

ANNUAL SUMMARY EVALUATION
of the
UTAH ABANDONED MINE RECLAMATION PROGRAM
for
EVALUATION YEAR 2006
(July 1, 2006, through June 30, 2007)



August 28, 2007



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ACRONYMS

AML	abandoned mine lands
AMLIS	Abandoned Mine Land Inventory System
AMR	Abandoned Mine Reclamation
BLM	Bureau of Land Management (of the U.S. Dept. of the Interior)
CIMRP	Colorado Inactive Mine Reclamation Program
DFD	Denver Field Division (of the Office of Surface Mining)
DOGM	Utah Division of Oil, Gas and Mining
NAAML	National Association of Abandoned Mine Land Programs
NEPA	National Environmental Policy Act of 1969, as amended
OIG	Office of the Inspector General (of the U.S. Dept. of the Interior)
OSM	Office of Surface Mining Reclamation and Enforcement (of the U.S. Dept. of the Interior)
SMCRA	Surface Mining Control and Reclamation Act of 1977, as amended
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	Forest Service (of the U.S. Dept. of Agriculture)

Cover photo: Overview of the Tuscarora project along the reclaimed crown pillar line, looking south/southeast. April 25, 2007.

I. Introduction

Title IV of the Surface Mining Control and Reclamation Act of 1977 (SMCRA or “the Act”) established the Abandoned Mine Reclamation Fund. The Fund’s primary purpose is to pay for mitigation of past mining effects. The Office of Surface Mining Reclamation and Enforcement (OSM) administers the Fund on behalf of the Secretary of the Interior. OSM awards grants to States and Tribes from the Fund to pay their administration costs and to reclaim abandoned mines. SMCRA puts the highest priority on correcting the most serious abandoned mine land (AML) problems endangering public health, safety, general welfare, and property. OSM and State and Tribal AML programs work together to achieve the goals of the national program. OSM also works cooperatively with the States and Tribes to monitor their AML programs.

On December 20, 2006, the President signed the Tax Relief and Health Care Act of 2006 (P.L. 109-432). That legislation included the Surface Mining Control and Reclamation Act Amendments of 2006 (the 2006 Act). The 2006 Act amended title IV of SMCRA to make significant changes in the abandoned mine reclamation fee and the AML program. OSM presently is developing regulations to implement the 2006 Act.

Directive AML-22 generally describes how OSM is to evaluate State and Tribal AML reclamation programs in “enhancement and performance reviews.” Following that Directive, a team of State and Federal personnel, called the Colorado-Utah AML Review Team, has been evaluating the Utah Abandoned Mine Reclamation (AMR) Program and the Colorado Inactive Mine Reclamation Program (CIMRP) since January 1996. The team includes representatives of the Utah AMR Program, CIMRP, and OSM’s Denver Field Division (DFD). Team members during the 2006 evaluation period included: Frank Atencio, Grants Management Specialist, OSM-DFD; Luci Malin, Administrator, Utah AMR Program; Mark Mesch, former Administrator, Utah AMR Program; Loretta Pineda, Administrator, CIMRP; and Ron Sassaman, Environmental Protection Specialist, OSM-DFD. Louis Amodt, UAMRP staff member, provided information that helped with the field evaluation as one of the managers of projects UAMRP completed in the Crawford Mountains.

This report summarizes our review and evaluation of the Utah AMR Program for the 2007 evaluation year, which included the period of July 1, 2006, through June 30, 2007.

II. General Information on the Utah Program

On June 3, 1983, the Secretary of the Interior approved Utah’s AML reclamation plan (“State Reclamation Plan”) under Title IV of SMCRA. That approval enables the AMR Program to reclaim the State’s abandoned mines using SMCRA funds in non-emergency projects. The AMR Program is part of the Division of Oil, Gas and Mining (DOG M) in Utah’s Department of Natural Resources. It administers Utah’s Abandoned Mine Reclamation Program (UAMRP) under the State’s approved Plan. The Denver Field Division of OSM’s Western Region works with UAMRP to fund and approve AML projects in Utah and to evaluate AML reclamation and other aspects of the Program.

Section 405(f) of SMCRA authorizes State and Tribal AML programs to apply to OSM for annual grants to support their programs and reclaim specific projects. OSM awards grants to Utah to fund the AMR Program's administration costs for the period of July 1st of one year through June 30th of the following year. The same grants also award construction funding that is available to the Program during the same period for each of three years after the initial grant award date.

UAMRP had three active grants during the evaluation year. The third and final year in the construction component of Utah's 2004 grant ended on June 30, 2007. That grant funded reclamation of one coal and two noncoal projects and the Program's engineering, design, and other planning needs for six additional noncoal projects. On May 26, 2005, OSM awarded \$1,518,045 to Utah for its 2005 grant. The grant funds reclamation of two noncoal projects and costs of administering the program with 11 positions. It expires on June 30, 2008. OSM awarded Utah's 2006 grant effective June 28, 2006. The grant funds 11 positions. It also funds reclamation of two noncoal projects and engineering, design, and other planning for two additional noncoal projects. The 2006 grant expires on June 30, 2009. Though OSM awarded Utah's 2007 grant on May 17, 2007, it begins with the 2008 evaluation year on July 1st.

Utah does not have OSM-approved subsidence insurance protection or emergency coal reclamation programs.

III. Noteworthy Accomplishments

The AMR Program was active in the following public outreach activities:

- Staffing an information booth at the annual meeting of the Utah Education Association. Four UAMRP staff members participated;
- Publishing Utah Mine Safety Workbooks. Ten staff members distributed 15,000 workbooks to fourth-grade school students;
- Staffing an information booth at a conference of the Utah Mining Association. One staff member participated.

The Program also participated in training and technology transfer including:

- Attending the annual conference and mid-winter business meeting of the National Association of Abandoned Mine Land Programs;
- Attending OSM grants training in April 2007 in Phoenix, Arizona;
- Providing two staff members to teach OSM's Coalfield Communication training course;
- Providing an instructor for OSM's NEPA Procedures training course; and
- Participating in online Environmental Systems Research Institute training courses.

Utah continued to partner with other agencies during the 2007 evaluation period to leverage its SMCRA funding. It helped the Bureau of Land Management (BLM)

document compliance with the National Environmental Policy Act (NEPA) for the Serviceberry Canyon project by writing the environmental assessment. UAMRP began that project during the evaluation period and completed it shortly after the period ended on July 6, 2007. Reclamation accomplishments included safeguarding 117 portals and 46 vertical openings. The Program completed the Labyrinth Canyon project during the 2007 period, having started it in mid-2004. That project also involved BLM-managed public lands and UAMRP completed the environmental assessment on BLM's behalf for it as well. That project safeguarded 22 portals. Utah's continued partnership with the BLM, Utah's Department of Environmental Quality – Division of Environmental Response and Remediation and the U.S. Army Corps of Engineers to plan a component of the San Rafael Swell noncoal project called the MK Tunnels is still active though temporarily on hold pending the results of studies on the presence of explosives residue. The BLM fully funded UAMRP's costs for that project. The Program also received full BLM funding of its administrative and construction costs of reclaiming up to 50 mine openings in the Brown's Hole uranium project and funds to design, engineer, and close additional uranium mine openings in the Red, White, and Fry project.

UAMRP's project planning and construction routinely protect and avoid disturbing plants and wildlife whenever possible. UAMRP excluded bats from the 22 mine openings it closed in the Labyrinth Canyon project to avoid entombing them during construction. It also planned and conducted reclamation of that project to avoid disturbing nesting and fledging raptors and to avoid disturbing endangered or threatened plants and animals. About sixteen of the closures Utah constructed in the Serviceberry Canyon project were bat compatible to protect bats and their habitat.

IV. Results of Enhancement and Performance Reviews

We updated the "Colorado-Utah AML Review Team Performance Agreement" on March 7, 2007 to describe the principles of excellence and performance measures that we planned to review in the 2007 evaluation year.

Principles of excellence and performance measures emphasize on-the-ground or end-results as much as possible. Each general principle of excellence has one or more specific performance measure(s). Performance measures describe: Why we selected that topic; what the review population and sample sizes will be; how we will do the review and report the results; and our schedule for completing the review. The principles of excellence and the specific performance measures we chose for our 2007 evaluation of the Utah AMR Program are:

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

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

Principle of Excellence 2: The State AML procedures are efficient and effective.

- *Performance Measure (e)*: Does the information the State entered into AMLIS beginning July 1, 2004, agree with information in its files?

Results of our 2007 evaluations are described below in Parts IV.A and B. We visited the Brazier Demonstration, Molly's Canyon, Arickaree, Coal Hollow, Molly's Canyon West, Emma's Canyon, Tuscarora, and Otto projects during the week of April 23, 2007. All those projects are located in the Crawford Mountains in Rich County. We subsequently reviewed project specifications, photographs, and closeout data at OSM's Denver office to complete the 1(b) evaluation. The 2(e) evaluation involved comparing data in Utah's project completion summaries to data in the respective Problem Area Description (PADs) in the Abandoned Mine Land Inventory System (AMLIS) for the sample projects at OSM's Denver office. We described our evaluation results in much greater detail in an enhancement and performance review report for each performance measure. Those reports are on file in OSM's Denver Field Division and are the factual basis of this report's summary of our evaluation of performance measures 1(b) and 2(e).

A. Summary Evaluation of Performance Measure 1(b)

For the purpose of this evaluation, we defined "long-term" reclamation as a project Utah completed more than three years before the date of our planned field review. Our evaluation sample included the Brazier Demonstration, Molly's Canyon, Arickaree, Coal Hollow, Molly's Canyon West, Emma's Canyon, Tuscarora, and Otto noncoal projects. The Brazier Demonstration project is the oldest at almost 14 years since completion. Next oldest are the Molly's Canyon and Arickaree reclamation, at about 13.1 years and 12.4 years, respectively, since completion. UAMRP completed the Coal Hollow reclamation about 11.4 years and the Molly's Canyon West project about 9.5 years before this evaluation. Finally, Utah completed reclamation of the Emma's Canyon, Tuscarora, and Otto Mine projects about 8.5 years, 7.5 years, and 6.5 years before April 2007.

We viewed UAMRP's excavation and backfilling of about 147 subsidence and other openings, including about 102 crown pillar failures and 45 collapsed or open manways, raises, trenches, exploration pits, stopes, and other features. Stabilization of those features involved reclaiming just over 152 acres actually or potentially affected by subsidence in the eight sample noncoal projects. In many areas, UAMRP's reclamation looked very good considering it excavated and backfilled much of the east and west crown pillar lines in highly variable terrain. Most, but not all, of UAMRP's excavation and backfilling remained intact. (SEE photos 1 and 2 on page 6.) However, active, ongoing subsidence occurred again along the east and west crown pillar lines in reclaimed project areas and occurred outside those areas as well. Though fewer in number (44 observed), the "new" (post-reclamation) subsidence features appeared to be as hazardous as many of the original subsidence openings UAMRP addressed were. It is possible the subsidence openings we saw involved previously existing openings that DOGM backfilled or could have been subsidence that occurred in new locations along the crown pillar lines. (SEE photos 3 and 4 on page 6). Surface roughening worked very well to control surface runoff and to prevent erosion. In turn, retained

moisture helped establish shrubs, forbs and grasses that were doing well in most areas where suitable soil material is present. A realigned road appeared to be in good condition. Signs warning of abandoned mine hazards remained posted in many locations along roads accessing the Crawford Mountains, though vandals damaged a number of them.

Photos 1 and 2. Below is a comparison of the pre-reclamation subsidence along the crown pillar line at the southern end of the Coal Hollow project area (below left) to the completed reclamation of the same area (below right).



Photo 1. Southern end of Coal Hollow project before reclamation. June 5, 1995



Photo 2. Southern end of Coal Hollow project after reclamation. April 25, 2007.

Photos 3 and 4. Below left is subsidence in the Otto project near reclaimed subsidence features E353, E352, and E350. Below right is subsidence in the central part of the Molly's Canyon West project. Subsidence shown occurred after reclamation.



Photo 3. Reclaimed crown pillar line and new subsidence openings near former subsidence features E353, E352, and E350 of the Otto project. April 24, 2007.



Photo 4. Reclaimed crown pillar line and new subsidence openings in the central part of the Molly's Canyon West project. April 24, 2007.

We also viewed 18 portals and 4 vertical openings UAMRP closed (shafts and inclined adits other than the manways noted above) and one realigned road. Closures of all safeguarded vertical openings and portals remained intact and functional, for 100 percent long-term success. Utah constructed two types of closures at the 18 safeguarded portals visited. They included 17 backfills and one concrete block wall with backfill. Utah used four methods of safeguarding the seven vertical openings, including: Four backfills; one cast-in-place concrete slab; one cast-in-place reinforced concrete plug; and one with cast-in-place reinforced concrete panels on a cast-in-place footer. (SEE Photo 5 at right for an example of one closure type.)



Photo 5. Cast-in-place concrete slab closure on vertical opening 2 in the Brazier Demonstration project. April 24, 2007.

We based our determination of long-term reclamation success on two factors. First, we considered if the measures Utah used for hazard abatement were intact and functional. Second, we considered whether the State's reclamation continued to improve restored areas over their previously abandoned condition. All the features and reclaimed areas we visited are accessible despite being located on private land and/or remote areas. The State's reclamation of the noncoal mine openings was limited to hazard abatement and did not directly address waste piles or structures. It did, however, include road realignment (in one case), sedimentation control, posting hazard warning signs, surface roughening, and revegetation. When we observed problems, we tried to determine if they appeared to have occurred since Utah completed reclamation, if they were hazardous or not, and if maintenance was needed to correct them.

Based on our observations and UAMRP's observations from a September 2006 overflight, we concluded that abatement of subsidence in the eight Crawford Mountains projects was partly successful over the long term. It appears likely that subsidence will remain active to some extent at least for the foreseeable future in the Crawford Mountains. The depth and dip of the workings, extent to which they remain open at depth, and unknown integrity of support for hanging walls and backfill material make subsidence there a geotechnically complex problem to address. As a result, the full extent to which UAMRP's completed reclamation will remain intact or subside is uncertain at this time.

We recommended UAMRP reflect on the methods it used to address subsidence in the Crawford Mountains when determining how to address continued subsidence there. We also recommended UAMRP consider the extent to which addressing continuing subsidence in the Crawford Mountains can be effectively accomplished using present technology and available funding.

UAMRP responded to our recommendations. It said it is evaluating maintenance needs on previously reclaimed and newly discovered subsidence features in the Crawford Mountains. That effort will involve identifying and documenting features, estimating volumes, considering engineering alternatives and estimating costs. UAMRP further responded that it is investigating potential technologically feasible methods to address subsidence in the Crawford Mountains and might do a feasibility study if funding is available. Last, the Program said it understands that it might not be feasible to address the subsidence problem in the Crawford Mountains using present technology and available funding.

B. Summary Evaluation of Performance Measure 2(e)

In September 2004, 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. That report criticized the accuracy of the AMLIS data, concluding that AMLIS data did not match data in the respective States' files. In part, the OIG recommended establishing "a quality control system that ensures that States, Tribes, and OSM, as applicable, review and certify the accuracy of data entered into AMLIS."

OSM responded to the OIG's recommendation with two new requirements for program evaluations. The first required OSM field offices to "assure that each State and Indian Tribe AML program has procedures in place to ensure and certify the accuracy of data entered into AMLIS" as part of the Fiscal Year 2004 oversight (subsequently changed to the 2005 evaluation year). We evaluated UAMRP's system for ensuring that data it enters into AMLIS match data in its files in evaluation year 2005. UAMRP uses a Project Completion Summary form as its system for compiling data for AMLIS input. For the purposes of this evaluation, we consider the project completion summaries to be UAMRP's "system" for ensuring that completion data Utah enters into AMLIS match data in its files.

The 2(e) evaluation we completed this year essentially determined if UAMRP's system worked as intended, i.e., to ensure that data it enters into AMLIS match data in its files. Our review involved comparing cost and accomplishments data in the projects' PADs to cost and accomplishments information in their respective completion summaries. This report summarizes our second annual evaluation of UAMRP's use of that system to update AMLIS.

Our review of the sample project completion summaries and their respective PADs showed that some PAD data matched data in UAMRP's files while other data needed to be updated. We concluded that UAMRP's use of its system to ensure that data in its files match AMLIS data was almost successful and should coincide with more timely AMLIS updates.

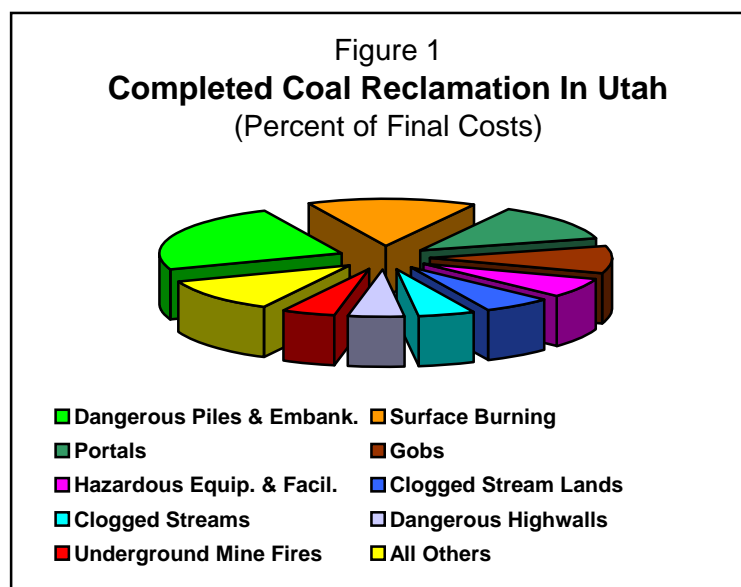
We made a number of recommendations. First, we recommended that UAMRP continue to improve project managers' use of the project completion summaries to ensure reporting consistency and completeness. Next, we recommended that UAMRP perform a quality control check at some point in the process of completing project completion summaries and updating AMLIS to ensure that AMLIS is updated for completed projects and that AMLIS data match data in the completion summaries. Third, we recommended that UAMRP update PAD UT000191NCA for the Labyrinth Canyon project to show final project completion costs and accomplishments. Last, we recommended UAMRP complete priority documentation forms for coal and noncoal PADs.

In its response, UAMRP said it updated one sample PAD as recommended and described other improvements. The Program said it will continue to improve project managers' use of the project completion summary sheets to ensure reporting consistency and completeness. It added that it instituted a quality control checkpoint when the project completion summary is submitted. UAMRP updates AMLIS at that time to ensure that the data is current for the project and that AMLIS data matches data in the completion summary sheet and in the AMR data base. It added that it will continue to complete priority documentation forms for all coal PADs, and we will further discuss the need to complete them for noncoal PADs as well. UAMRP also notes that continuing AMLIS malfunctions hamper its ability to use the system.

V. Accomplishments and Inventory Reports

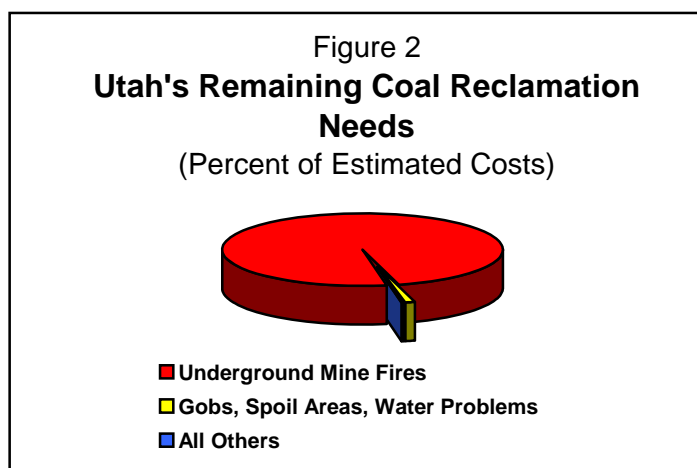
Reclamation of abandoned coal mine-related problems is the cornerstone of title IV of SMCRA because the fee that active mines pay per ton of coal produced generates the AMR Fund. As described below, the Utah AMR Program's reclamation and inventory address coal and noncoal problems, however. Because Utah has not yet certified completion of its known coal problems, OSM can fund its noncoal reclamation upon request by the Governor under section 409(c) of SMCRA.

Utah continued to monitor the effects of previous abatement methods on one underground mine fire project during the 2007 evaluation year but did not begin construction on new coal projects. Since Program approval on June 3, 1983, however, Utah completed 52 coal reclamation projects addressing 25 types of priority 1, 2, and 3 problems at a cost of over \$9.1 million. Abating nine types of AML problems



required about 88.3 percent of the \$9.1 million-plus total cost. Those problem types include: Dangerous piles and embankments (23.6%); surface burning (15%); portals (12.8%); gobs (9.3%); hazardous equipment and facilities (6.9%); clogged stream lands (6%); clogged streams (5%); dangerous highwalls (4.9%); and underground mine fires (4.8%). Fifteen other types of problems make up the remaining 11.7 percent of the Utah AMR Program's completed abandoned coal mine reclamation. Figure 1 (above right) further illustrates the abated abandoned coal mine problems. Appendix 1 shows the Program's coal reclamation accomplishments and costs in greater detail.

The State continues to inventory eight types of abandoned coal mine problems in AMLIS at an estimated abatement cost of slightly more than \$4.9 million. Priority 1 coal problems including dangerous highwalls, hazardous and explosive gases, subsidence, and underground mine fires have almost no associated estimated costs of abatement in AMLIS because Utah is not sure whether or not it will address them. These problems are shown as "all others" in Figure 2 (below right). The token costs (0.2 percent of total estimated costs) associated with those problems only serve as a data entry criterion to retain them in AMLIS while UAMRP monitors them. However, the State previously considered removing some of those problems from AMLIS because the estimated cost of abating them exceeds its presently available funding. Also, the unfunded priority 1 problems include six coal fires, some of which might not be related to abandoned mines. UAMRP might reconsider its options concerning these problems upon receipt of additional funding made available under the SMCRA Amendments Act of 2006. Also illustrated in figure 2 (right), priority 2 underground mine fires make up almost 98.6 percent of the estimated unfunded cost of coal reclamation. Utah currently inventories two priority 2 fires in AMLIS, one of which makes up virtually all of the estimated abatement cost. The second has a token cost associated with it to retain it in the inventory while UAMRP monitors it. Priority 3 gobs, spoil areas and water problems comprise the remaining 1.2 percent of the total estimated unfunded cost of abating Utah's inventoried coal problems.

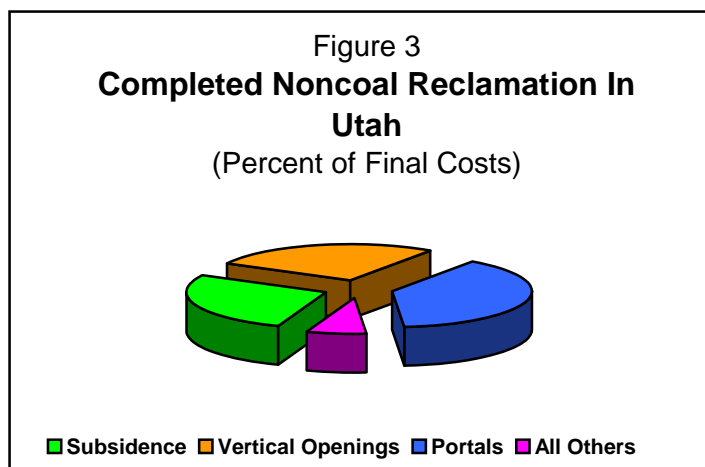


Utah's abandoned noncoal mines generally pose more danger to public health and safety than the remaining abandoned coal mine problems do (some underground coal mine fires being the possible exception to that generalization). Utah must restrict its noncoal reclamation to priority 1 hazards under section 409(c) of SMCRA except in rare cases where lower priority problems must be abated as part of addressing higher priority problems. OSM funded UAMRP to address 42 noncoal projects in 24 grants

awarded to UAMRP since June 3, 1983. The Program completed 39 of those 42 projects, including one completed just after the end of the 2007 evaluation period.

UAMRP had two noncoal projects under construction in the 2007 evaluation year. It began the Serviceberry Canyon project in September 2006 and completed it during the first week of July 2007 shortly after the end of the period. That project safeguarded 117 portals and 46 vertical openings. In November 2006, the Program completed the Labyrinth Canyon project, which it had started over two years earlier. Accomplishments for that project include 22 portal closures. Utah also contracted for the Gold Hill project and plans to begin construction in early August 2007. Contracting began for the Star District project toward the end of the 2007 evaluation year and continued shortly afterward, with construction expected to begin in the first week of September 2007. Appendix 2 shows UAMRP's noncoal reclamation accomplishments for the 2007 evaluation year as reported in AMLIS. AMLIS data included in that Appendix were not updated in time for this report to include the Serviceberry Canyon project accomplishments described above.

AMLIS data show Utah has safeguarded 5,751 noncoal mine openings, reclaimed 294



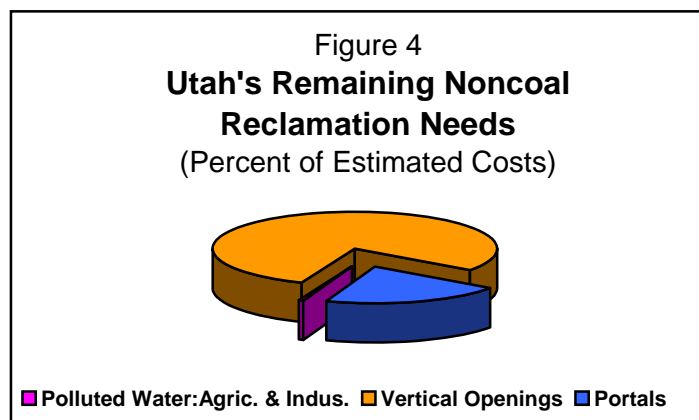
acres of dangerous piles and embankments, and abated the hazards of 68 structures with funding from its SMCRA grants and other sources. To date, Utah abated noncoal dangerous piles and embankments, hazardous equipment and facilities, portals, subsidence, vertical openings, haul roads and gobs with over \$7.65 million in funds from all sources. Appendix 3 shows Utah's noncoal reclamation accomplishments since Program approval in greater detail. Just over 93 percent of that

total cost went toward reclaiming portals (39%) subsidence (27.1%), and vertical openings (27%). Figure 3 (above left) further illustrates these percentages.

Vertical openings and portals are the most prominent unfunded noncoal problems remaining in Utah. They make up about 99.5 percent of the estimated total cost of abating the State's noncoal problems. Pollution of water used for agricultural and industrial purposes makes up the remaining 0.5 percent of the total estimated abatement cost. Figure 4 (page 11 - below) shows a comparison of the estimated unfunded reclamation costs. Appendix 3 shows the same data in greater detail. We note that AMLIS data do not reflect the overall scope of Utah's unfunded noncoal problems. The units data are preliminary estimates of the State's near-term reclamation needs. Their associated costs are rough estimates as well. Utah's unfunded noncoal data in AMLIS list the most hazardous priority 1 problems UAMRP plans to include in

projects over the next few years. UAMRP's internal inventory shows that there are thousands of abandoned noncoal mine problems remaining in Utah.

Noncoal abandoned mine features are extremely dangerous to public health and safety because they are so numerous and widespread throughout the State. Remoteness and difficult access no longer separate people from abandoned mine hazards to the extent they did in past years. Urban sprawl and dispersed outdoor recreation (especially all-terrain vehicle use) increasingly put people in proximity to abandoned mines. UAMRP dedicated its most recent three SMCRA grants exclusively to noncoal project planning and construction to meet the threat these mines pose. The focus of Utah's outreach is to increase public awareness of abandoned noncoal mine hazards.



Appendix 1

Utah Abandoned Mine Reclamation Program

Coal Reclamation Accomplishments Since June 3, 1983, and Remaining Reclamation Needs*

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Bench	0	0	0	0	4 acres	\$154,544	4 acres	\$154,544
Clogged Streams	0.2 mile	\$10,000	0	0	14.1 miles	\$455,376	14.3 miles	\$465,376
Clogged Stream Lands	0	0	0	0	9 acres	\$546,126	9 acres	\$546,126
Dangerous Highwalls	4,500 feet	\$3	0	0	3,425 feet	\$444,871	7,925 feet	\$444,874
Dangerous Impoundments	0	0	0	0	1 (count)	\$14,600	1(count)	\$14,600
Dangerous Piles & Embankments	0	0	0	0	150 acres	\$2,150,933	150 acres	\$2,150,933
Dangerous Slides	0	0	0	0	3 acres	\$29,825	3 acres	\$29,825
Equipment & Facilities	0	0	0	0	64 (count)	\$47,850	64 (count)	\$47,850
Gases: Hazardous & Explosive	5 (count)	\$1	0	0	19 (count)	\$55,000	24 (count)	\$55,001
Gobs	10 acres	\$50,000	0	0	255 acres	\$846,349	265 acres	\$896,349
Highwall	0	0	0	0	550 feet	\$1	550 feet	\$1
Hazardous Equipment & Facilities	0	0	0	0	156 (count)	\$630,623	156 (count)	\$630,623
Haul Road	0	0	0	0	3 acres	\$35,000	3 acres	\$35,000
Industrial / Residential Waste	0	0	0	0	9 acres	\$76,800	9 acres	\$76,800
Portals	0	0	0	0	497 (count)	\$1,164,783	497 (count)	\$1,164,783
Pits	0	0	0	0	8 acres	\$23,266	8 acres	\$23,266
Polluted Water: Agric. & Industrial	0	0	0	0	3 (count)	\$55,700	3 (count)	\$55,700
Subsidence	180 acres	\$3	1 acre	0	4 acres	\$106,917	185 acres	\$106,920
Spoil Area	2 acres	\$5,034	0	0	55 acres	\$264,484	57 acres	\$269,518
Surface Burning	0	0	0	0	38.8 acres	\$1,368,636	38.8 acres	\$1,368,636
Slurry	0	0	0	0	1 acre	\$2,830	1 acre	\$2,830
Slump	0	0	0	0	16 acres	\$24,143	16 acres	\$24,143
Underground Mine Fire	306 acres	\$4,840,006	0	0	18 acres	\$436,248	324 acres	\$5,276,254
Vertical Openings	0	0	0	0	24 (count)	\$49,243	24 (count)	\$49,243
Water Problems	0.5 gal/min	\$4,000	0	0	20.3 gal/min	\$117,085	20.8 gal/min	\$121,085
UTAH TOTAL COAL COSTS		\$4,909,047		0		\$9,101,233		\$14,010,280

* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of July 19, 2007, as corrected by deleting 40 unfunded portals and their estimated unfunded cost of \$48,000 and 21 unfunded vertical openings and their estimated unfunded cost of \$52,500. Coal accomplishments and costs shown are the same whether reported as SMCRA-funded only or as funded by all sources.

NOTE: Unfunded costs of \$1 or \$3 are data points only used to retain the problem(s) in AMLIS. They do not reflect estimated reclamation costs. A completion cost of \$1 means UAMRP reclaimed that problem type incidental to reclamation of another problem type.

Appendix 2

Utah Abandoned Mine Reclamation Program

Noncoal Reclamation Accomplishments and Inventory Changes in the 2007 Evaluation Year*

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Dangerous Piles and Embankments	-50 acres	-\$50,000					-50 acres	-\$50,000
Portals	-407 (count)	+\$48,000	+247 (count)	-\$68,000	+22 (count)	+\$140,090	-138 (count)	+\$120,090
Vertical Openings	-177 (count)	-\$614,400	+285 (count)	+\$362,612	+16 (count): SMCRA & all sources	+\$74,853: SMCRA & all sources	-82 (count): SMCRA & all sources	-\$176,935: SMCRA & all sources

* This table is based on a comparison of Problem Type Unit and Cost Summary Reports from the Abandoned Mine Land Inventory System as of July 5, 2006, and July 19, 2007, as corrected by adding 40 unfunded portals and their estimated unfunded cost of \$48,000 and 21 unfunded vertical openings and their estimated unfunded cost of \$52,500. Changes in noncoal accomplishments and costs shown are the same whether reported as SMCRA-funded only or as funded by all sources.

Appendix 3
Utah Abandoned Mine Reclamation Program
Noncoal Reclamation Accomplishments Since June 3, 1983, and Remaining Reclamation Needs*

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Dangerous Piles & Embankments	0	0	0	0	205 acres-SMCRA ; 244 acres-all sources	\$226,036 - SMCRA ; \$284,753-all sources	205 acres-SMCRA ; 294 acres-all sources	\$226,036-SMCRA ; \$284,753-all sources
Gobs	0	0	0	0	1 acre-all sources	\$173-all sources	1 acre-all sources	\$173-all sources
Hazardous Equipment & Facilities	0	0	0	0	50 (count)-SMCRA ; 68 (count)-all sources	\$31,816-SMCRA ; \$45,620-all sources	50 (count)-SMCRA ; 68 (count)-all sources	\$31,816-SMCRA ; \$45,620-all sources
Haul Road	0	0	0	0	0.5 acre-SMCRA ; 68 acres-all sources	\$48,171-SMCRA ; \$184,901-all sources	0.5 acre-SMCRA ; 68 acres-all sources	\$48,171-SMCRA ; \$184,901-all sources
Other	0	0	0	0	53-SMCRA ; 54 - all sources	\$13,354-SMCRA ; \$13,459-all sources	53-SMCRA ; 54-all sources	\$13,354-SMCRA ; \$13,459-all sources
Portals	859 (count)	\$1,142,800	247 (count)	\$362,612	2,665 (count)-SMCRA ; 2,776 (count)-all sources	\$2,783,605-SMCRA ; \$2,986,993-all sources	3,771 (count)-SMCRA ; 3,882 (count) - all sources	\$4,289,017-SMCRA ; \$4,492,405-all sources
Polluted Water: Agri. & Indus.	1 (count)	\$25,000	0	0	0	0	1	\$25,000
Subsidence	0	0	0	0	179.2 acres-SMCRA ; 182.2 acres-all sources	\$2,066,914-SMCRA ; \$2,070,359-all sources	179.2 acres-SMCRA ; 182.2 acres-all sources	\$2,066,914-SMCRA ; \$2,070,359-all sources
Vertical Openings	405 (count)	\$4,396,000	298 (count)	\$505,241	1,217 (count)-SMCRA ; 1,248 (count)-all sources	\$2,020,780-SMCRA ; \$2,064,092-all sources	1,899 (count)-SMCRA ; 1,930 (count) - all sources	\$6,922,021-SMCRA ; \$6,965,333-all sources
UTAH TOTAL NONCOAL COSTS		\$5,563,800		\$867,853		\$7,190,676-SMCRA ; \$7,650,350-all sources		\$13,622,329-SMCRA ; \$14,082,003-all sources

* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of July 19, 2007 as corrected by adding 40 unfunded portals and their estimated unfunded cost of \$48,000 and 21 unfunded vertical openings and their estimated unfunded cost of \$52,500. AMLIS does not include a complete inventory of Utah's unfunded noncoal problems.

Appendix 4

State Comments on the Report

From: Lucia Malin [luciamalin@utah.gov]
Sent: Tuesday, August 28, 2007 8:16 AM
To: Ronald Sassaman
Subject: RE: Draft annual evaluation report - final comment

I agree with the Annual Evaluation Report as written [by] Mr. Sassaman. He has incorporated the edits and comments I previously submitted.

Luci Malin
Administrator
Utah Abandoned Mine Program
1594 West North Temple Suite 1210
Salt Lake City, Utah 84116
801-538-5323
801-359-3940 fax
LUCIAMALIN@utah.gov