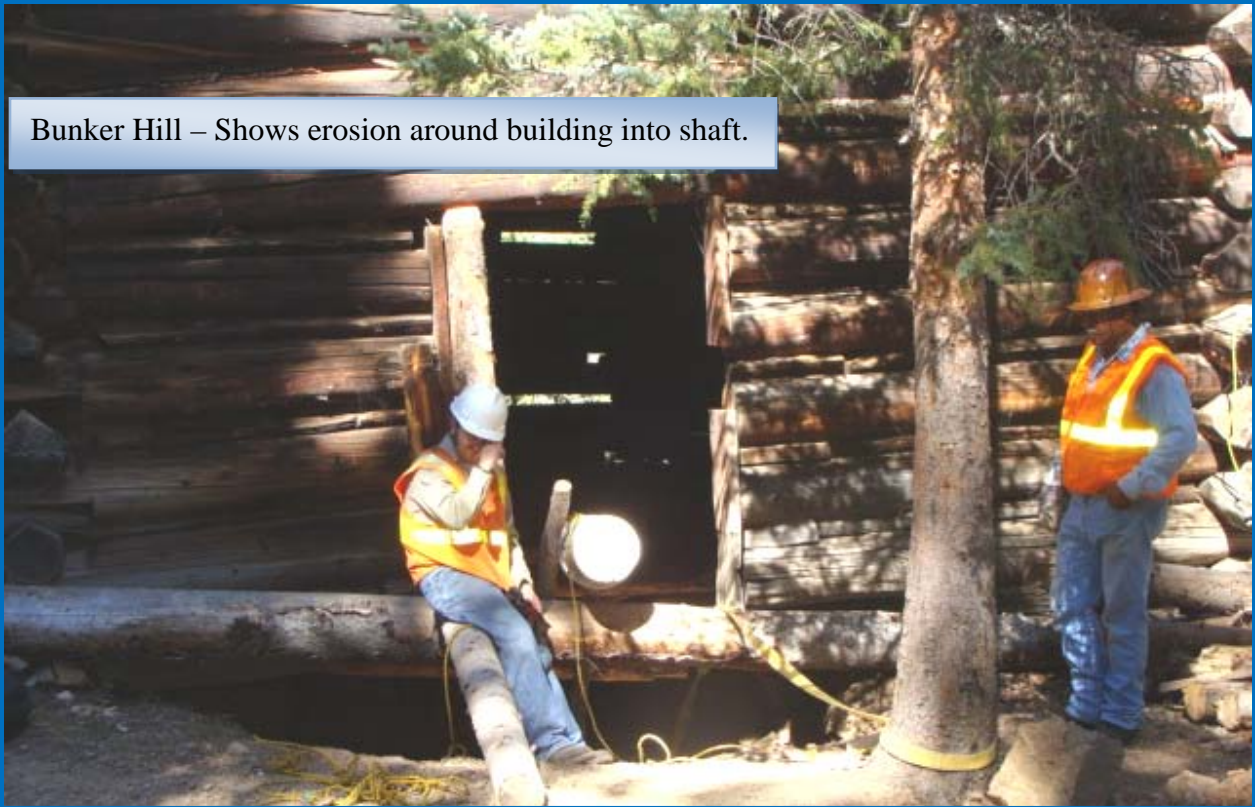


Bunker Hill – Dangerous Vertical Shaft



Bunker Hill – Headframe Support

Bunker Hill – Shows erosion around building into shaft.



Bunker Hill – Building Stabilization



Bunker Hill – Shaft Backfill



Bunker Hill – PUF Installation





Bunker Hill – Final Closure



Lake Valley – Surface Opening to Vertical Shaft



Lake Valley – Highwall Covered With Wire Mesh Fabric



Lake Valley – Vertical Opening Before Closure with Bat Cupola



Lake Valley – Final Closure with Bat Cupola



Harding Pegmatite Mine – Prebid Tour

Sugarite - Phase VII Coal Gob Stabilization Project
NMAML Project Manager, Randal Armijo Doing Final Inspection.



Sugarite - Phase VII Coal Gob Reclamation Project



John Kretzmann, Program Manager NM-AML
Randall Armijo, Project Manager
John H. Bemis, EMNRD Cabinet Secretary