

**ANNUAL SUMMARY EVALUATION**  
**of the**  
**UTAH ABANDONED MINE RECLAMATION PROGRAM**  
**for**  
**EVALUATION YEAR 2008**  
(July 1, 2007, through June 30, 2008)



August 27, 2008



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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
NAAMLPP	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: Grate with beam and door closure on vertical opening 3281109VO21 in the Star District noncoal project. May 20, 2008.

## 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 Indian tribes from the Fund to pay their administration costs and reclaim abandoned mines. SMCRA puts the highest priority on correcting the most serious abandoned mine land (AML) problems that endanger public health, safety, general welfare, and property. OSM, State, and Indian tribal AML programs work together to achieve the goals of the national program. OSM also works cooperatively with the States and Indian 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 published a **Federal Register** on June 20, 2008, in which it proposed to align the 30 CFR regulations with the SMCRA amendments (73 FR 35214). The comment period for that proposed rule ends on August 19, 2008.

Directive AML-22 generally describes how OSM evaluates 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 Program (UAMRP) since January 1996. The team includes representatives of UAMRP, the Colorado Inactive Mine Reclamation Program (CIMRP), and OSM’s Denver Field Division (DFD). It also includes other individuals on an ad-hoc basis as needed. For the 2008 evaluation, Tony Gallegos, UAMRP, helped us evaluate the 1(a) performance measure. Luci Malin, UAMRP Administrator, is a Team member. Paul Krabacher, CIMRP, participated in the evaluation of the 1(a) performance measure, and Loretta Pineda, CIMRP Director, is a member of the Team. Utah Division of Oil, Gas and Mining (DOG M) employees who helped evaluate the 3(h) performance measure included Jill Marriott and Paula Dupin Zahn. Frank Atencio, Christine Belka, and Ron Sassaman represented OSM-DFD for the evaluations.

This report summarizes our review and evaluation of the Utah Abandoned Mine Reclamation Program for the 2008 evaluation year, which included the period of July 1, 2007, through June 30, 2008.

## 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

(DOGM) 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 Indian 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 1<sup>st</sup> of one year through June 30<sup>th</sup> 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.

Utah had three open AML grants during the evaluation year. OSM awarded \$1,518,045 in the State's 2005 grant. That grant funded reclamation of two noncoal projects and one-year costs of administering the program with 11 positions. It expired on June 30, 2008. Utah's 2006 grant funded UAMRP's administrative costs for one year, including 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. Last, OSM awarded \$1,626,467 in Utah's 2007 grant. That grant funded the Program's administrative costs for one year and 11 positions. It includes funding to reclaim one noncoal project and to engineer, design, and plan two other noncoal projects. It also included funding to for unspecified cooperative projects UAMRP undertakes with other agencies. OSM amended that grant effective November 1, 2007, increasing it to a total of \$2,049,219.33.

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

### **III. Noteworthy Accomplishments**

UAMRP's public outreach, partnering, and related activities during the evaluation year included:

- Staffing an information booth at the annual meeting of the Utah Education Association. Two UAMRP staff members participated and distributed 200 DVDs, 38 VHS "Stay Out – Stay Alive" videos, and 200 work books;
- Publishing Utah Mine Safety materials. Ten staff members distributed 14,532 workbooks, 254 DVDs and 39 VHS "Stay Out – Stay Alive" video tapes to fourth-grade school students. UAMRP also developed 1,568 abandoned mine reclamation calendars and distributed them to 4<sup>th</sup> grade teachers, DOGM associates and other stakeholders;
- Staffing information booths at conferences of the Utah Mining Association and the Richfield Natural Resources Festival. Two staff members participated in each event;
- Making a presentation to a delegation of 20 land managers from Shandong Province, China, hosted by the Utah Engineering Experiment Station at the University of Utah. Two staff members made that presentation;

- Making a field presentation to students and their teacher on the Brown's Hole cooperative uranium mine reclamation project. Two staff members made that presentation;
- Judging science fair projects at Jackson Elementary School. One staff member served as a judge;
- Holding three public meetings for the Grand Staircase-Escalante National Monument 2 project, and one public meeting for each of the Star District, Mammoth, and Lakeside projects; and
- Organizing and holding eight planning meetings and two public meetings to develop an interagency State/Federal participating agreement for National Historic Preservation Act consultation.

The Program also participated in training and technology transfer by:

- Attending the annual conference, mid-winter business meeting, two pre-conference planning meetings, and various committee meetings of the National Association of Abandoned Mine Land Programs;
- Attending four Technical Innovation and Professional Services (TIPS), two National Technical Training Program (NTTP), and one other OSM training courses throughout the year, with staff members occupying a total of 12 training slots in those courses;
- Attending training for Office of Safety and Health Administration, Hazardous Waste Operations and Emergency Response and Utah State certified public managers, with staff occupying a total of three training slots;
- Attending a Western Region Technical Team annual meeting, with one staff member in attendance;
- Attending training on section 106 compliance training with the National Advisory Council on Historic Preservation, with two staff members in attendance;
- Attending the 2008 Geospatial Conference, with two staff members presenting a paper on project ranking and selection; and
- Providing an instructor for OSM's National Environmental Policy Act (NEPA) Procedures training course.

Utah continued to partner with other agencies during the 2008 evaluation period to leverage its SMCRA funding. In recognition of its efforts, UAMRP received a Ten Years Appreciation Award for participating in AML watershed reclamation from the Bureau of Land Management (BLM) and U.S. Department of Agriculture, Forest Service. It completed reclamation of the Serviceberry Canyon noncoal project on July 6, 2007, in cooperation with the BLM. The Program also completed the Gold Hill noncoal project in cooperation with the BLM. Utah continued its partnership with the BLM, Utah's Department of Environmental Quality – Division of Environmental Response and Remediation, the U.S. Army Corps of Engineers, and the U.S. Department of the Interior, Geological Survey, to plan the MK Tunnels and San Rafael Swell noncoal projects. These projects formerly were combined. They will address underground workings that were used to test military munitions before being abandoned. Planning is progressing now that the issue of munitions residue has been addressed. The BLM

fully funds UAMRP's costs for these projects. UAMRP also participated in initial discussions and planning with the same partners for the Yellow Jacket project. That project also addresses underground workings affected by military munitions testing. 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. Work to inventory the abandoned mine features in that project continued in the 2008 evaluation year. UAMRP also is participating in the BLM's "Fix a Shaft Today" (FAST) initiative, the purpose of which is to develop and coordinate rapid response capability for abandoned mine hazards that occur on public lands.

#### **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 (a):* Does reclamation meet the goals of the project?

*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?

*Principle of Excellence 3:* The State has systems to properly manage AML funds.

- *Performance Measure (h):* Are the State's drawdowns of AML grant funds in accordance with Chapter 5-55 of the Federal Assistance Manual?

Results of our 2008 evaluations are described below in Parts IV.A, B, and C. 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 detailed factual basis of this report's summary of our evaluation of performance measures 1(a), 2(e), and 3(h).

##### A. Summary Evaluation of Performance Measure 1(a)

Our goal for this evaluation was to determine if reclamation met project goals. We empirically compared UAMRP's reclamation to its project specifications and used its as-built closure table and project completion report for additional information for the sample project we visited. We considered measures UAMRP approved in change orders during construction to address site-specific conditions. We also considered any requirements resulting from interagency consultation it completed to help OSM comply with NEPA and other laws. Our evaluation focused on determining whether completed reclamation met project goals by continuing to abate original hazards, complying with conditions of interagency consultation, and improving overall site conditions compared to pre-reclamation conditions.

The evaluation sample included the 181 closures of the Star District noncoal project that the State completed by December 10, 2007. UAMRP's accomplishments for that part of the project included safeguarding 86 vertical openings, 35 inclined openings, 59 portals, and one trench. For this evaluation, we visited 153 of those safeguarded features, including 77 vertical openings, 23 inclined openings, 52 portals, and one trench.

We found that all of the 153 completed closures we visited of the Star District project were intact, continued to abate the original hazards, and improved site conditions overall. Our review found that, in most cases, Utah abated the original hazards as planned in its specifications. We noted about 20 cases in which the final closure type differed from the type planned in the specifications. In those cases, the Program determined alternate approaches were more appropriate for site-specific conditions, including ease of equipment access. UAMRP constructed 11 types of closures to safeguard the 153 mine features we observed, including: Machine backfills; pinned grates; hand backfills; grates with beams; polyurethane foam; a grate with a beam and access door; a bat gate with an access door; block walls; bat gates; a stone wall; and a corrugated metal pipe with a bat gate and access door.

None of the closures that we visited required corrective actions. However, a small number of closures showed minor settling and we found two openings near constructed closures. We recommended that DOGM monitor one opening adjacent to a constructed backfilled closure when it monitors other closures in this project to ensure that it is aware of worsening conditions, if they occur. Though this opening did not appear to compromise the adjacent backfilled closure, it could become hazardous if it enlarges to a size that would permit entry and access to underground workings.

Our review also concluded that DOGM protected wildlife habitat and cultural/historic resources in the areas we visited. The Program incorporated provisions in its specifications that resulted from its interagency consultation on issues involving wildlife and cultural/historic resources. Documentation noted that investigators found evidence of at least five bat species during warm and cold season surveys of the mine openings. Prior to constructing closures, DOGM excluded bats from openings where they were thought to be and installed seven bat gates that we observed. It also timed construction for the fall season to avoid impacting nesting and fledging raptors.

A survey of the Star District project area identified 47 cultural sites, 14 of which are eligible for listing on the National Register of Historic Places. The project's specifications include provisions for accessing mines and building closures that avoid or minimize damage to cultural/historic structures and structural remnants, thereby maintaining the area's historic character. Closures we visited preserved cribbing and other timbering, stone walls and masonry, and at least one headframe.

We concluded that the part of the Star District project we visited met its goals.

#### 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."

In response to that recommendation, we developed performance measure 2(e) to require an annual comparison of data in a sample of Utah's AMLIS PADs to data in UAMRP's files to ensure that they agree. UAMRP uses data from its project managers to complete its project completion summaries. We consider project completion summaries to be UAMRP's "system" for ensuring that completion data Utah enters into AMLIS match data in its files. We compared data in UAMRP's project completion summaries to data in those projects' respective PADs. This report summarizes our third annual evaluation of UAMRP's use of that system to update AMLIS. Data we reviewed for this evaluation pertained to the Serviceberry Canyon and Gold Hill noncoal projects.

Our review of the sample project completion summaries and their respective PADs made a number of findings. We found that, as corrected, data in the sample PADs matched data in UAMRP's files. Also, UAMRP funded both projects entirely from its SMCRA grant, as reflected in the performance measures data linked to AMLIS and the completion cost data in the PAD. Performance measures data for reclaimed high priority hazards matched the keywords data for completed reclamation in the PADs. We found that neither PAD included a priority documentation form.

Overall, we concluded that UAMRP's use of its system to ensure that data in its files match AMLIS data was successful but requires a quality control check. Our review also concluded that UAMRP's use of the completion summary form during this evaluation year appeared to improve the consistency of project data transferred from the Program's files to AMLIS.

We recommended that UAMRP perform a quality control check of data entries to ensure that AMLIS data match data in the respective project completion summaries. We also recommended that UAMRP complete priority documentation forms for coal and noncoal

PADs as required in OSM directive AML-1. Finally, we recommended that UAMRP train additional staff to update AMLIS.

### C. Summary Evaluation of Performance Measure 3(h)

Our evaluation of this performance measure determined that the State draws-down AML grant funds in accordance with requirements of the Federal Assistance Manual (FAM). Our review sample included drawdown reports from fiscal years 2006, 2007, and 2008. Though we included Utah's coal regulatory program in our drawdown review, the discussion of our review in this report is limited to UAMRP's drawdowns. OSM-DFD's files include the original report discussing our review of both programs, however. We evaluated this performance measure most recently in fiscal year 1998.

We note that the Utah fiscal year is one year ahead of the Federal fiscal year. For example, Federal fiscal year 2005 Federal will appear as fiscal year 2006 in the State's financial reports.

DOGM recently changed its financial reporting system. The new system now reports indirect costs with all administrative and project costs. A monthly summary report has been developed to reflect this change. This reporting system will make it easier to see total program costs without having to breakdown direct and indirect costs separately.

UAMRP draws funds on a monthly basis. A summary report of expenditures and revenue status by program keeps running balances of all open and closed program grants. DOGM keeps separate reports for regulatory grants and for AML grants. It constantly compares this financial system, called Financial Network (FINET), and its fund balances to those on the U.S. Treasury's Automated Standard Application for Payment (ASAP) system to make sure all balances are the same.

The Division also keeps monthly revenue and expenditure reports on individual program projects and their associated administrative costs. It keeps year-to-date reports on all object classes such as employee wages, benefits, travel, materials and supplies, rental expense, and indirect costs. DOGM also keeps a year-to-date report of grant expenditures for each open grant by funding year. A total drawdown amount then appears in the consolidated Cash Draw Report. That report contains bank postings of draws by subaccount and the bank posting date. We reviewed records of three grants for this draw-down review and found them to be in order and well documented.

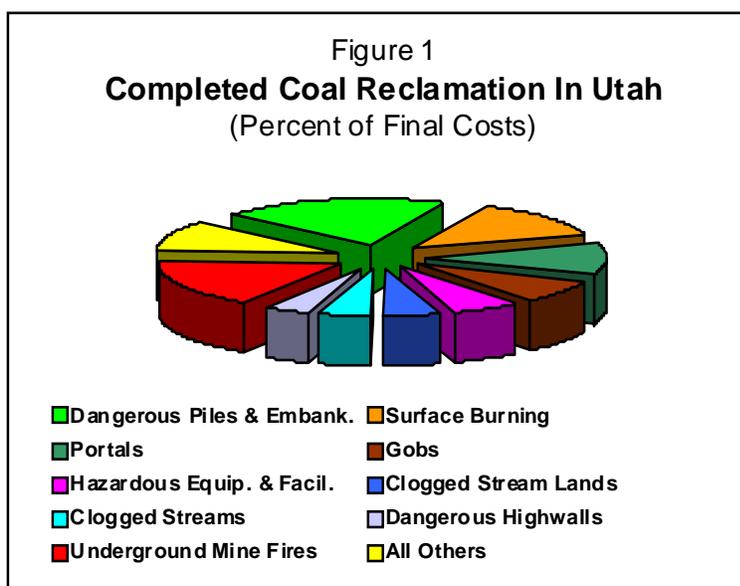
Our review found that UAMRP operates on a cash reimbursement basis. The State pays all costs up-front through its accounting system, after which the State is reimbursed for the amount it paid out to cover DOGM's program expenses. Because DOGM operates on a cash reimbursement basis, it does not receive advances of Federal funds. This means that the State does not need to be concerned about how long it keeps cash on hand before it pays customers, contractors, or for services. Also, the actual and optimum days required to pay funds under the State's system are not a concern because the State pays all debts from its treasury first.

DOGM maintains a financial drawdown system that complies with Federal and State requirements. The Division complies with the requirements of Chapter 5-55 of the FAM and the Cash Management Act of 1990 because it operates on the cash reimbursement method of payment and does not keep a cash balance on hand before paying out Federal funds.

## V. Accomplishments and Inventory Reports

Title IV of SMCRA emphasizes reclamation of abandoned coal mine-related problems because active mines pay a fee on each ton of coal produced, and that fee generates the AMR Fund. The 2006 Act increases that emphasis. Utah maintains an inventory of abandoned coal mine problems in AMLIS, and UAMRP

continues to reclaim those problems. The State also receives funding to abate priority 1 noncoal mine hazards upon request by the Governor under section 409(c) of SMCRA.

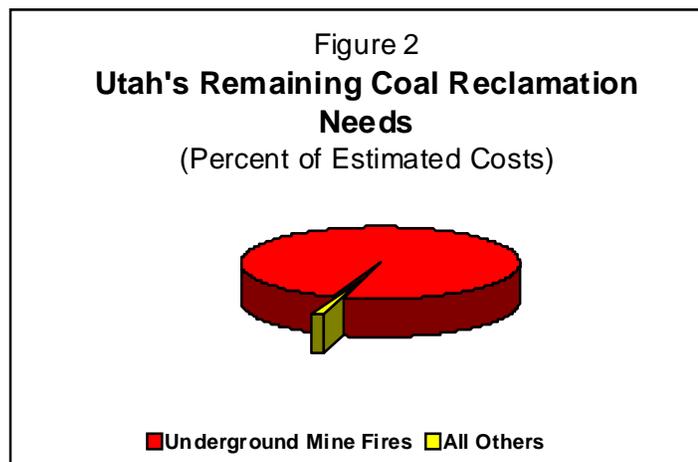


UAMRP did not reclaim coal projects during the 2008 evaluation year, though it continued to monitor the effects of previous abatement methods on one underground mine fire project. Based on AMLIS data, Utah expended over \$10.4 million to abate 25 types of

priority 1, 2, and 3 hazards related to abandoned coal mines since the Secretary approved its program on June 3, 1983. About 89.6 percent of that total cost involved abating nine types of AML problems. Those problem types include: Dangerous piles and embankments (20.6%); underground mine fires (16.8%); surface burning (13.1%); portals (11.3%); gobs (8.1%); hazardous equipment and facilities (6%); clogged stream lands (5.2%); clogged streams (4.3%); and dangerous highwalls (4.2%). Sixteen other types of problems make up the remaining 10.4 percent of the State's completed abandoned coal mine reclamation, as inventoried in AMLIS. Figure 1 (above left) further illustrates the coal problems Utah abated as percentages of total final costs. Appendix 1 shows the Program's coal reclamation accomplishments and costs to date in greater detail.

Though Utah has been reclaiming abandoned mines for 25 years, it still inventories unfunded abandoned coal mine problems in AMLIS. Eight types of problems remain unfunded at an estimated abatement cost of slightly more than \$4.9 million, unchanged from the 2007 evaluation report. Those problems include priority 1 dangerous

highwalls, hazardous and explosive gases, subsidence, and underground mine fires. Unfunded coal problems also include priority 2 underground mine fires and priority 3 gobs, spoil areas, and water problems. Figure 2 (right) illustrates Utah's unfunded coal problems. Priority 2 underground mine fires make up 98.5 percent of the estimated cost to reclaim Utah's unfunded fires. Utah's inventory of unfunded priority 1 dangerous highwalls, hazardous and explosive gases, subsidence, and underground mine fires in AMLIS does not include valid cost estimates because the State is not sure if, and how, it will address them. Their small associated costs serve only as data entry criteria to retain them in AMLIS. Excluding the priority 2 underground mine fires, these other problems are shown as "all others" in Figure 2.



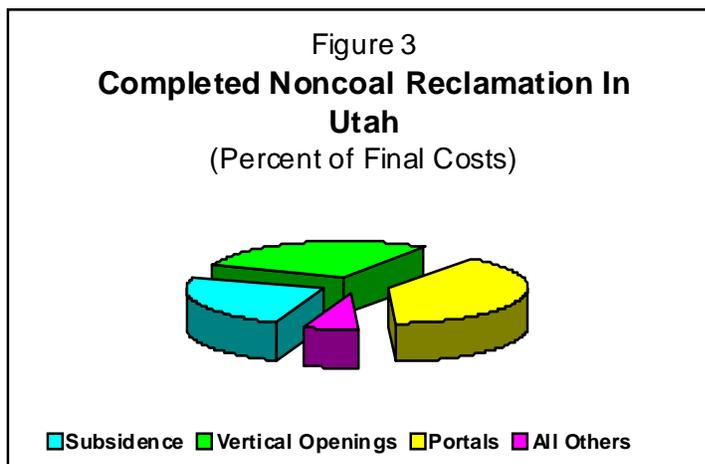
Utah's 2008 grant application requested funding for a Statewide coal inventory to systematically assess the current status of abandoned coal mine problems throughout the State. That new effort will include previously inventoried and/or reclaimed problems as well as problems not previously inventoried. Utah will determine the need for additional work based on that inventory, with the goal of completing its remaining coal work. The 2006 Act increased the amount of grant funds available to Utah over the next seven years beginning with Federal fiscal year 2008. That increased funding should enable the State to address more coal problems than it previously could.

Utah also plans to reexamine the scope of its unfunded underground mine fire problem in context of its increased funding and the extent to which abatement is feasible. Utah currently inventories six priority 1 underground mine fires and six priority 2 fires in AMLIS. UAMRP previously documented its investigation of three underground mine fires and eight coal outcrop fires in a December 1, 2004, report entitled, "Utah Coal Fires Status Report With Recommendations for Future Work." At that time, it considered re-prioritizing and removing nine of the eleven fires from AMLIS. Further, we recognized that Utah is an uncertified State and may not fund work on coal seam or outcrop fires with grant money it receives from the Abandoned Mine Reclamation Fund if they are unrelated to abandoned mines. UAMRP continues to experiment with a number of techniques and products on one underground mine fire. Its purpose over several years has been to find an approach that successfully, and affordably, abates the fire and can be expected to succeed on other fires. UAMRP has not yet found such an approach. Almost 81 percent of the \$1,757,873 shown in Appendix 1 as the cost of work completed to date for underground mine fires is related to this ongoing effort. Utah's 2008 AML grant also funds a Statewide coal fires assessment. That work should update the previous investigation by looking at the current status of about 16

abandoned coal mine and coal seam fires in the State to recommend future actions as appropriate.

Utah’s abandoned noncoal mines generally pose more immediate danger to public health and safety than the remaining abandoned coal mine problems do. However, 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 45 noncoal projects since June 3, 1983, of which 40 were complete by the end of the 2008 evaluation year.

Current AMLIS completion data show Utah expended over \$7.96 million from all

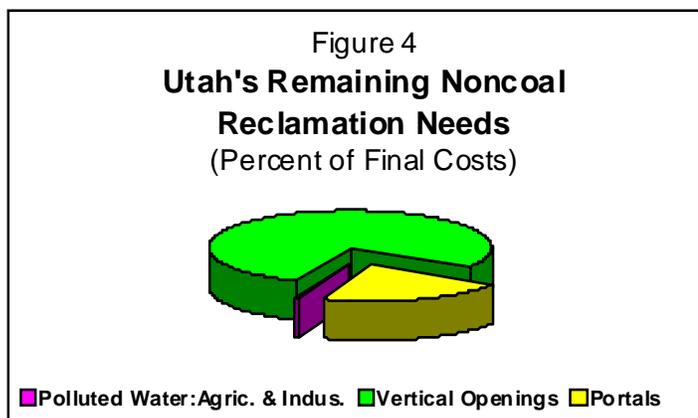


sources to reclaim abandoned noncoal mine problems to date. Those problems include 4,324 mine openings, 244 acres of dangerous piles and embankments, 50 hazardous structures, and 182.2 acres of subsidence. Portals (39.4%), vertical openings (29.7%), and subsidence (24.5%) made up about 93.6 percent of the total cost. Figure 3 (left) further illustrates UAMRP’s reclamation of noncoal problems as percentages of final

costs. The results of noncoal reclamation Utah completed to date are shown in greater detail in Appendix 2.

UAMRP completed two noncoal projects in the 2008 evaluation year, in addition to maintenance of previously completed projects. The Serviceberry Canyon project safeguarded 117 portals and 46 vertical openings. The Program also completed the Gold Hill project, which safeguarded 100 vertical openings and 58 portals.

Vertical openings, portals, and pollution of water used for agricultural and industrial purposes are the three types of noncoal problems remaining to be funded in Utah based on AMLIS data. Of the three, the estimated cost of reclaiming vertical openings and portals is about 99.4 percent of the \$5,789,300 total unfunded cost. Pollution of water used for agricultural and industrial purposes



makes up the remaining 0.6 percent of the total estimated abatement cost. Figure 4 (preceding page, lower right) illustrates a comparison of the three problems' estimated unfunded reclamation costs. The same data are shown in Appendix in greater detail. We note, however, that AMLIS data do not reflect the overall scope of Utah's unfunded noncoal problems.

## 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	507 (count)	\$1,182,500	507 (count)	\$1,182,500
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	\$1,757,873	324 acres	\$6,587,879
Vertical Openings	0	0	0	0	31 (count)	\$53,913	31 (count)	\$53,913
Water Problems	0.5 gal/min	\$4,000	0	0	20.3 gal/min	\$117,085	20.8 gal/min	\$121,085
<b>UTAH TOTAL COAL COSTS</b>		<b>\$4,909,047</b>		<b>0</b>		<b>\$10,445,245</b>		<b>\$15,354,292</b>

\* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of July 22, 2008. 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 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 ; 244 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	803 (count)	\$1,249,800	128 (count)	\$150,000	2,840 (count) - SMCRA ; 2,951 (count) - all sources	\$3,122,558 - SMCRA ; \$3,325,946 - all sources	3,771 (count) - SMCRA ; 3,882 (count) - all sources	\$4,522,358 - SMCRA ; \$4,725,746 - 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	373 (count)	\$4,514,500	153 (count)	\$250,000	1,342 (count)- SMCRA ; 1,373 (count)-all sources	\$2,459,667 - SMCRA ; \$2,502,979 - all sources	1,867 (count) - SMCRA ; 1,898 (count) - all sources	\$7,224,167 - SMCRA ; \$7,267,479 - all sources
<b>UTAH TOTAL NONCOAL COSTS</b>		<b>\$5,789,300</b>		<b>\$400,000</b>		<b>\$7,968,516 - SMCRA ; \$8,428,190 - all sources</b>		<b>\$14,157,816 - SMCRA ; \$14,617,490 - all sources</b>

\* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of July 22, 2008. AMLIS does not include a complete inventory of Utah's unfunded noncoal problems.

### **Appendix 3**

#### State Comments on the Report

From: Lucia Malin [LUCIAMALIN@utah.gov]  
Sent: Wednesday, August 27, 2008 11:27 AM  
To: Ronald Sassaman  
Cc: James Fulton; Loretta Pineda  
Subject: Comments on draft annual summary evaluation report

Ron,

I agree with the report and its findings. I have assigned two staff people to AMLIS whom I trust will provide more accurate data entry than I have provided over the last year. I realize that there are many challenges in the near future regarding AMLIS and I want you to know that Utah is committed to work closely with OSM to make AMLIS a useful and well used data reporting tool.

As always, thank you for your tireless and cheerful guidance in Utah's oversight process. Your efforts are essential to the cooperative spirit and the successful partnership that we have created with OSM and Colorado. I look forward to working together in the future as we work to abate the legacy of abandoned mine related hazards and environmental problems in Utah.

Luci Malin

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