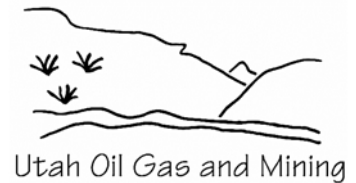


**ANNUAL SUMMARY EVALUATION REPORT**  
of the  
**COLORADO – UTAH ABANDONED MINE LAND REVIEW TEAM**  
for the  
**COLORADO INACTIVE MINE RECLAMATION PROGRAM**  
For  
**EVALUATION YEAR 2003**  
(October 1, 2002, through June 30, 2003)



October 28, 2003

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## ACRONYMS

AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory
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
DOGM	Utah Division of Oil, Gas and Mining
EPA	United States Environmental Protection Agency
MSHA	Mine Safety and Health Administration (of the U.S. Dept. of Labor)
NAAMLPL	National Association of Abandoned Mine Land Programs
OSM	Office of Surface Mining (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)



Pre-cast concrete panel closure with locking access door in the Dakota Hill project, funded in part with severance tax money from legislative appropriation



Steel grate closure with bat slot in the Turret project, built in partnership with the USDA Forest Service



Steel grate closure with concrete footer in the Turret project, built in cooperation with the USDA Forest Service



Steel grate closure with bat ladder in the Turret project, built in cooperation with the USDA Forest Service

## 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 reclaim abandoned mines and pay their administration costs. 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 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.

Directive AML-22 generally describes how OSM evaluates State and Tribal AML reclamation programs in “enhancement and performance reviews.” A team of State and Federal personnel, called the Colorado-Utah AML Review Team, has been completing these reviews of the Colorado Inactive Mine Reclamation Program (CIMRP) and the Utah Abandoned Mine Reclamation (AMR) Program since it was first formed in January 1996. The team includes representatives of CIMRP, the Utah AMR Program, and OSM’s Denver Field Division (DFD). Members of the team during the 2003 evaluation period included: Frank Atencio, Grants Management Specialist, OSM-DFD; Dave Bucknam, CIMRP Supervisor; Mark Mesch, Administrator, Utah AMR Program; and Ron Sassaman, Environmental Protection Specialist, OSM-DFD.

This report summarizes our review and evaluation of the Colorado Inactive Mine Reclamation Program for evaluation year 2003. In March 2003, OSM changed the evaluation period’s ending date. As a result, we did not complete one of the evaluations we originally planned for 2003 until after the period ended. We will report on that evaluation in the 2004 evaluation year.

## II. General Information on the Colorado Program

On June 11, 1982, the Secretary of the Interior approved Colorado’s AML plan (“State reclamation plan”) under Title IV of the Surface Mining Control and Reclamation Act (SMCRA). That approval allows Colorado to reclaim abandoned mines in the State in non-emergency AML projects. CIMRP is part of the Division of Minerals and Geology (DMG) in the Department of Natural Resources. It administers Colorado’s AML program under its approved plan. The Denver Field Division of OSM’s Western Regional Coordinating Center works with CIMRP to fund and approve AML projects in Colorado 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 each year for a grant to support their programs and reclaim specific projects. OSM awards grants to CIMRP based on the calendar year. Because the *evaluation* year (on which this report is based) included the period of October 1, 2002 through June 30, 2003, CIMRP’s grants spanned parts of two successive evaluation periods and will do

so in future years as well. The administration funding in those grants applies to a single year. Construction funding awarded in those grants is available for three years.

In the 2002 grant, OSM awarded a total of \$2,650,000 to CIMRP. That grant funded 14 positions and program administration. In addition, it funded reclamation of six coal and fifteen noncoal projects and maintenance of previously completed projects. In September 2002, OSM also awarded to CIMRP a grant for \$60,000 to fence, delineate, and characterize a coal outcrop fire on public land in western Colorado. OSM will extend that grant's performance period by one year at the State's recent request.

OSM awarded \$3,038,000 to CIMRP in the 2003 grant. That funding will continue to support 14 positions and program administration. The grant also funded reclamation of seven coal and thirteen noncoal projects and project maintenance. All seven proposed coal projects involve underground mine fires or their surface effects.

Appendices 1 and 2 show Colorado's AML coal and noncoal reclamation accomplishments and remaining reclamation needs based on data from the Abandoned Mine Land Inventory System (AMLIS).

CIMRP oversees administration of the State's approved Colorado Mine Subsidence Protection Program by an insurance brokerage firm. A total of 838 active members were enrolled in the insurance program at the end of June 2003, a decrease of 22 members since September 30, 2002. Slightly less than 90 percent of those members live in the Colorado Springs area and almost 8.5 percent reside in the area of the Boulder/Weld coal field. Another 1.2 percent of the program's members live in the Rocky Mountain foothills and the remaining 0.3 percent lives on the Western Slope. Members filed three claims during the period of October 1, 2002, through June 30, 2003. All of those claims were closed as of June 30, 2003. Investigations concluded that abandoned mine-related subsidence did not cause the damage involved in any of the three claims.

Colorado does not have an OSM-approved emergency coal reclamation program.

### III. Noteworthy Accomplishments

Increasing public awareness of hazards associated with abandoned mines helps to prevent and reduce abandoned mine-related accidents. Outreach efforts inform the public of resources available to address AML problems. In turn, those efforts encourage the public and special interest groups to bring AML-related needs to the Program's attention. CIMRP continued its efforts to increase public AML awareness and outreach during this evaluation period. In several cases, CIMRP conducted its outreach in coordination with MSHA's **Stay Out - Stay Alive** campaign. Staff participated in CIMRP's outreach efforts at the following events:

- Colorado Preservation, Inc., Conference (included a presentation and booth; February 2003);

- Fire and Ice Family Event at Aurora Reservoir (February 2003);
- Colorado Mining Association Conference (included a booth; February 2003);
- Grand Junction Safety Fair (included a booth; March 2003);
- Earth Day at Chatfield Reservoir (April 19, 2003);
- **Stay Out-Stay Alive** campaign (distributed a new mine safety primer and poster produced by the National Energy Foundation; April 20 through May 2, 2003);
- Grand Junction Rendezvous (for fourth grade students and included a booth; May 9, 2003);
- Northwest Colorado Coal Conference in Craig (May 15-17, 2003);
- Clear Creek/Gilpin Miners Association meetings (included presentations on the Virginia Canyon projects; Spring and Summer 2003);
- Mining History Conference (included a booth; June 4-7, 2003);
- Environmental Learning for Kids field trip to the Trapper Mine - set up by DMG (June 2003); and
- Total Concept of Mining Class sponsored by the Colorado Mining Association's Education Foundation (included presentations; June/July 2003).

The Program was involved in other related activities throughout the 2003 evaluation period. It produced a new brochure "**Watch your step...**" for the **Stay Out – Stay Alive** campaign and the **Colorado Reader - Mining and Energy Edition** for fourth grade students. Also, DMG sponsored an exhibit showcasing **Mine Reclamation: New Life for Mined Lands and the Environment** at the Western Museum of Mining and Industry in Colorado Springs. The exhibit opened on May 9, 2003, and illustrates land restoration as an integral part of present-day mining.

CIMRP continued to develop partnerships with agencies other than OSM to address mining-related concerns. Those agencies funded a number of projects entirely or in part, many of which addressed water quality concerns while others abated hazards typically found in projects funded under OSM grants. We evaluated CIMRP's partnerships in detail in 2003 and summarized our findings and conclusions in section IV.B of this report. As described further in that section, CIMRP participated in partnerships with the U.S. Department of Agriculture, Forest Service (USFS), the U.S. Department of the Interior, Bureau of Land Management (BLM), the U.S. Environmental Protection Agency (EPA), the Colorado Department of Public Health and Environment's Water Quality Control Division, several watershed associations, and others.

In Fall 2002, the Non-point Source Council, an advisory group to the Colorado Department of Public Health and Environment's Water Quality Control Division, announced its second annual Hall of Fame Awards. The Council recognized DMG with two awards: One in the organization category; and the other for "moving dirt" in the project category. The organization category award recognized DMG "for being in the forefront of the effort to address heavy metals in [Colorado's] waters \* \* \* through mine inventories, assessment of metal loadings, and the remediation of mine waste." The moving dirt project award for the Chalk Creek / Mary Murphy / Golf Tunnel projects recognized CIMRP and other partners for "consolidating and stabilizing mine waste, tracking groundwater flows through underground mine workings, and eventually

diverting some of that underground flow” while producing “positive measurable results.” Our review of CIMRP’s partnerships in the Mary Murphy Mine project was part of the evaluation we summarized in section IV.A of this report.

On January 16, 2003, the Colorado Chapter of the Wildlife Society awarded its 2002 Land Steward Award to CIMRP in recognition of the Program’s work to protect bat habitat through construction of specialized closures to safeguard abandoned mines. We note that CIMRP continued to protect bats and other wildlife and their habitat by planning and constructing specialized mine closures during the evaluation period.

#### **IV. Results of Enhancement and Performance Reviews**

In November 2002 and January 2003, we revised the “Colorado-Utah AML Review Team Performance Agreement” that we used for the previous five years’ evaluations. We signed our new agreement on January 29, 2003. It will apply to each year’s evaluation through the 2007 evaluation year. The performance agreement describes the team’s purpose, team members’ responsibilities, and three general principles of excellence that the team developed to review and evaluate the Colorado and Utah AML programs’ performance. As before, we expect to update the agreement every year with current-year schedules and to describe the principles of excellence and performance measures we plan to review. We also will update the performance measures to describe any specific aspects of the program that we plan to focus on.

We emphasized on-the-ground or end-results when we developed the principles and measures in the agreement. Each general principle of excellence has one or more specific performance measure(s). We decided which performance measures to review and evaluate in each year of the agreement. Performance measures describe the following: Why we selected a certain topic; what the review population and sample sizes will be; how we will conduct the review and report the results; and our schedule for completing the review. The three principles of excellence, and the specific performance measures we chose for the 2003 review of the Colorado Inactive Mine Reclamation Program, are described below.

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

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

*Principle of Excellence 2:* The State must have systems to properly manage AML funds.

- *Performance Measure (f):* Does the State partner with other organizations to increase its program’s effectiveness?

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

- *Performance Measure (a):* Is State AML program income accounted for properly?

As noted in section I of this report, in March 2003, OSM changed the evaluation period to end on June 30 instead of September 30, 2003. Because we planned our 2003 evaluations in our November 7, 2002, team meeting, we chose not to alter the schedule we agreed on at that time. As a result, we did not do the field work for the 1(a) evaluation described above until the week of July 28, 2003, and will not complete the report for some time yet. We will report on that evaluation in the 2004 evaluation year.

Results of our 2003 evaluations are summarized below. Our evaluations included interviews with CIMRP, DMG, and Natural Resources Department staff, and reviews of the Program's project specifications, grant applications and reports, and internal State and AMLIS inventories. We described our review and evaluation results in much greater detail in enhancement and performance review reports that we wrote for each performance measure. Those reports are on file in OSM's Denver Field Division. This report and the supporting enhancement and review reports describe our reviews and evaluations of performance measures 2(f) and 3(a).

#### A. Summary Evaluation of Performance Measure 2(f)

We evaluated the 2(f) performance measure to determine if CIMRP partnered with other organizations to increase its effectiveness. Programs look for funding sources other than SMCRA's Abandoned Mine Reclamation Fund in part to maximize their efforts to protect public health, safety, and the environment. Receiving funds from other sources enables AML programs to increase the number and types of hazards they abate by making more money available overall or through cost sharing. It also enables them to address hazards on lands owned or managed by various agencies and organizations in cooperative projects that comprehensively address AML problems in designated watersheds and/or mining districts. Partnering with other organizations also enables programs to proactively reduce AML-related accidents by increasing public awareness of AML hazards.

Our review sample included those efforts that were started, ongoing, or completed between October 1, 2000 and September 30, 2002, in which CIMRP provided or received funding or other resources in cooperation with organizations other than OSM to augment the functions funded in OSM grants.

We concluded that CIMRP partnered with a variety of organizations to increase its program's effectiveness. Our evaluation included 59 partnerships CIMRP entered into with Federal land management and environmental agencies, other and multiple agencies and partners, and watershed partnerships. We also included projects CIMRP worked on with funds the Colorado Legislature appropriated from limited stakes gambling (gaming) and severance taxes. We recognize the significant contribution CIMRP has made participating in numerous water quality improvement projects in partnership with organizations throughout the State.



CIMRP had 21 active partnerships with the BLM during the review period. In 20 of those cases, various BLM offices provided funding through task orders and, in one case, through a joint assistance agreement with the Forest Service. Eight task orders involved work CIMRP combined, in part, with SMCRA-funded projects. Upon completion of the work under these agreements, BLM funding will have enabled CIMRP to abate abandoned noncoal mine hazards associated with 73 vertical openings and 92 portals. It also will enable CIMRP to address other noncoal problems including three pits, one trench, one hazardous structure, at least eight mine waste piles and over 60 acres and 3 million cubic yards of mill tailings. CIMRP applied this additional funding to noncoal reclamation in 12 counties throughout the State.

Water quality is of increasing concern in various areas of Colorado, particularly those heavily impacted by noncoal mining. As a result, eight of the BLM task orders also funded CIMRP to investigate pollution caused by underground mine workings, mine drainage, and mine waste piles. In some cases, CIMRP also developed, or will develop, best management practices for reducing contact between mine inflows and ore bodies. In others, CIMRP is charged with developing pilot water treatment plans as precursors to full-scale treatment systems.

Partnerships with the Forest Service accounted for 17 of the 59 we reviewed. These partnerships provided funds to CIMRP in one cooperative agreement, nine task orders, and seven challenge cost-share agreements. The USFS regional office awarded one cooperative agreement to include task orders issued by individual USFS offices for National Forests throughout the State. Notably, CIMRP combined, or will combine, work funded under 14 of these partnerships with projects funded in grants OSM awarded to the State. Upon completion, the funding will have enabled CIMRP to abate noncoal hazards associated with 133 portals, 194 vertical openings, six subsidence features, two pits, and one glory hole. It also funded CIMRP to reclaim coal waste piles at one bond forfeiture site and to characterize complex noncoal mine drainage problems. One task order funded CIMRP to inventory abandoned mine features in three National Forests and to provide USFS with a list of recommended closure activities.

We characterized 11 of the active partnerships CIMRP participated in during the 2001 and 2002 evaluation periods as “partnerships with other and multiple agencies and partners.” These partnerships supported 14 projects in at least seven counties. CIMRP is the construction contractor for at least three of those projects. Nine of these partnerships reflect a strong commitment to improving water quality throughout the State, particularly in areas impacted by noncoal mining. One of those partnerships funded five water quality improvement projects in San Juan County. Those five projects removed over 7,000 tons of mine waste and reclaimed at least six mine waste rock sites. Other projects CIMRP was involved with under these 11 partnerships addressed additional water quality work in San Juan County, non-point source education, mine drainage investigation and characterization in Chaffee County, and characterization of 274 noncoal mine waste piles in Clear Creek County. Among the other partnerships in this group, one funds CIMRP to continue safeguarding mine openings with bat-friendly

closures when appropriate. Another funded it to develop a handbook of best practices for AML reclamation and to co-sponsor an outdoor exhibit on mill tailings reclamation at the Western Museum of Mining and Industry. Finally, CIMRP partnered with two historical societies to fund a consultant to map and evaluate historical mines in part of Hinsdale County.

CIMRP also used funds the Colorado Legislature appropriated from limited stakes gambling (gaming) and severance taxes to further its AML-related coal and noncoal accomplishments. Cooperation between the Colorado Legislature and agencies of the Department of Natural Resources, including CIMRP, and their common interest in the welfare of the State's citizens are essential to making these funds available to CIMRP. CIMRP used gaming funds in combination with SMCRA noncoal project to safeguard 32 vertical openings and 8 portals and perform project maintenance and other activities. Severance tax funds enabled CIMRP to safeguard 18 vertical openings in combination with a SMCRA-funded noncoal project, to address two other vertical openings, and to purchase 58 pre-cast concrete panels for future mine closures. The same severance tax funding enabled CIMRP to contribute matching funds for two non-point source / water quality improvement projects in San Juan County. Additionally, severance tax funds paid for reclamation CIMRP completed at four coal mines that were subject to bond forfeiture.

Finally, we reviewed the eight watershed partnerships CIMRP participated in during the 2001 and 2002 evaluation years. Overall, their purpose is to discuss and prioritize water quality for specific watersheds. All of the eight partnerships are working to improve water quality and three have set a goal of restoring fisheries based on the improved water quality. The watersheds of concern include parts of: Clear Creek; Snake River; Lake Fork of the Arkansas River; Lake Fork of the Gunnison River; Willow Creek; Animas River; Lefthand Creek; and Howard Fork of the San Miguel River. Depending on the partnership, CIMRP provides technical advice and grant writing expertise and performs project design and management and water quality evaluation. In one case, CIMRP has projects planned in the watershed area in partnership with the BLM as well.

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

OSM encourages all grantees to earn income as a means to defray AML Program costs. However, not all State AML programs have sources of program income, nor are they required to actively try to find sources of program income.

Our evaluation of this performance measure had three components. First, we would determine if CIMRP earns income generated by OSM grant-related activities. If it did, we would determine if the disposition of program income was in keeping with OSM Policy. Finally, we would determine if CIMRP properly maintains adequate financial records of program income receipts and the disposition of program income. The review sample included all financial records of program income resulting from AML grant supported activities for fiscal years 2000, 2001, and 2002 and their sources of income

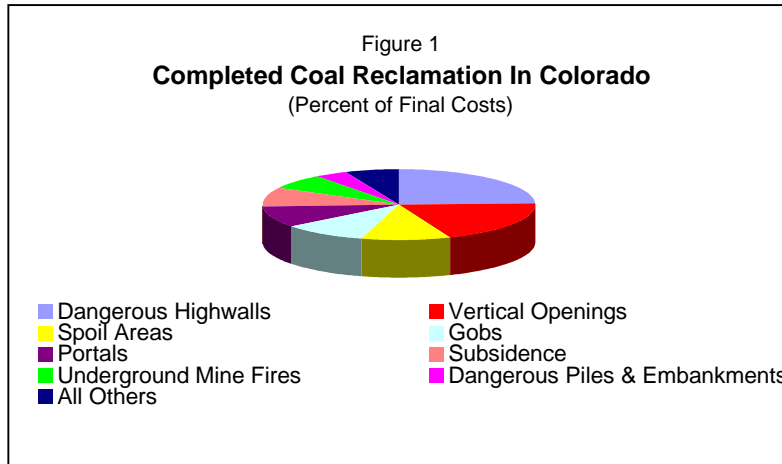
as described by OSM’s Federal Assistance Manual (FAM). We met with CIMRP and Department of Natural Resources staff with administrative record keeping responsibilities for AML program income. In addition, we reviewed CIMRP’s grant files for the past three years to determine if and how much program income was earned.

We found that CIMRP does not generate any program income. Because CIMRP does not earn any program income generated by OSM grant-related activities, it does not need to keep records of program income earnings or disposition.

Colorado has an established Mine Subsidence Program. All funds and any fees generated by this program go into the Colorado Coal Mine Subsidence Trust Fund. All monies for this Trust Fund are separately accounted for as required by the agreement of June 28, 1988, between the Colorado Department of Natural Resources and the Colorado Mined Land Reclamation Board.

**V. Accomplishments and Inventory Reports**

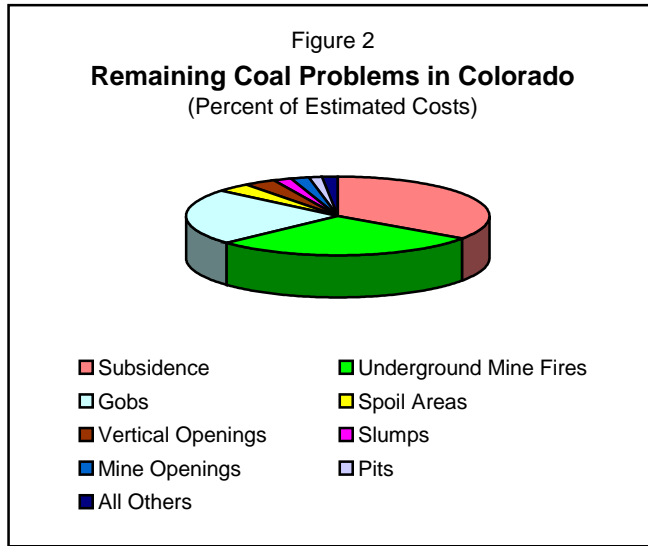
Title IV of SMCRA stresses reclamation of abandoned coal mine-related problems because a fee that active mines pay per ton of coal produced generates the AMR Fund. Appendix 1 shows in detail the abandoned coal problems that Colorado reclaimed since its program began and how much that reclamation cost to date. By the end of the 2003 evaluation period, CIMRP



reclaimed 151 coal projects since the Secretary approved its program effective June 11, 1982, and has funding to reclaim eleven more. Abating nine types of AML problems required about 93.8 percent of the \$12.52 million cost of reclaiming those coal projects. Those problem types include: Dangerous highwalls (23.6%); vertical openings (18.9%); spoil areas (10.3%); gobs (9.7%); portals (9.4%); subsidence (8.2%); underground mine fires (6.9%); dangerous piles and embankments (3.7%); and pits (3.1%). Twelve other types of problems comprised the remaining 6.2 percent of CIMRP’s completed abandoned coal mine reclamation. Figure 1 above illustrates CIMRP’s abandoned coal mine-related reclamation accomplishments.

Though CIMRP has made significant progress toward abating the known coal problems in Colorado since 1982, the State has not certified under section 411(a) of SMCRA that it addressed all known abandoned coal mine problems. OSM continues to fund the Program to abate them. Appendix 1 shows over \$37.8 million in unfunded, unreclaimed problems are included in Colorado’s inventory of coal hazards in AMLIS. This is a

decrease of about \$155,000 in estimated costs of unreclaimed coal problems since the 2002 evaluation year. About 93 percent of that estimated cost is associated with five

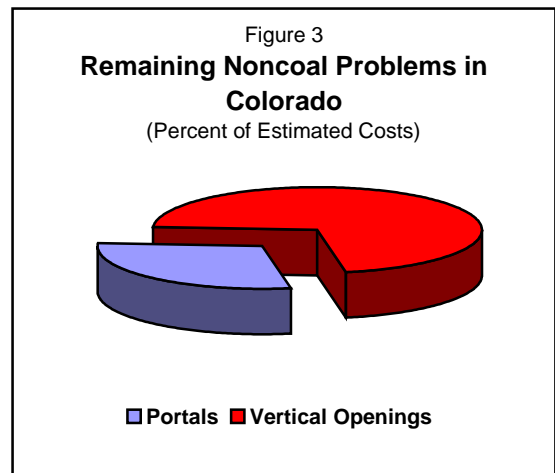


problem types. They include: Subsidence (34.7%); underground mine fires (28.4%); gobs (23%); spoil areas (3.6%); and vertical openings (3.3%). As two of the problem types comprising most of Colorado's unfunded coal reclamation costs, gob and spoil areas involve priority three environmental hazards where the need for abatement is somewhat less urgent. Twenty other problem types make up the remaining seven percent of the estimated unfunded cost of reclamation. Most of the remaining estimated cost of reclaiming other coal-related problems is associated

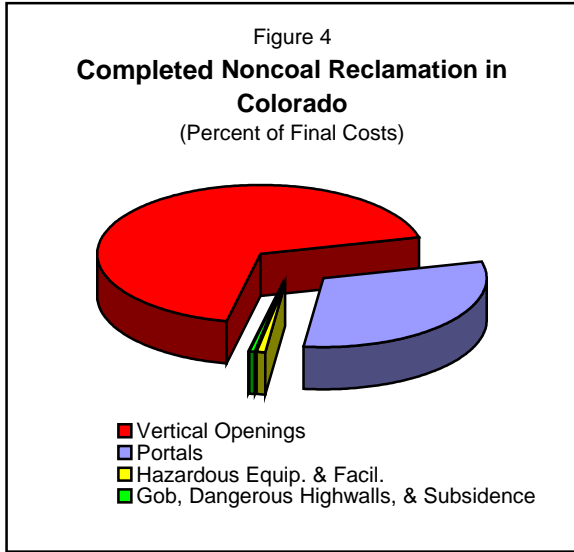
with vertical openings (3.3%), slumps (2.1%), lower priority mine openings (1.9%), and pits (1.2%). Figure 2 above further illustrates the scope of Colorado's remaining abandoned coal mine problems.

Appendix 2 summarizes the noncoal problems Colorado inventoried in AMLIS and its noncoal reclamation accomplishments. AMLIS does not reflect the magnitude of unfunded noncoal problems in Colorado and the Program plans to update it to do so. CIMRP estimates that at least 17,000 abandoned noncoal mine problems remain to be addressed in the State despite the significant effort it has made over the years to address the highest priority hazards. Most noncoal problems are found primarily west of Interstate 25 in the mountainous part of the State. Based on the limited information in AMLIS, almost \$15.3 million are needed to abate the remaining inventoried noncoal hazards in Colorado, not including work already funded and uninventoried problems.

Portals and vertical openings pose some of the most serious noncoal hazards in the State and make up 100 percent of the estimated cost reflected in AMLIS. Abandoned noncoal mine features pose immediate and extreme hazards to public health and safety in part because they are so numerous and widespread and because demographic changes increasingly put people in proximity to them. Figure 3 illustrates the percentages that portals (28.9 percent) and vertical openings (71.1 percent) comprise of Colorado's estimated unfunded noncoal reclamation costs relative to each other.



On July 6, 2003, a hiker discovered the body of a 47-year old man in a 20 to 24 feet deep noncoal prospect shaft near Mount Pisgah west of Cripple Creek, Colorado. It appears the man fell while trying to rappel into the shaft sometime in late 2002. An autopsy showed he sustained broken ribs and died of a gunshot wound, leading to speculation that he shot himself sometime after falling in the shaft. CIMRP backfilled the shaft by the end of the same week the body was discovered.



CIMRP continues to respond to the noncoal threat by reclaiming priority one abandoned noncoal mine problems. Since 1985, OSM funded CIMRP to reclaim 179 noncoal projects, of which 147 are complete. Appendix 2 shows that CIMRP’s completed noncoal reclamation abated hazards attendant to dangerous highwalls, hazardous equipment and facilities, mine waste, portals, subsidence, and vertical openings at a cost of over \$20.39 million. Based on AMLIS data, CIMRP safeguarded at least 4,880 noncoal portals and vertical shafts in an effort to address the State’s most serious hazards, an increase of 465 since the 2002 evaluation. Figure 4 shows the relative final

cost of each type of noncoal problem Colorado reclaimed based on AMLIS data. The Program funded another \$1.73 million worth of work on dangerous highwalls, industrial and residential waste, portals, and vertical openings that is not yet complete.

Appendix 1

**Colorado Abandoned Mine Reclamation Program  
Coal Reclamation Accomplishments and Remaining Reclamation Needs\***

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Bench	58 acres	\$201,500	0	0	3 acres	\$31,044	61 acres	\$232,544
Dangerous Highwalls	1,030 feet	\$30,000	500 feet	\$40,000	51,992 feet	\$2,955,885	53,522 feet	\$3,025,885
Dangerous Piles & Embankments	0	0	12 acres	\$90,000	28.5 acres	\$459,432	40.5 acres	\$549,432
Equipment & Facilities	73 (count)	\$108,000	0	0	7 (count)	\$14,657	80 (count)	\$122,657
Gobs	569.3 acres	\$8,724,954	31 acres	\$218,253	158.6 acres	\$1,210,367	758.9 acres	\$10,153,574
Highwall	1,100 feet	\$82,500	0	0	2,027.5 feet	\$46,387	3,127.5 feet	\$128,887
Hazardous Equipment & Facilities	1(count)	\$2,000	0	0	1(count)	\$1	2 (count)	\$2,001
Haul Road	4 acres	\$13,000	0	0	0	0	4 acres	\$13,000
Industrial / Residential Waste	3 acres	\$13,000	8	\$84,000	8 acres	\$311,776	19 acres	\$408,776
Mine Openings	303 (count)	\$725,000	3 (count)	\$3,206	18 (count)	\$62,592	324 (count)	\$790,798
Other	28.0	\$104,000	0	0	5.0	\$48,916	33.0	\$152,916
Portals	32 (count)	\$136,060	37(count)	\$121,746	507(count)	\$1,178,980	576 (count)	\$1,436,786
Pits	98 acres	\$441,900	0	0	82.9 acres	\$387,062	180.9 acres	\$828,962
Polluted Water: Agric. & Industrial	0	0	1 (count)	\$50,000	3 (count)	\$22,481	4 (count)	\$72,481
Subsidence	179.6 acres	\$13,130,000	0	0	45.4 acres	\$1,029,140	225 acres	\$14,159,140
Spoil Area	398.6 acres	\$1,347,595	0	0	829 acres	\$1,286,756	1,227.6 acres	\$2,634,351
Surface Burning	1acre	\$5,000	5 acres	\$70,000	35 acres	\$238,404	41 acres	\$313,404
Slump	25 acres	\$804,000	0	0	0	0	25 acres	\$804,000
Underground Mine Fire	176.5 acres	\$10,750,000	72 acres	\$3,247,000	156.5 acres	\$863,278	405 acres	\$14,860,278
Vertical Openings	118 (count)	\$1,242,967	24 (count)	\$131,961	278 (count)	\$2,370,536	420 (count)	\$3,745,464
Water Problems	39 gal/min	\$23,000	1 gal/min	\$25,000	1 gal/min	\$6,000	41 gal/min	\$54,000
<b>COLORADO TOTAL COSTS</b>		<b>\$37,884,476</b>		<b>\$4,081,166</b>		<b>\$12,523,694</b>		<b>\$54,489,336</b>

\* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of 8/12/2003

NOTE: Completed cost of \$1 means that problem type's reclamation was incidental to reclamation of another problem type.

Appendix 2

Colorado Abandoned Mine Reclamation Program  
**Non-Coal Reclamation Accomplishments and Remaining Reclamation Needs\***

Problem Type and Description	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
Dangerous Highwalls	0	0	1	\$1,000	150 feet	\$2,498	151 feet	\$3,498
Gobs	0	0	0	0	3 acres	\$78,250	3 acres	\$78,250
Hazardous Equipment & Facilities	0	0	0	0	1 (count)	\$205,000	1 (count)	\$205,000
Industrial/Residential Waste	0	0	1 acre	\$20,000	0	0	1 acre	\$20,000
Portals	1,078 (count)	\$4,517,820	211(count)	\$934,170	1,845 (count)	\$6,281,420	3,134 (count)	\$11,733,410
Subsidence	0	0	0	0	2 acres	\$10,000	2 acres	\$10,000
Vertical Openings	2,746(count)	\$11,111,753	262(count)	\$775,648	3,035(count)	\$13,822,379	6,043count)	\$25,709,780
<b>COLORADO TOTAL COSTS</b>		<b>\$15,629,573</b>		<b>\$1,730,818</b>		<b>\$20,399,547</b>		<b>\$37,759,938</b>

\* This table is based on a Problem Type Unit and Cost Summary Report from the Abandoned Mine Land Inventory System as of 8/12/2003