

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT

U.S. Department of the Interior



Annual Evaluation Report for the

Abandoned Mine Land Program

Administered by the New Mexico Mining and Minerals Division



For Evaluation Year 2023
July 1, 2022 to June 30, 2023

Prepared by Western Interior Regions 5, 7-11 (Denver Field Division)
September 2023

EXECUTIVE SUMMARY

The Office of Surface Mining Reclamation and Enforcement - Denver Field Branch (OSMRE – DFB) annually prepares this report to describe the accomplishments of the New Mexico Mining and Minerals Division - Abandoned Mine Land Program (MMD – AMLP) during the previous Evaluation Year (EY). The report includes a discussion of New Mexico’s program administration, public participation and outreach efforts, technical assistance provided by OSMRE, and the results of topic-specific oversight reviews (TSOR) conducted in coordination with the State.

Denver Field Branch’s annual oversight activities typically involve two different methods of evaluation. First are various administrative reviews designed to ensure accuracy and integrity throughout the grants financial assistance and enhanced Abandoned Mine Land Inventory System (eAMLIS) reporting processes. Second are on-the-ground site visits that enable us to evaluate various elements of the State’s construction management, abatement selection, and hazard prioritization processes.

According to data available through the enhanced Abandoned Mine Land Inventory System (eAMLIS), New Mexico has a remaining inventory of 396.9 coal-related acres to be reclaimed at an estimated cost of \$35,701,106. Since 1978, New Mexico has expended a total of \$23,943,439.02 in grant funding to reclaim a total of 471.19 coal-related acres. In EY 2023, OSMRE awarded New Mexico \$2,829,000 in annual fee-based grant funding and an additional \$2,423,032 in grant funding made available through the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law (BIL), to continue carrying out its mission of protecting people, property, and the environment from hazards related to historic mining operations.

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Cover Page Photograph: Socorro West Mine Safeguard Project; Socorro County, New Mexico.

I. INTRODUCTION

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSMRE) in the Department of the Interior. SMCRA provides authority to OSMRE to oversee the implementation of and provide federal funding for state regulatory programs and abandoned mine land programs that have been approved by the Secretary of the Interior as meeting the minimum standards specified by SMCRA. The primary purpose of SMCRA Title IV is to address the adverse effects of past coal mining, though it also allows AML programs to address certain non-coal problems. To this end, Title IV authorizes OSMRE to provide grant support to states and tribes from the Abandoned Mine Reclamation Fund and the general Treasury of the United States. SMCRA puts the highest priority on correcting the most serious AML problems that endanger public health, safety, and property. As amended in 2006, SMCRA also allows AML programs to address certain lower priority coal problems if they are reclaimed in conjunction with or located adjacent to higher priority problems. OSMRE, state, and tribal AML programs work together to achieve the goals of the national program including annual evaluations.

OSMRE also provides staff training and financial, technical, and management assistance to each state program. This report contains summary information regarding the New Mexico Abandoned Mine Land Program and its effectiveness in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers EY 2023 which ran from July 1, 2022, to June 30, 2023.

Detailed background information and comprehensive reports for the program elements evaluated during the EY are available for review and copying at the OSMRE Denver Field Branch; One Denver Federal Center; Bldg. 41; Lakewood, Colorado 80225. To arrange an appointment, contact Howard E. Strand, Denver Field Branch Manager, at (303) 236-2931 or hstrand@osmre.gov.

The reports are also available at the OSMRE Oversight Documents website: <https://odocs.osmre.gov>. Adobe Acrobat Reader® is needed to view these documents. Acrobat Reader® is free and can be downloaded at <https://get.adobe.com/reader>. Follow these steps to gain access to the document of interest:

1. Select the applicable governing body and performance period from the drop-down boxes labeled “State or Tribe” and “Evaluation Year” respectively. The search can be narrowed using the optional “Category” or “Keyword” drop-down menus. Lastly, click “Search”.

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2. The oversight documents and reports matching the selected state and evaluation year will appear at the bottom of the page.
3. Select “View” for the document that is of interest and the report will appear for viewing, saving, and/or printing.

The following acronyms may be used in this report:

ACHP	Advisory Council on Historic Preservation
AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AMLPL	New Mexico Abandoned Mine Land Program
BIL	Bipartisan Infrastructure Law
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CMI	Chevron Mining Inc.
DFB	Denver Field Branch
DFD	Denver Field Division
eAMLIS	Enhanced Abandoned Mine Land Inventory System
EMNRD	Energy, Minerals and Natural Resources Department
EY	Evaluation Year
FTE	Full-time equivalent
GIS	Geographic Information System
GPRA	Government Performance and Results Act
NEPA	National Environmental Policy Act
NTTP	National Technical Training Program
OIG	Office of the Inspector General
OSMRE	Office of Surface Mining Reclamation and Enforcement
PAD	Problem Area Description
PDF	Priority Documentation Form
SHPO	State Historic Preservation Office
SMCRA	Surface Mining Control and Reclamation Act
TIPS	Technical Innovation and Professional Services
TSOR	Topic-Specific Oversight Review

(a) Program Administration

New Mexico submitted its AML reclamation plan to OSMRE on February 4, 1981; OSMRE approved the plan on June 17, 1981. The New Mexico AMLP is administered by the Mining and

Minerals Division of the New Mexico Energy, Minerals and Natural Resources Department. AMLP employs a staff of 13 full-time equivalents (FTE) and seven partially funded support positions across a variety of disciplines including project management, engineering, geographic information systems, environmental compliance, geology, and cultural resources.

Overall, the DFB finds that AMLP is successfully implementing its approved AML program. The AMLP-DFB Team maintains open and productive lines of communication and a cooperative relationship. Through these, effective reclamation of high-priority AML hazards and stewardship of grant funds continue.

II. NOTEWORTHY ACCOMPLISHMENTS

Over the past year, DFB monitored New Mexico’s performance in meeting the goals and objectives of SMCRA Section 102. As mentioned, the DFB finds that AMLP is successful in implementing its approved AML program. Results of the oversight reviews used to reach this conclusion are included in Section V of this report.

During EY 2023 New Mexico was awarded a larger grant amount than any previous year due to the BIL. New Mexico is now expected to receive an annual fee-based grant of approximately \$2.8 million each July 1st, along with an additional \$2.4 million from the BIL.

Major accomplishments in AML reclamation during EY 2023 include:

PROJECT CONSTRUCTION

<u>Project Name / PAD Number</u>	<u>County</u>
Harding Pegmatite Mine Safeguarding Project Phase II / NM-214	Taos
Bell/Aztec Fire Fencing / NM-090	McKinley
Enterprise/Brown Fire Fencing / NM-935062	McKinley
Biava No. 3 Fire Fencing / NM-935064	McKinley
Carbon Coal Signage / NM-070	McKinley

PROJECT DEVELOPMENT AND ENGINEERING

<u>Project Name / PAD Number</u>	<u>County</u>
Madrid Stormwater and Erosion Control Project / NM-935060	Santa Fe
Allison Phase IV Project / NM-069	McKinley
Navajo Fire Project / NM-935063	McKinley
Enterprise Brown Fire / NM-935062	McKinley
Boston Hill Mine Safeguarding Project Phase II / NM-935059	Grant
Chloride Flat / NM-237	Grant
Old Turner Ranch / NM-237	Grant
Yankee Canyon / NM-001	Colfax
Abo Mine / NM-935061	Torrance
Red Hill / NM-935065	Sierra
La Ventana Maintenance / NM-037	Sandoval

III. UTILIZATION OF OSMRE TECHNICAL ASSISTANCE

Section 405(f) of SMCRA authorizes State and Tribal AML programs to apply for a grant each year to support the administration of their programs and to fund specific AML reclamation projects. OSMRE awards these AML fee-based grants to New Mexico to fund the State's administration costs for the period of July 1 of one year through June 30 of the following year. The fee-based grant also awards construction funding to New Mexico for a period of three years starting on the initial grant award date. On November 15, 2021, Congress enacted the BIL¹ which authorizes additional funds for eligible states, including New Mexico, over a 15-year

¹ For a thorough description of the effects of the Bipartisan Infrastructure Law (Public Law 117-58, the Infrastructure Investment and Jobs Act), please visit <https://www.osmre.gov/bil>.

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period. These funds may be used to address coal problems including hazards resulting from legacy coal mining, water supply restoration, and the abatement and long-term treatment of acid mine drainage, subsidence, and coal mine fires. The use of BIL AML funding differs from the traditional fee-based AML funding in a few important ways:

- Stand-alone projects classified as Priority 3 under SMCRA section 403(a) are eligible, whether or not the problems are reclaimed in conjunction with adjacent features classified as Priority 1 and Priority 2;
- AMD treatment projects that are not part of a qualified hydrologic unit are eligible;
- BIL funds can be placed in a long-term account to treat persistent coal mine fires, subsidence, and AMD treatment projects; and
- The individual BIL grant cycle is for a period of five years.

In EY 2023, OSMRE awarded New Mexico \$2,829,000 in annual fee-based grant funding and an additional \$2,423,032 in grant funding made available through the BIL, to continue carrying out its mission of protecting people, property, and the environment from hazards related to historic mining operations.

OSMRE also provides direct technical and technological assistance to state AML programs on project-specific efforts including problem investigations, design and analysis, permitting, interagency consultation, and general guidance. OSMRE provides technical and technological support at the national level in the form of conferences, trainings, and initiatives. In 2004 OSMRE formed a regional Technology Transfer Team to support and enhance the technical skills needed to effectively implement regulatory and AML programs; the Technology Transfer Team includes a representative from each state, including New Mexico. OSMRE's training catalog includes offerings from the National Technical Training Program (NTTP) and Technical Innovation and Professional Services (TIPS).

In EY 2023 AMLP staff attended the following course available through OSMRE's NTTP training program:

- Soils and Revegetation
- Erosion and Sediment Control
- Historical and Archaeological Resources
- Subsidence
- Effective Writing
- Underground Mining Technology

In EY 2023 AMLP staff attended the following courses available through OSMRE's TIPS training program:

- Field Data Collection and Management
- ArcHydro GIS Water Resources
- ArcGIS Online Essential Workflows
- Sharing Content to ArcGIS Enterprise
- ArcGIS Pro Essential Workflows
- Spatial Analysis with ArcGIS Pro
- AutoCAD Map 3D and Raster
- Creating Python Scripts for ArcGIS Pro

IV. PUBLIC PARTICIPATION AND OUTREACH

The term "public" means stakeholders, including the citizenry at large, industry, other federal, state, or local agencies, and environmental groups.

(a) OSMRE - DFB

AMLP maintains a database of interested parties the Team uses each year to solicit comments or suggestions from persons and groups who may have an interest in abandoned mine land reclamation and our oversight process. These stakeholders include: state, federal, and local governmental agencies; coal mine permittees; and environmental groups. This year the Team mailed its outreach letter on February 21 soliciting input for EY 2024 review topics in addition to any questions or comments on previous oversight reports or the OSMRE / AMLP oversight process.

For EY 2023 the Team received two public outreach responses. In a letter dated March 30, 2023, Chevron Mining Inc. (CMI) noted its appreciation for the photos and tables provided in the EY 2022 annual evaluation report which provided excellent examples of best management practices. CMI acknowledged AMLP's efforts in public outreach in addition to skill development through participation in TIPS and NTTP training courses. CMI also noted OSMRE's determination in the EY 2022 TSOR stating AMLP's reclamation is successful on a long-term basis. Lastly, CMI acknowledged AMLP's management of grant funds to address public safety and potential environmental hazards at historic mining sites. In an email dated March 3, 2023, Andrew Zink of the New Mexico Historic Preservation Division noted he had reviewed the EY 2022 Annual Evaluation Report and did not have any comments or concerns. The Team always appreciates stakeholder input.

Once every two years OSMRE, in conjunction with AMLP, conducts tribal outreach pursuant to its Programmatic Agreement among AMLP, the New Mexico State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP). Through this outreach, OSMRE solicits comments and input regarding the potential effects of AMLP's minimally invasive activities on properties and regions of significance to tribes, pueblos, and nations. By letter dated October 17, 2022, OSMRE requested input from 34 different tribes, pueblos, and nations and received one response. In a letter dated November 23, 2022, the Historic Preservation Office of the White Mountain Apache Tribe noted its appreciation for the opportunity to provide input and stated they anticipate no adverse effects to the tribe's cultural heritage resources or historic properties.

(b) MMD - AMLP

The New Mexico AMLP interacts with the stakeholders described above and provides opportunities for the public to:

- Determine areas of concern and receive suggestions relative to AML reclamation; and
- provide timely information about OSMRE activities to interested groups.

In EY 2023, AMLP hosted a public scoping meeting at the Raton public library with stakeholders and residents of Raton, New Mexico to describe the proposed Yankee Mine Reclamation/Subsidence Project. The meeting took place on March 9, 2023, and a PowerPoint presentation was given to describe: the proposed project and its purpose and need; and the NEPA process and upcoming draft Environmental Assessment (EA) with an overview of the affected environment and resource topics, anticipated impacts, and mitigation measures. Following AMLP's presentation, the meeting was opened for questions and comments.

On June 8, 2023, AMLP hosted a follow-up public meeting with stakeholders and residents of Raton, New Mexico to discuss the draft EA for the Yankee Mine Reclamation/Subsidence Project. During the meeting AMLP staff presented an overview of the proposed scope of work and related potential environmental impacts. Afterwards, the EA was posted to AMLP's website for additional public comment. Both meetings were advertised on AMLP's website, through newspaper announcements, radio public service announcements, and flyers posted in Spanish and English at the Raton public library.

Other outreach efforts included meetings with Santa Fe County and the Madrid Landowners Association to discuss the objectives of the planned Madrid Stormwater and Erosion Control Project. AMLP continues to use the Esri web application to update its Story Map Journal and promote public awareness of abandoned mines and abandoned mine safety. AMLP also fosters awareness of abandoned mine lands through press releases, the New Mexico Energy, Minerals and Natural Resource Department (EMNRD) website, staff presentations, and through its display

at the State Fair Natural Resources Building in Albuquerque, New Mexico each September. The State Fair display provides exposure to a few thousand visitors annually.

In addition, AMLP's women engineering staff conduct outreach events throughout New Mexico with the goal of raising awareness of the AMLP mission. These outreach events include workshops, presentations, and information sessions about what it means to be a woman in engineering and how to apply engineering principals in everyday jobs. The AMLP receives support from the New Mexico Society of Women Engineers, where AMLP staff serve as President and Secretary. These outreach events primarily involve girls attending K-12 grade schools and some college-aged women.

AMLP staff also hold regular meetings with the BLM, Santa Fe County, and the Madrid Landowners Association for project development in the San Pedro Mountains, Florida Mountains, Caballo Mountains, and the village of Madrid. AMLP also uses its cultural resource consultants to produce popular reports summarizing cultural resource investigations and the mining history of specific project areas for public distribution.

V. RESULTS OF EVALUATION YEAR 2023 REVIEWS

National priority reviews and oversight topic reviews can be located and reviewed at OSMRE's website as listed in the Introduction of this report. Individual reports prepared by OSMRE are part of the oversight process of each state and contain findings and details regarding the evaluation of specific elements of a state's program.

In EY 2023 the AMLP-DFB Team conducted the following Topic-Specific Oversight Reviews as specified in the Performance Agreement:

- 1 (b): Is reclamation successful on a long-term basis?
- 2 (e): Does the information the State entered into eAMLIS agree with information in its files?

No reviews were conducted under Principle of Excellence 3 (the State has systems to properly manage AML funds) during EY 2023. These reviews will be conducted as practicable during EY 2024.

EY 2023 Enhancement and Performance Review New Mexico Abandoned Mine Land Program

Measure

Principle of Excellence: 1. The State's on-the-ground reclamation is successful.

Performance Measure: (b) Is reclamation successful on a long-term basis?

Review Dates

This review was conducted in the spring of 2023. The report was composed in the spring and summer of 2023.

Personnel

Chuck Denton, James Hollen, Meghan McDonald, Lloyd Moiola, and Leeland Murray (New Mexico Abandoned Mine Land Program [AMLPL]); Steve Fluke and Jan Morse (Utah Abandoned Mine Reclamation Program [AMRP]); Jeff Litteral (Colorado Inactive Mine Reclamation Program [IMRP]); Sarah Friend, Haley Hampstead, Hillary Smith, Jim Stark, and Brook Zeller (Office of Surface Mining Reclamation and Enforcement [OSMRE]). Hereinafter referred to as “the Team.”

Background

This is a cyclical review that was last conducted in EY 2022. The initial plan for EY 2023 was to review Performance Measure 1(d) (is the degree to which the State monitors projects during construction appropriate); however, the AMLP had no active construction projects to evaluate at the time of this review. Therefore, the Team chose to evaluate New Mexico under Performance Measure 1(b) because reclamation success is a principal goal of the AMLP.

Population / Sample

The population for this review included all abandoned mine land (AML) projects completed by AMLP ten or more years ago. The sample included six coal projects (Gallup - Gibson/Heaton Mine Closure Project; Caledonia, Otero and Catalpa – Southeastern Engineering and Construction Work; Weaver and Grenko Mine Closures and Reclamation Around Gallup Project; Carthage Mine Safeguard Project; Carthage Gob Reclamation Projects [Phases I and II]; and the Carthage Imprint Seeding Project) and one non-coal project (Socorro West Mine Safeguard Project).

Methodology

The goal of Performance Measure 1(b) is to determine whether AMLP’s reclamation work is successful on a long-term basis. Reclamation work demonstrates long-term success if the AML closures are intact and functioning as designed at the time of inspection. In preparation for this field evaluation, OSMRE personnel reviewed drawings, plans, specifications, change orders, maps, enhanced Abandoned Mine Land Inventory System (eAMLIS) data, photographs, and National Environmental Policy Act documentation. During the week of May 22nd, 2023, the Team traveled throughout the State of New Mexico to evaluate reclaimed AML features at each sample project site. AMLP project managers began each stop on the tour with a discussion of the

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site's: history and significance; technical, environmental, and cultural resource considerations; and challenges, achievements, and lessons learned. OSMRE personnel then recorded their findings for each site.

Findings

The Team evaluated approximately 42 reclaimed AML features over the seven sample projects, including shafts, adits, stope openings, subsidences, and coal gob. Our findings are presented in the tables below.

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Gallup - Gibson/Heaton Mine Closure Project - eAMLIS key NM-063 - Completed in 1988

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Caledonia Mine	Caledonia Gob Pile	Gob Pile	Stabilization via grading, topsoil placement, and seeding	This gob pile showed signs of erosion with large sections of topdressing washed away and moderate gully formation. The eroded topdressing and gob appeared contained in close proximity to the gob pile with the sites' access road acting as a downstream barrier. See Figure 1.

Caledonia, Otero and Catalpa – Southeastern Engineering and Construction Work - eAMLIS key NM-072 - Completed in 1988

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Caledonia Mine	Caledonia Decline	Decline Adit	Backfill	Neither the monument nor the exact location of this feature could be identified in the field. See Figure 2 showing the approximate location of this feature.
Caledonia Mine	Caledonia Shaft	Shaft	Concrete collar with backfill	Neither the monument nor the exact location of this feature could be identified in the field.

Weaver and Grenko Mine Closures and Reclamation Around Gallup - eAMLIS key NM-063 - Completed in 1988

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Weaver Mine	Weaver South Shaft #2	Shaft	Backfill	Neither the monument nor the exact location of this feature could be identified in the field. See Figure 3 showing the approximate location of this feature.
Weaver Mine	Weaver South Shaft #3	Shaft	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.

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Socorro West Mine Safeguard Project - eAMLIS key NM-211 - Completed in 1996

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Nancy Mine	AML-4	Shaft	Concrete slab and preserved headframe	Stable and secure. See Figure 4.
Nancy Mine	AML-4A	Adit	Locking steel bat gate	Stable and secure. See Figure 5.
Nancy Mine	AML-19	Shaft	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.
Nancy Mine	AML-18	Stope	Backfill	Neither the monument nor the exact location of this feature could be identified in the field. See Figure 6 showing the approximate location of this feature.
Nanvy Mine	AML-18B	Vent Hole	Concrete plug with culvert and steel grate	Rocks had been dropped through the steel grate into the culvert and had stacked up close to the grate opening. Future maintenance in the area will include plans to remove the rocks. See Figure 7.
Nancy Mine	AML-18A	Vent Hole	Concrete plug	Stable and secure. See Figure 8.
Nancy Mine	AML-12	Stope	Culvert with bat cupola	This feature was originally closed in 1996 with a culvert and steel grate. Maintenance was performed on this feature in 2005 to remove rocks that had been dropped through the steel grate, and to replace the steel grate with a bat cupola. The feature was stable and secure. See Figure 9.
Nancy Mine	AML-13	Stope	Culvert with bat cupola	This feature was originally closed in 1996 with a culvert and steel grate. Maintenance was performed on this feature in 2005 to remove rocks that had been dropped through the steel grate, and to replace the steel grate with a bat cupola. The feature was stable and secure. See Figure 10.
Nancy Mine	AML-13.5	Stope	Toroid tire plug	Stable and secure. See Figure 11.
Nancy Mine	AML-14	Stope	Horizontal bat grate	This feature was covered by rockfall from the adjacent cliff at the time of inspection.

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Nancy Mine	AML-15	Shaft	Culvert with horizontal steel grate	Stable and secure. See Figure 12.
Nancy Mine	AML-16	Shaft	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.
Nancy Mine	AML-17	Shaft	Toroid tire plug with horizontal bat grate	Stable and secure. See Figure 13.
Nancy Mine	Shaft #2	Shaft	Backfill	This feature had subsided open and will require maintenance. See Figure 14.
Nancy Mine	Shaft #1	Shaft	Backfill	The area where this feature was located was covered with tumbleweeds making it difficult to safely determine whether the backfill was successful. See Figure 15.
Black Canyon Mine	AML-6A	Shaft	Cable net	Stable and secure. See Figure 16.
Black Canyon Mine	AML-8	Stope	Backfill	Stable and secure. See Figure 17.
Black Canyon Mine	AML-6	Adit	Locking steel bat gate	Stable and secure. See Figure 18.
Black Canyon Mine	AML-7	Stope	Locking steel bat gate	Stable and secure. See Figure 19.
Black Canyon Mine	AML-8A	Stope	Cable net	Stable and secure. See Figure 20.
Black Canyon Mine	AML-11	Shaft	Concrete collar and steel grate	Stable and secure. See Figure 21.

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Black Canyon Mine	AML-9	Stope	Backfill	Stable and secure. See Figure 22.
Black Canyon Mine	AML-10	Shaft	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.
Black Canyon Mine	AML-5	Adit	Locking steel bat gate	Stable and secure. See Figure 23.

Carthage Mine Safeguard Project - eAMLIS keys NM-059, NM-057, NM-058, NM-205 - Completed in 1993

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Kinney Mine No. 3	R-10	Decline adit	Backfill	This feature had subsided open. Planned maintenance for the fall of 2023 will install a decline culvert and bat gate in addition to fencing around the perimeter of the feature. See Figure 24.
Government and Duffy Mines	C-2	Shaft	Backfill	Stable and secure. See Figure 25.
Government and Duffy Mines	C-3	Shaft	Backfill	Stable and secure. See Figure 26.
Government and Duffy Mines	R-15	Decline adit	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.
Bernal Mine	R-5	Decline adit	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.

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Bernal Mine No. 1	R-6	Decline adit	Backfill	Stable and secure. See Figure 27.
Bernal Mine No. 2	R-4	Decline adit	Backfill	Neither the monument nor the exact location of this feature could be identified in the field.

Carthage Gob Reclamation Project Phase I - eAMLIS keys NM-057, NM-058 - Completed in 1997

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Government and Duffy Mines	Gob 2-27	Gob pile	Stabilization via grading, topsoil placement, and seeding	An experimental practice of excavating stock ponds for cover material was used for the reclamation of this gob pile. The material proved to be too silty which inhibited vegetation growth and expedited erosion. This gob pile had very little vegetation and large sections where the cover material had been eroded. Some rebar remained from straw wattle installation and should be removed with future maintenance. See Figure 28.
Kinney Mine No.3 (also known as the Gilmore Mine)	Gob 4-3	Gob pile	Stabilization via grading, topsoil placement, and seeding	Some rebar remains from straw wattle installation and requires removal. See Figure 29.

Carthage Gob Reclamation Project Phase II - eAMLIS keys NM-058, NM-059 - Completed in 1999

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Bernal Mine No. 1	Gob 2-9 and Dozer Basins	Gob pile	Stabilization via grading, topsoil placement, and seeding	This gob pile had very little vegetation, some mild erosional features, and straw wattles remaining that require removal. Vegetation appeared to be growing only in areas where small depressions existed in the topdressing. During future

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				maintenance this vegetation may benefit from roughening of the topdressing layer which creates microclimates to promote vegetation growth. See Figure 30.
Bernal Mine No. 1	Gob 2-6	Gob pile	Stabilization via grading, topsoil placement, and seeding	This gob pile had very little vegetation. Some mild erosional features and straw wattles, rebar, and fencing remained that require removal. Almost all of the topdressing was eroded, and vegetation was sparse. See Figure 31.
Bernal Mine No. 2	Gob 2-1	Gob pile	Stabilization via grading, topsoil placement, and seeding	Some straw wattles and T-posts remained that require removal. See Figure 32.

Carthage Imprint Seeding Project - eAMLIS key NM-058 - Completed in 2009

Mine	Feature ID	Feature Type	Reclamation Method	Comments
Bernal Mine No. 1	Gob 2-8	Gob pile	Stabilization via grading, topsoil placement, and seeding	Some vegetation was present; however, several surrounding unreclaimed gob piles appeared to have more vegetation than the reclaimed gob pile. Small sections of the gob pile showed signs of erosion where the topdressing had eroded away. See Figure 33.

Conclusion

Overall, OSMRE found AMLP's reclamation to be successful on a long-term basis. AMLP's mine closures were often custom designs, but compatible as necessary, durable, and compatible with the visual resources of the surrounding environment. AMLP noted the problem type and location where potential vandalism, erosion, or natural subsidence was an issue in order to prioritize future maintenance efforts. Each project site showcased different stabilization techniques AMLP uses where high elevation, steep slopes, landowner preference, historic preservation considerations, and low rainfall were all factors.

Some maintenance will be required to ensure continued protection of the public, as is typical with evaluations of long-term reclamation success. At the Gallup-Gibson/Heaton Mine Closure Project site and the Carthage Gob Reclamation Project site (Phases I and II), several gob piles showed signs of erosion and sparse vegetation in addition to remaining rebar, straw wattles, fencing, and T-posts from previous erosion control efforts. Future maintenance will include the removal of rebar, straw wattles, fencing, and T-posts. AMLP has attempted several times to promote vegetation growth and erosion control at these sites with little success due to the extremely dry and hot climate. Future maintenance may be conducted at these sites for the purpose of reducing erosion and promoting vegetation growth; however, these sites are not high priorities at this time.

At the Socorro West Mine Safeguard Project site vent hole feature AML-18B will require maintenance to remove rocks from the culvert that have been dropped through the steel grate. Additionally, shaft #2 will need to be re-backfilled or secured with an alternate closure option to prevent the public from gaining access. When maintenance work is conducted at shaft #2, AMLP staff should investigate the status of the closure at shaft #1 which could not be safely determined during the Team's inspection. At the Carthage Mine Safeguard Project site, decline adit feature R-10 will be maintained with the installation of a decline culvert and bat gate in the fall of 2023 as part of the Carthage Maintenance Project.

Lastly, it is important to note that several features and their monuments could not be located during the course of this inspection. For the purpose of this evaluation, the inability to locate these features indicates successful reclamation on a long-term basis.

Figures



Figure 1: Gallup - Gibson/Heaton Mine Closure Project, Caledonia Mine, Caledonia Gob Pile. The red line shows the approximate location of the sites' access road.



Figure 2: Caledonia, Otero and Catalpa – Southeastern Engineering and Construction Work, Caledonia Mine, Caledonia Decline (approximate location).



Figure 3: Weaver and Grenko Mine Closures and Reclamation Around Gallup, Weaver Mine, Waver South Shaft #2 (approximate location).



Figure 4: Socorro West Mine Safeguard Project, Nancy Mine, AML-4.



Figure 5: Socorro West Mine Safeguard Project, Nancy Mine, AML-4A.



Figure 6: Socorro West Mine Safeguard Project, Nancy Mine, AML-18 (approximate location).



Figure 7: Socorro West Mine Safeguard Project, Nancy Mine, AML-18B.



Figure 8: Socorro West Mine Safeguard Project, Nancy Mine, AML-18A.

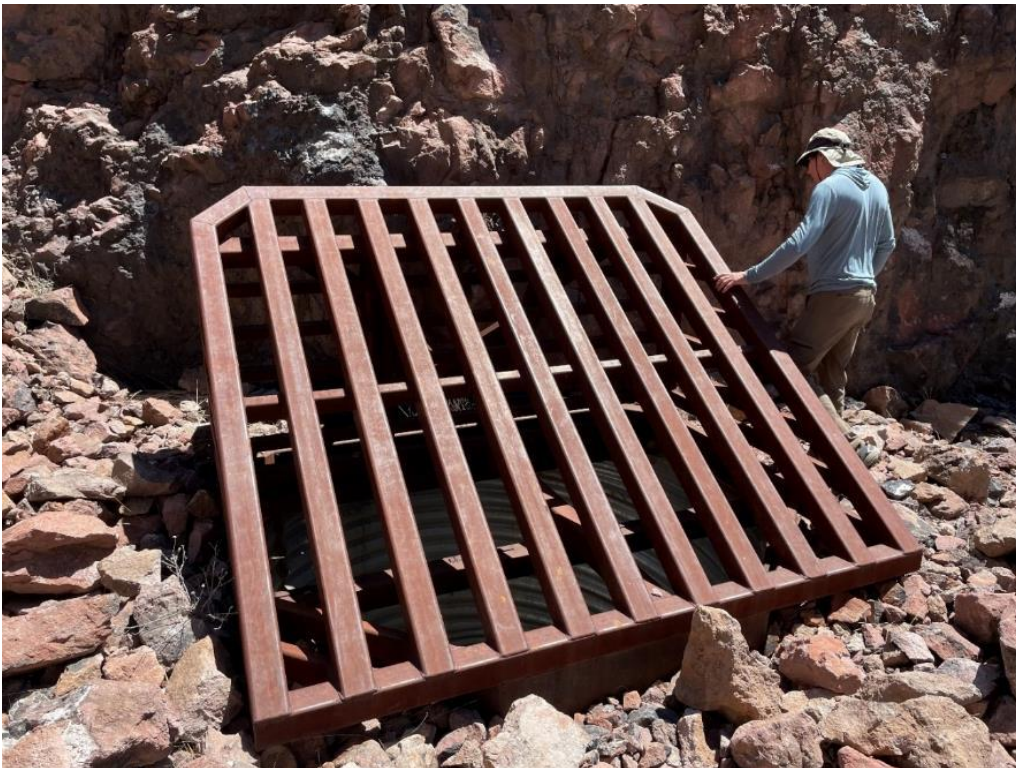


Figure 9: Socorro West Mine Safeguard Project, Nancy Mine, AML-12.



Figure 10: Socorro West Mine Safeguard Project, Nancy Mine, AML-13.



Figure 11: Socorro West Mine Safeguard Project, Nancy Mine, AML-13.5.



Figure 12: Socorro West Mine Safeguard Project, Nancy Mine, AML-15.



Figure 13: Socorro West Mine Safeguard Project, Nancy Mine, AML-17.



Figure 14: Socorro West Mine Safeguard Project, Nancy Mine, Shaft #2.



Figure 15: Socorro West Mine Safeguard Project, Nancy Mine, Shaft #1.



Figure 16: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-6A.



Figure 17: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-8.



Figure 18: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-6.



Figure 19: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-7.



Figure 20: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-8A.



Figure 21: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-11.



Figure 22: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-9.



Figure 23: Socorro West Mine Safeguard Project, Black Canyon Mine, AML-5.

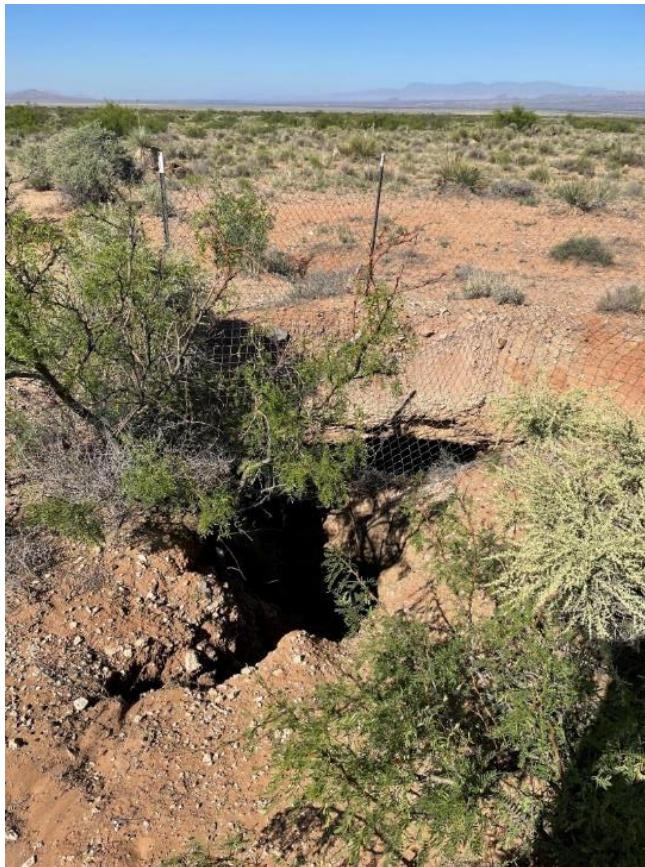


Figure 24: Carthage Mine Safeguard Project, Kinney Mine No. 3, R-10.



Figure 25: Carthage Mine Safeguard Project, Government and Duffy Mines, C-2.



Figure 26: Carthage Mine Safeguard Project, Government and Duffy Mines, C-3.



Figure 27: Carthage Mine Safeguard Project, Bernal Mine No. 1, R-6.



Figure 28: Carthage Gob Reclamation Project Phase I, Government and Duffy Mines, Gob 2-27.



Figure 29: Carthage Gob Reclamation Project Phase I, Kinney Mine No. 3, Gob 4-3.



Figure 30: Carthage Gob Reclamation Project Phase II, Bernal Mine No. 1, Gob 2-9 and Dozer Basins.



Figure 31: Carthage Gob Reclamation Project Phase II, Bernal Mine No. 1, Gob 2-6.



Figure 32: Carthage Gob Reclamation Project Phase II, Bernal Mine No. 2, Gob 2-1.



Figure 33: Carthage Gob Reclamation Project Phase II, Bernal Mine No. 1, Gob 2-8.

**New Mexico Abandoned Mine Land Program
2023 Topic-Specific Oversight Review**

Measure

Principle of Excellence: 2. The State's abandoned mine land (AML) procedures are efficient and effective.

Performance Measure: (e) Does the information the State entered into the Abandoned Mine Land Inventory System (AMLIS) beginning July 1, 2004, agree with information in its files?

Review Dates

This review was conducted throughout EY 2023.

Personnel

Lloyd Moiola, New Mexico Abandoned Mine Land Program (AMLPL) and
Brook Zeller, Office of Surface Mining Reclamation and Enforcement (OSMRE).

Background

This is the seventh annual review of this performance measure. OSMRE Directive AML-1, “Abandoned Mine Land Inventory Manual” effective December 12, 2012, requires state and tribal AML programs to update Problem Area Descriptions (PAD) in eAMLIS when OSMRE approves project funding and upon project completion. AML-1 also requires state and tribal AML programs to complete Priority Documentation Forms (PDF) when adding new problem-types to eAMLIS designated as high priority hazards (Priority 1 or Priority 2).

In September 2003, the U.S. Department of the Interior, Office of the Inspector General (OIG), issued report number 2003-I-0074 based on its review of AMLIS data for four eastern states’ AML programs. The report criticized the accuracy of AMLIS data and recommended corrective action. Specifically, the OIG’s review concluded that AMLIS data did not match data in those states’ files. In part, the OIG recommended establishing “a quality control system that ensures that States, Tribes, and OSM[RE], as applicable, review and certify the accuracy of data entered into AMLIS.”

OSMRE responded to the OIG’s recommendation with two new reviews. OSMRE reviewed the first as performance measure 2(d) in EY 2005. This assessed whether the states had procedures in place to ensure and certify the accuracy of data entered in AMLIS. The second requirement, performance evaluation 2(e), was first implemented in EY 2006 and annually compares a sample of AMLIS PAD data to the State’s respective project files to ensure they agree. OSMRE did not conduct this evaluation in EY 2011 due to complications with the transition to the enhanced Abandoned Mine Land Inventory System (eAMLIS). OSMRE reasoned it would be difficult to conduct a credible evaluation when state and federal staff had not had sufficient time to learn and update eAMLIS.

Methodology

The population for this review included all project completion data entered into AMLIS or eAMLIS since July 1, 2004, which have not already been evaluated under 2(e). AMLPL uses the information in its individual project files to update eAMLIS. AMLPL also uses this information to produce Project Completion Summaries (PCS) which aid in this evaluation. OSMRE compares the information in the PCS to the costs, quantities, keywords, and construction completion dates contained in the corresponding eAMLIS PADs. OSMRE also ensures the PADs under evaluation contain the additional information required by AML-1 such as PDFs and 1:24,000 scale / USGS 7.5-minute quadrangle maps showing the approximate location of each AML problem.

Findings**1. Bonito Lake (non-coal)**

The Bonito Lake Mines Project is the only project that has been completed under the Bonito Lake PAD, NM-234. The project was designed to safeguard nine Vertical Openings and 17 Portals within the Lincoln Nation Forest, approximately 10 miles northwest of Ruidoso, New Mexico. The work included backfilling, installing foam plugs, constructing bulkheads and grates, and seeding and mulching the disturbed areas. Since completion of the project in 1995, one Portal has re-opened and will be addressed with a future maintenance project known as the Bonito Lake Adit 10 Maintenance Project.

- a. eAMLIS PAD NM-234 (Bonito Lake) contained a 7.5-minute quadrangle map; however, the map did not show the approximate location of each AML problem as required by AML-1. AMLP updated the map to show the location of each AML problem as well as the PAD boundary and uploaded the corrected map to eAMLIS PAD NM-234.
- b. Upon initial review, a PDF was present for the one Portal that will receive future maintenance and the nine Vertical Openings safeguarded as part of the Bonito Lakes Mines Project; however, no PDF had been uploaded for the 17 Portals that were part of the Bonito Lake Mine Project. While PDFs are not required for these problems since the Bonito Lake Mines Project was completed prior to the transition to eAMLIS, AMLP uploaded a PDF for the 17 Portals for consistency.
- c. Grant 0G579109 funded project construction.
- d. Construction ran from November 7, 1994, to March 24, 1995. All project start and completion dates were accurately entered in eAMLIS.
- e. The project resulted in two change orders.
- f. Future maintenance will be conducted for one Portal as part of the Bonito Lake Adit 10 Maintenance Project at an estimated cost of \$19,500.
- g. The Bonito Lake PAD PCS indicated nine Vertical Openings and 17 Portals were safeguarded at costs of \$51,270.42 and \$52,882.18 respectively. Additionally, the PCS states that future maintenance will be conducted on one Portal at an estimated cost of \$19,500. These figures match the construction costs reported in the Bonito Lake eAMLIS PAD NM-234.

2. Pecos (coal)

Two projects have been completed under the Pecos PAD, NM-047: the Pecos Coal Mine Closure Project and the La Posada Mine Closure Project. The Pecos Coal Mine Closure Project was designed to safeguard one Portal located in the Pecos River

Canyon, approximately five miles north of Pecos, New Mexico. The work included constructing a concrete block and rock bulkhead. During construction of the closure, a second Portal was discovered approximately 200-feet south. This Portal was later closed as part of the La Posada Mine Closure Project by constructing a concrete block and rock bulkhead.

- a. eAMLIS PAD NM-047 (Pecos) does not require a 7.5-minute quadrangle map since both projects were fully complete prior to the transition to eAMLIS; however, AMLP has uploaded a 7.5-minute quadrangle map for completeness and consistency.
- b. PDFs are not required for either project since they were fully completed prior to the transition to eAMLIS; however, AMLP uploaded PDFs for consistency.
- c. Grant 06575102 funded project construction.
- d. Construction for the Pecos Coal Mine Closure Project ran from August 27, 1990, to August 29, 1990. Construction for the La Posada Mine Closure Project ran from March 1, 1991, to March 9, 1991. All project start and completion dates were accurately entered in eAMLIS.
- e. No change orders were initiated for the Pecos Coal Mine Closure Project or the La Posada Mine Closure Project, and no maintenance costs have been incurred.
- f. The Pecos Coal Mine Closure Project PCS indicates one Portal was safeguarded at a cost of \$1,949.44. This figure matches the construction costs reported in the Pecos eAMLIS PAD NM-047.
- g. The La Posada Mine Closure Project PCS indicates one Portal was safeguarded at a cost of \$3,683.00. This figure matches the construction costs reported in the Pecos eAMLIS PAD NM-047.
- h. The Problem Summary Table notes one unit of Priority 3 Gob under the “unfunded” category for \$45,000. This problem was recorded as part of a survey conducted in 2015.

3. Turquoise Hill (non-coal)

The Turquoise Hill PAD, NM-225, catalogues work completed as part of the Turquoise Hill Project and the Cerrillos Central/Bonanza Creek Mine Safeguard Project, Phase I. The Turquoise Hill Project was designed to safeguard 25 Vertical Openings and five Portals in the Cerrillos Mining District located in Santa Fe County, New Mexico. The work included backfilling with adjacent waste material, installing bat compatible gates, steel mesh, and fencing. Two additional Vertical Openings were later safeguarded on Turquoise Hill as part of the Cerillos Central/Bonanza Creek

Mine Safeguard Project, Phase I, which secured 53 abandoned mine features nearby in Santa Fe County.

- a. eAMLIS PAD NM-225 (Turquoise Hill) contains a 7.5-minute quadrangle map showing the approximate location of each AML problem as required by AML-1.
- b. The PAD contains PDFs for the Priority 1 Portals and Vertical Openings as required by AML-1.
- c. Grants 0G579109 and EMN60021 funded project construction.
- d. Construction for the Turquoise Hill Project began April 16, 1997 and ended June 25, 1997. Construction for the two additional Vertical Openings closed on Turquoise Hill as part of the Cerillos Central/Bonanza Creek Mine Safeguard Project, Phase I, began June 13, 2011 and ended September 30, 2011.
- e. The Turquoise Hill project resulted in two change orders, and no maintenance costs have been incurred.
- f. The Turquoise Hill PCS indicates 25 Vertical Openings were safeguarded at a cost of \$102,493.71 and five Portals were safeguarded at a cost of \$13,084.67. Additionally, the Turquoise Hill PCS reports two additional Vertical Openings were closed as part of the Cerillos Central/Bonanza Creek Mine Safeguard Project, Phase I at a cost of \$2,445. These figures match the construction costs reported in the Turquoise Hill eAMLIS PAD NM-225.

4. **Fite Ranch (coal)**

The Fite Ranch eAMLIS PAD, NM-058, encompasses work accomplished by the Carthage Mine Safeguard Project, the Carthage Gob Reclamation Projects (Phases I-III), the Carthage Imprint Seeding Project, and the Carthage Fencing Maintenance Project. The work accomplished during these projects was primarily located approximately nine miles east of San Antonio, New Mexico in Socorro County. The work included backfilling, installing bat compatible grates and fences, and the reclamation of several Gob piles. AMLP has planned future maintenance for this PAD for 2023 as part of the Carthage Maintenance Project. The maintenance project will re-secure two Vertical Openings and one Portal through the use of a Polyurethane foam plug (PUF), the reconstruction of a timber mat closure with a more durable material, and the redesign/replacement of a current gate locking system.

- a. eAMLIS PAD NM-058 (Fite Ranch) contains a 7.5-minute quadrangle map showing the approximate location of each AML problem as required by AML-1.

- b. eAMLIS PAD NM-058 contains PDFs for the Priority 1 Portals, Priority 1 Vertical Openings, Priority 2 Portals, and Priority 2 Vertical Openings as required by AML-1. The Priority 3 Gob does not require a PDF.
- c. AMLP was unable to locate funding information for the Carthage Mine Safeguard Project or the Carthage Gob Reclamation Projects (Phases I-III). These projects were conducted between 1993 and 2001, prior to the transition to eAMLIS. The Carthage Imprint Seeding Project was funded by grants EMN60014 and S08AM12751, while the Carthage Fencing Maintenance Project was funded by grants EMN60026 and S10AB20005.
- d. The construction period for each project ran as follows:
 - i. Carthage Mine Safeguard Project: May 3, 1993 – June 22, 1993
 - ii. Carthage Gob Reclamation Project – Phase I: October 4, 1997 – June 30, 1999
 - iii. Carthage Gob Reclamation Project – Phase II: March 25, 1999 – June 30, 2000
 - iv. Carthage Gob Reclamation Project – Phase III: May 17, 2000 – May 3, 2001
 - v. Carthage Imprint Seeding: June 15, 2009 – June 22, 2009
 - vi. Carthage Fencing Maintenance: July 30, 2009 – June 30, 2013
- e. Change orders and maintenance costs associated with projects under the Fite Ranch eAMLIS PAD NM-058 are as follows:
 - i. Carthage Mine Safeguard Project: two change orders
 - ii. Carthage Gob Reclamation Project – Phase I: two change orders, no maintenance costs
 - iii. Carthage Gob Reclamation Project – Phase II: one change order, no maintenance costs
 - iv. Carthage Gob Reclamation Project – Phase III: two change orders, no maintenance costs
 - v. Carthage Imprint Seeding Project: one change order, no maintenance costs
 - vi. Carthage Fencing Maintenance: no change orders, \$2,688 in maintenance costs
- f. The Fite Ranch PCS indicates eight Priority 1 Vertical Openings were safeguarded at a cost of \$23,287.86, nine Priority 1 Portals were safeguarded at a cost of \$27,271.84, and 26 acres of Gob were reclaimed at a cost of \$614,711.47.
- g. Future maintenance is planned for one Portal and two Vertical Openings associated with the Fite Ranch PAD as part of the Carthage Maintenance

Project and will cost \$2,000 and \$86,000 respectively. These figures match the construction costs reported in the Fite Ranch eAMLIS PAD NM-058.

For all four sample projects the following general findings also apply:

1. As required by 30 CFR § 886.21 AMLP updated eAMLIS with completion data for the sample PADs. These data match the information contained in AMLP's Project Completion Summaries. Applicable problem type units were also updated to reflect completion of the work;
2. AMLP uploaded maps and PDFs to eAMLIS for each high priority problem type as required by OSMRE Directive AML-1;
3. AMLP's project information was well organized and easy to interpret; and
4. The cost data (unfunded, funded, completed, total) in each eAMLIS PAD's problem summary table were prorated by keyword, as applicable.

Conclusion

Overall, the information entered in the sample PADs evaluated above was accurate, well organized, and in many instances contained more information than required by AML-1. One minor discrepancy with the Bonito Lake PAD map was identified and promptly corrected by AMLP. AMLP was unable to locate funding information for four of the projects completed under the Fite Ranch PAD. Construction for these four projects took place between 1993 and 2001, and in 2009 the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) changed accounting systems. As a result of EMNRD's transition to a new accounting system, AMLP is unable to access some grants information associated with projects conducted prior to 2009. Additionally, paper files for construction contracts typically refer to an internal tracking number rather than an OSMRE grant number, making the grants associated with these four projects difficult to locate. OSMRE found no further problems in our comparison of the data contained in AMLP's Project Completion Summaries and the information reported by eAMLIS. Therefore, no corrective actions are recommended at this time. OSMRE appreciates AMLP's continued assistance with reporting comprehensive and accurate AML accomplishment and construction cost data in eAMLIS. OSMRE looks forward to collaborating with AMLP in the coming EY to review and improve additional PADs while continuing to rebuild institutional knowledge with respect to eAMLIS best practices.

VI. TABLES

Summary of Core Data to Characterize the AML Program

The following tables present summary data pertinent to abandoned mine land activities carried out by the New Mexico AMLP. Unless otherwise specified, the reporting period for the data contained in the tables is EY 2023. Other data and information used by DFB in its evaluation of AMLP's performance are available for review in the evaluation file maintained by the Denver Field Branch.

Because of the significant variations from state to state and the differences between state programs, the summary data should not be used to compare one state to another.

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Table 1 – New Mexico’s Status of AML Inventory all Priority 1, 2, and 3 Coal Hazards on June 30, 2023					
	High Priority		Elevated Priority 3	Stand-Alone Priority 3 (Not adjacent or in conjunction w/ P1&2)	Total
	Priority 1	Priority 2			
UNFUNDED					
GPRA Acres	88	64.56	N/A	104.9	257.46
Dollars	\$5,604,556	\$11,060,460	N/A	\$6,225,000	\$ 20,890,016
FUNDED					
GPRA Acres	0	7.2	3	18	28.2
Dollars	0	\$358,997	\$20,300	\$318,000	\$ 697,297
COMPLETED					
GPRA Acres	133.1	140.49	81.9	115.7	471.19
Dollars	\$7,868,258.16	\$7,485,215.81	\$4,894,565.99	\$3,695,399.13	\$ 23,943,439.09

Table 1a – New Mexico’s Status of AML Inventory all Priority 1 Non-Coal Hazards on June 30, 2023

	High Priority		Elevated Priority 3	Stand-Alone Priority 3 (Not adjacent or in conjunction w/ P1&2)	Total
	Priority 1	Priority 2			
UNFUNDED					
GPRA Acres	47.5	N/A	N/A	N/A	47.5
Dollars	\$2,938,386	N/A	N/A	N/A	\$2,938,386
FUNDED					
GPRA Acres	16.7	N/A	N/A	N/A	16.7
Dollars	\$855,517	N/A	N/A	N/A	\$855,517
COMPLETED					
GPRA Acres	186.87	N/A	N/A	N/A	186.87
Dollars	\$7,732,605.49	N/A	N/A	N/A	\$7,732,605.49

Table 2 – New Mexico’s Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining Priority 1 and 2 Coal Hazards as of June 30, 2023

PROBLEM TYPE (keyword)																		
	Clogged Stream Lands (CSL) (acres)	Clogged Stream (CS) (miles)	Dangerous Piles & Embankments (DPE)(acres)	Dangerous Impoundment (DI) (count)	Dangerous Highwall (DH) (feet)	Dangerous Slide (DS) (acres)	Gases: Hazardous /Explosive (GHE)	Hazardous Equip. /Facilities (HEF) (count)	Hazardous Water Body (HWB) (count)	Industrial/Residential Waste (IRW)	Polluted Water: Agri/Industrial (PWAD)(count)	Polluted Water: Human Consumption (PWHC)(count)	Portal (P) (count)	Subsidence (S) (acres)	Surface Burning (SB) (acres)	Underground Mine Fire (UMF) (acres)	Vertical Opening (VO) (count)	TOTAL
UNRECLAIMED / REMAINING HAZARDS (Unfunded)																		
Units	0	0	36	0	0	0	0	16	1	0	3	0	72	80	4.12	1.14	25	N/A
GPRA Acres	0	0	36	0	0	0	0	1.6	5	0	15	0	7.2	80	4.12	1.14	2.5	152.56

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Dollar s	0	0	\$6,675,690	0	0	0	0	\$1,094,500	\$15,000	0	\$610,000	0	\$935,000	\$5,640,871.06	\$1,310,000	\$675,000	\$286,000	\$16,665,016	
ANNUAL RECLAMATION EY 2023 only (Completed)																			
Units	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.19	0	0	N/A
GPRA Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.19	0	0	1.19
Dollar s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$51,807.15	0	0	\$51,807.15	
HISTORICAL RECLAMATION 1978 – 2023 (Completed)																			
Units	1.5	6	26.5	0	0	0	0	14	0	0	3	1	261	81.8	37.19	32	86	N/A	
GPRA Acres	10	30	26.5	0	0	0	0	1.4	0	0	15	5	26.1	81.8	37.19	32	8.6	273.59	
Dollar s	\$155,000	\$1,089,715.41	\$2,771,123	0	0	0	0	\$113,840	0	0	\$2,430,980.07	\$1,728	\$1,316,130.30	\$5,640,871.06	\$753,543.15	\$234,983	\$845,559.98	\$15,353,473.90	

Table 2a – New Mexico’s Accomplishments in Eliminating Health and Safety Hazards Related to Past Mining Priority 1 Non-Coal Hazards as of June 30, 2023

PROBLEM TYPE (keyword)																		
	Clogged Stream (CS) (miles)	Clogged Stream Lands (CSL) (acres)	Dangerous Piles & Embankments (DPE) (acres)	Dangerous Highwall (DH) (feet)	Dangerous Impoundment (DI) (count)	Dangerous Slide (DS) (acres)	Gases: Hazardous /Explosive (GHE) (count)	Hazardous Equip. /Facilities (HEF) (count)	Hazardous Water Body (HWB) (count)	Industrial/Residential Waste (IRW) (acres)	Portal (P) (count)	Polluted Water: Agri/Industrial (PWAD)(count)	Polluted Water: Human Consumption (PWHC)(count)	Subsidence (S) (acres)	Surface Burning (SB) (acres)	Underground Mine Fire (UMF) (acres)	Vertical Opening (VO) (count)	TOTAL
UNRECLAIMED / REMAINING HAZARDS (Unfunded)																		
Units		0	0	3,000	0	0	0	0	0	0	96	0	0	0	0	0	382	N/A
GPRA Acres		0	0	42.9	0	0	0	0	0	0	9.6	0	0	0	0	0	38.2	90.7
Dollars		0	0	\$426,105	0	0	0	0	0	0	\$642,155	0	0	0	0	0	\$2,320,231	\$3,388,491

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ANNUAL RECLAMATION EY 2023 only (Completed)																		
Units	0	0	0	75	0	0	0	0	0	0	1	0	0	0	0	0	2	N/A
GPRA Acres	0	0	0	1.1	0	0	0	0	0	0	0.1	0	0	0	0	0	0.2	1.40
Dollars	0	0	0	\$16,166.34	0	0	0	0	0	0	\$17,230.82	0	0	0	0	0	\$74,798.83	\$108,195.99
HISTORICAL RECLAMATION 1978 – 2023 (Completed)																		
Units	0	0.5	4	286	0	0	0	7	0	0	407	0	0	13	0	0	1230	N/A
GPRA Acres	0	0.5	4	4.08	0	0	0	0.7	0	0	46.1	0	0	13	0	0	125.7	194.08
Dollars	0	\$2,500	\$24,500	\$53,292	0	0	0	\$2,460	0	0	\$2,240,021.51	0	0	\$31,450	0	0	\$5,452,235.98	\$7,806,459.49

Table 3 – New Mexico’s Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 and SMCRA section 403(b) Coal Hazards as of June 30, 2023

PROBLEM TYPE (keyword)

	Bench, Solid Bench, Fill Bench (BE) (acres)	Equipment and Facilities (EF) (count)	Gob (GO) (acres)	Haul Road (HR) (acres)	Highwall (H) (feet)	Industrial/Residential Waste Dump (DP) (acres)	Mine Opening (MO) (count)	Pit, Open Pit, Strip Pit (PI) (acres)	Slump (SP) (acres)	Slurry (SL) (acres)	Spoil, Spoil Bank (SA) (acres)	Water (WA) (gallons)	Other (specify)	Water Supplies (WS) – Section 403(b) (count)	TOTAL
UNRECLAIMED / REMAINING HAZARDS (Unfunded)															
Units	9	5	183	8	0	0	13	0	0	0	39.5	3	0	0	N/A
GPRA Acres	9	0.5	183	8	0	0	1.3	0	0	0	39.5	3	0	0	244.3
Dollars	\$720,000	\$350,000	\$15,344,090	\$580,000	0	0	\$122,000	0	0	0	\$1,720,000	\$200,000	0	0	\$19,036,090

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ANNUAL RECLAMATION EY 2023 only (Completed)															
Units	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A
GPR Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dollars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HISTORICAL RECLAMATION 1978 – 2023 (Completed)															
Units	3	9	138.9	48.5	0	0	13	2	0	2	1	0	0	0	N/A
GPR Acres	3	0.9	138.9	48.5	0	0	1.3	2	0	2	1	0	0	0	197.6
Dollars	\$7,301	\$10,634	\$4,808,366.12	\$3,633,933	0	0	\$123,540	\$3,890	0	\$1	\$2,300	0	0	0	\$8,589,965.12

Table 3a – New Mexico’s Accomplishments in Eliminating Environmental Problems Related to Past Mining Priority 3 and SMCRA section 403(b) Non-Coal Hazards as of June 30, 2023

PROBLEM TYPE (keyword)

	Bench, Solid Bench, Fill Bench (BE) (acres)	Equipment and Facilities (EF) (count)	Gob (GO) (acres)	Haul Road (HR) (acres)	Highwall (H) (feet)	Industrial/Residential Waste Dump (DP) (acres)	Mine Opening (MO) (count)	Pit, Open Pit, Strip Pit (PI) (acres)	Slump (SP) (acres)	Slurry (SL) (acres)	Spoil, Spoil Bank (SA) (acres)	Water (WA) (gallons)	Other (specify)	Water Supplies (WS) – Section 403(b) (count)	TOTAL
UNRECLAIMED / REMAINING HAZARDS (Unfunded)															
Units	0	0	0	0	0	0	0	0	0	0	360	0	0	0	N/A
GPRA Acres	0	0	0	0	0	0	0	0	0	0	360	0	0	0	360

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

U.S. Department of the Interior

Dollars	0	0	0	0	0	0	0	0	0	0	0	\$72,000	0	0	0	\$72,000
ANNUAL RECLAMATION EY 2023 only (Completed)																
Units	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A
GPRA Acres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dollars	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HISTORICAL RECLAMATION 1978 – 2023 (Completed)																
Units	0	18	0	0	0	0	25	0	0	0	330	0	0	0	N/A	
GPRA Acres	0	1.8	0	0	0	0	2.5	0	0	0	330	0	0	0	334	
Dollars	0	\$9,000	0	0	0	0	\$115,000	0	0	0	\$41,643	0	0	0	\$165,643	

**Table 4 – (State/Tribe) Public Well-Being Enhancement
(All Priority 1, 2, and 3 Coal AML projects completed during EY 2023)**

#	PAD Number	Project Name	Problem Type(s) Reclaimed	GPRA Acres	Cost	Number of People with Reduced Exposure Potential (State Estimated /or/ Census Data)
1	NM-070, NM-090, NM-935064	Gallup Coal Fire Fencing Project	SB	1.19	\$51,807.15	1,494
TOTAL				1.19	\$51,807.15	1,494

**Table 4a – (State/Tribe) Public Well-Being Enhancement
(All Priority 1, 2, and 3 Non-Coal AML projects completed during EY 2023)**

#	PAD Number	Project Name	Problem Type(s) Reclaimed	GPRA Acres	Cost	Number of People with Reduced Exposure Potential (State Estimated /or/ Census Data)
1	NM-214	Harding Pegmatite Mine Safeguarding Phase II	VO, P, DH	1.4	\$108,195.99	57
TOTAL				1.4	\$108,195.99	57

Table 6 – New Mexico’s AML Projects Started and / or Completed During EY 2023

Projects Started	Projects Completed
1	1

Table 6a – New Mexico’s Non-Coal AML Projects Started and / or Completed During EY 2023

Projects Started	Projects Completed
0	1

Table 7 – New Mexico’s AML Program Grant Awards and Staffing During EY 2023

AML Program Costs	
Water Supply Construction	0
AMD Set-Aside	0
Fee-based Funding	\$2,829,000
BIL Funding	\$2,423,032
Total AML Funding	\$5,252,032
AML Program Staffing (full-time equivalents on June 30, 2023)	13 FTE

VII. COMMENTS

The New Mexico AMLP had no comments on the EY 2023 Annual Evaluation Report.