DEPARTMENT OF INTERIOR/OFFICE OF SURFACE MINING

NEW MEXICO ABANDONED MINE LAND ANNUAL EVALUATION REPORT 2012

Cover Photo: Vermejo Park Ranch Coal Reclamation, Colfax County |

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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, 2011 and ending June 30, 2012 (EY-2012). 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 of 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-coalmines. 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 ten (10) full-time employees plus the equivalent of two and a half (2.5) additional support staff employee within the Mining and Minerals Division. Five (5) 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-2012:

Grant Number	Grant Period	Amount
S09AP15297	07/01/09 to 06/30/12	$4,759,634
S10AB20005	07/01/10 to 06/30/15	$4,258,725
S11AF20023	07/01/11 to 06/30/14	$4,880,409
S12AF20009	07/01/12 to 06/30/15	$6,733,888

*Note: the grand amount for Grand No. S10AB200058 was amended from the previous evaluation report from $4,641,068.

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.

NM AML Program staff has stepped up to the challenges of the a near tripling in OSM grants, while also receiving BLM grants of close to $2 million, in the last four years. For the first time since increased grants started for the Program in June 2008, in state Fiscal Year 2011 spent more money than was received in grants. The challenges of developing, designing and constructing the large projects that this money allows the Program to undertake and the concomitant changes in programmatic culture and staff assignments have been met without significantly increasing staff levels and without significant disruptions to the Program and its work.

The challenge was met through creating a shared vision for the staff on the rewards that would come from working in different ways to get large projects developed and built, establishing a vision of excellence in all aspects of the Program's work, training of staff including NTTP and TIPS courses, setting of goals and communicating those with staff, being willing to take risks, and everyone working diligently together.

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-2011 and 2012 Project Submissions:
OSM-AAO reviewed and approved grant applications, grant close out reports and project packages submitted for funding during EY-2012. OSM-AAO has issued Findings of No Significant Impact (FONSI) and Authorizations to Proceed (ATP) with construction for the Cleveland Mine Safeguard (non-coal) in Grant County; Dandee Coal Mine (coal) in Rio Arriba County; Bradley Group Mine Safeguard – Phase II (non-coal) in Luna County.

In addition, NMAML continued with 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.

Program Accomplishments to Date:
The NMAML Program was approved in June, 1981. As of June 2012, NMAML has been in operation for 31 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 2012, 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-2012 Projects:
The following tables list projects that were either completed or in some phase of project development during EY-2012. 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 June 2012

Program Activity	Status
Construction	
Bunker Hill Mine Stabilization (non-coal); Taos Country	USFS- funded small construction project completed in October 2011 at cost of $19,999
Cerrillos Central/Bonanza Creek Mine Safeguard – Phase I (non-coal); Santa Fe County	St. Cloud Mining Company completed construction in September 2011 at cost of $151,519
Sugarite Gob Reclamation – Phase VII (coal); Colfax County	Construction started June 2010; Samcon Inc. substantially completed work in August 2011 at cost of $795,061
Cerrillos Grave Pit (non-coal); Santa Fe County	Runyan Construction completed in March 2012 at cost of $13,068
Lake Valley Maintenance 2011(non-coal); Sierra County	Runyan Construction completed in March 2011 at cost of $11,945
Gage Maintenance (non-coal); Luna County	Silver Gryphon Southwest backfilled six subsided mine openings in April 2012 at cost of $2,599
Vermejo Park Ranch – Swastika Mine and Dutchman Canyon Coal Mine Reclamation Project (coal); Colfax County	Kiewit about 65 percent complete with construction, which started in April 2012; Construction costs expected is $4 million with completion in August 2012
Design Phase	
Boston Hill Phase II (non-coal); Grant County	Contractor selected for community planning, design and construction observation services in March; Contract negotiation underway; Needs archaeological study and EA before construction
Bradley Group Mine Safeguard – Phase I (non-coal); Luna County	Design and specifications complete; Planning to bid within months
Cleveland Mine Safeguard (non-coal); Grant County	FONSI received; In-house engineering design started
Dandee Coal Mine (coal); Rio Arriba County	FONSI received; Design underway
Diamond No. 2 Uranium Mine Maintenance (non-coal); McKinley County	In-house design; Needs realty , archaeology and EA
Madrid Low Impact Stormwater Study, Design, Construction and Monitoring Services (coal); Santa Fe	Contract finalized in June 2012; Rangeland Hands close to beginning initial phases of work; Needs archaeological survey and EA before construction
Oscura Maintenance (coal); Lincoln County	Design started for project to safeguard adit; Coordinating with BLM
Poison Canyon Uranium (non-coal); McKinley County	Golder Associates completed archaeological survey and design; Needs EA, tribal and agency consultations and FONSI
San Pedro Mine Safeguard – Phase I (non-coal); Santa Fe County	Archaeological and bat survey s complete; Design nearing completion; Needs EA

Project Status as of June, 2012 (continued)

Program Activity	Status
Project Development	
Bingham Mine Safeguard (non-coal); Socorro County	Archaeological surveys complete and consultations in progress; Realty complete, Needs EA and project definition
Bradley Group Mine Safeguard – Phase II (non-coal); Luna County	Project awaiting engineering reconnaissance; FONSI received; Needs EA and project definition
Carthage Reclamation Maintenance (coal); Socorro County	Geomorphic reshaping of one reclamation site to prevent blowout; May need updated archaeological work
Cerrillos Central/Bonanza Creek – Phase II; Santa Fe County	Bat survey complete; Archaeological survey complete; Needs realty
Cochiti Albemarle Adit Maintenance (non-coal); Sandoval County	Maintenance required at cable net closure due to rock fall; May drop project due to inaccessibility of site following wildfire
Cookies Peak Mine Safeguard (non-coal); Luna County	Archaeological field work complete; Bat surveys underway; Needs EA
Gage Phase II Mine Safeguard (non-coal); Sierra County	Mapping completed; Needs archaeological survey and EA
Kingston Mine Safeguard (non-coal); Sierra County	Reconnaissance and realty underway; Mapping completed; Needs archaeological survey and EA
Madrid Anthracite Mines (coal); Santa Fe County	Archaeological report completed; SHPO clearance for mine openings, not for gob piles
Orogrande Mine Safeguard Project – Phase III (BLM, non-coal); Otero County	Mapping completed; Needs archaeological survey and EA
Vermejo Park Ranch Coal Reclamation Engineering (coal); Colfax County	Plan to issue RFP for design and construction administration for future phases of construction in Dillon Canyon and at Koehler Mine
Zuni 27 USFS Mine (non-coal); Cibola County	Archaeological letter report has been cleared by SHPO; USFS preparing environmental assessment; Needs FONSI

Project Status as of June, 2012 (continued)

Program Activity	Status
Project Initiation	
Bonito Lake Maintenance (non-coal)	Repair of breached closures needed
Burro Peak Mine Safeguard (non-coal); Grant County	Includes radium/uranium mines in populated area south of Silver City; Reconnaissance complete; Considering developing RFP for engineering, archaeological and environmental assessment services at White Signal AUMs near Burro Peak.
Caballo Mountains (non-coal)	Preliminary reconnaissance
Carrizalillo Hills (non-coal); Luna County	In-house reconnaissance (BLM is working on reconnaissance in other areas for possible border area projects)
Dawson Reclamation (coal)	Determining land ownership
Eagle Nest (non-coal); Colfax County	Preliminary reconnaissance
Gallup Chiaramonte Mine (coal); McKinley County	Environment Department issu3ed NOV to City of Gallup for unpermitted discharge to groundwater; Project currently stalled; AML to design and fund construction of closure of the existing drop inlet into the mine when issue resolved
Gallup Area Project (coal); McKinley County	Beginning to research and reconnoiter high-priority coal projects in the Gallup Coal Field for future work
Hachita Mine Safeguard (non-coal); Grant County	Preliminary reconnaissance
Hatch Mine Safeguard (non-coal); Dona Ana County	Preliminary reconnaissance; USFS
Kingston/Tierra Blanca (non-coal); Sierra County	Preliminary reconnaissance
La Petaca Mine Safeguard – Phase II (non-coal); Rio Arriba County	Preliminary reconnaissance
Lemitar Mine Safeguard (non-coal); Socorro County	Preliminary reconnaissance at mine where man was injured in a fall and nearby opening
Lone Mountain Ranch Mine Safeguard (non-coal); Santa Fe County	Preliminary reconnaissance; working on ROE
Magdalena/Waldo and Kelly Mines (non-coal); Socorro County	Preliminary reconnaissance
Mogollon Safeguard (non-coal); Catron County	Preliminary reconnaissance
Monero Coal Mines Maintenance (coal); Rio Arriba County	Reconnaissance on 1980s project; Needs archaeological survey
Rinconada Coal Mine Project (coal); Rio Arriba County	Preliminary reconnaissance
Ruidoso Silver Plume Mine (non-coal); Otera County	Preliminary reconnaissance on U.S. Forest Service land; working with USFS
Spencer Uranium Mine (non-coal); McKinley County	BLM interested in project to reclaim mine site and may provide funding for construction; Preliminary reconnaissance; BLM providing archaeological survey; Needs EA
Yankee Canyon Gob Reclamation (coal); Colfax County	ROE issues, on hold
Zuni Mountains Mine Safeguard (non-coal); Cibola County	Reconnaissance; USFS funds may become available

Project Status as of June, 2012 (continued)

Program Activity	Status
Professional Services Agreements	
As-needed Environmental and Archaeological Services (coal and non-coal); Statewide	Parametriz working to monitor excavation at eh Swastika/Dutchman project; Marron scheduled to begin work in Madrid
Boston Hill Phase II (non-coal); Grant County	Contractor selected for community planning, design and construction observation services in March; Contract under negotiation
Construction Phase Engineering Services for the Swastika Mine/Dutchman Canyon Project (coal); Colfax County	Water and Earth Technologies monitoring construction; Significant redesign required during construction due to cultural resource sites
Swastika Mine/Dutchman Canyon Project (coal); Colfax County	Contract finalized with River Source in April 2012, who is organizing public visits to the site during construction
Madrid Low Impact Stormwater Study, Design, Construction and Monitoring Services (coal); Santa Fe County	Contract awarded to Rangeland Hands in June 2012; Needs archaeological survey and EA before construction
On-call Engineering Services contracts (coal and non-coal); Statewide	Work by Water and Earth Technologies at Vermejo Park and URS at Madrid is complete; Kleinfelder's contract has funds remaining, which may be used at the Boston Hill project
Photogrammetric Engineering Services (coal and non-coal)	T.R. Mann and Wilson & Co. photogrammetry and mapping services; statewide
Uranium Legacy Project (non-coal)	Professional services agreement with Golder Associates for on-call engineering services at abandoned uranium mines,

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:

- Swastika Mine and Dutchman Canyon Reclamation Project
- Sugarite Coal-gob Reclamation Project – Phase VII (coal project).
- Madrid Coal Reclamation Project.
- Completion 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.

Swastika Mine and Dutchman Canyon Reclamation Project

Swastika Mine and Dutchman Canyon Reclamation project is a major accomplishment for the NM AML Program, even though construction currently underway. It is by far the largest project the Program has undertaken, with projected final construction costs of over $4 million compared with all previous projects being under $1 million. It also used new (for the NM AML Program) methods of procurement: selection of a construction contractor on both qualifications (60 percent) and price (40 percent) and construction payments made on a time-and-materials basis. It also includes use of an innovative reclamation approach emphasizing geomorphic landforming of gob piles, gob repositories and stream relocation. Another unique aspect is the use of a pond/wetland system to treat alkaline coal mine drainage in Dutchman Canyon. Handling a project of this size and complexity has been a handled exemplary by the NM AML Program staff, from engineers to contract and project managers and fiscal officers.

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. 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

Final cost of the phase VII project $791,061 and was completed August 2011.

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. The next phase of work involving conceptual design, final design and construction on the two major projects identified – stormwater improvements along the east slope where drainage and erosion from historic gob piles are leading to flooding and sedimentation of properties and improvements to the Madrid arroyo which was degraded during historic mining operations. At the request of the community, stormwater harvesting and ecological enhancements will be a part of the project. The project is complicated, involving numerous landowners, agencies and groups (including Santa Fe County,

Department of Transportation and several community civic organizations), and historic structures and cultural resources. NM AML Program is working diligently with members of the community to provide the best options to improve the sedimentation and degrading.

Harding Pegmatite Safeguard Project (non-coal):

The Harding Pegmatite Mine Safeguard (non-coal) started June 2011. The notice to proceed was issued on June 7 and the project was completed in August 2011. The Harding Pegmatite Mine located near Dixon in north –central New Mexico is a historic geologic site that made significant contributions to the scientific understanding of the origin of pegmatites and other mineral resources. In the 1940s it was mined for tantalum-bearing mineral microlite, associated with lepidolite. Harding Pegmatite Mine was the world's largest producer of this mineral. Beryl was also mined at this site. Beryl was used to make non-sparking tools needed in the development of atomic weapons.

The mine was left well preserved and exposed. Currently it is still used as an outdoor laboratory for geology and mineralogy students from around the world. The public also visits for mineral collecting. The University of New Mexico has supervision and there is a current caretaker, Gilbert Griego, son of the original caretaker, who gives guided tours. Three to four thousand people visit the mine each year.

The project involved improvement of site access control by installing posts and chain barrier around the parking lot, installing a locking hinged swinging gate at the road entrance; backfilling one mine shaft using mine waste; construction of bat grates, each with hinged locking door at five adits; construction of bat grates, without hinged doors at one stope and two adits; construction of a corrugated steel pipe for airflow closure at one adit; installation of a six-strand barbed wire fence along a highwall; installation of two interpretive sign bases including historical and mineralogical information with photos. There are also seven numbered posts for a self guided tour in the mine area.

Design challenges were overcome and underground workings remain accessible to authorized personnel for scientific research and training. The AML project engineer designed a lockable hinged door at all adit portals where access is needed. Alternate escape routes were also designed in the event of a cave in or other disaster. An innovative and effective locking mechanism can be opened from the inside without a key but is not accessible from the outside.

The bedrock is hard but brittle, to secure grating to the adit opening both the inside and outside framework is contoured around the perimeter of the opening and locks the grating in place.

The design minimizes visual impact on the historical site providing aesthetic and functional closures. The exposed steel is corrosion-resistant and blends into the surrounding setting. The grates are designed with 5 ¾" high horizontal opening allowing bats to pass through safely while restricting human access. Natural ventilation restriction is minimized for the health and safety of humans and wildlife.

PRINCIPLE NO. 2 – ACCOMPLISHMENTS UNDER THE AMLIS INVENTORY

AMLIS accomplishments during EY-2012 are listed below in Tables-1 and Table-2. Accomplishments specifically for EY-2012 are in bold blue print in both tables so that the changes from last evaluation period can be readily identified.

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 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 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.

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-2012 program activities. The second table lists the cumulative accomplishments of NMAML to date, as of the end of EY-2012. 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-2012 Accomplishments[1]

PROBLEM TYPE AND DESCRIPTION	COMPLETED EY 2012	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)	3	$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 2012 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-2012 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.