OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

Annual Evaluation Summary Report
for the
Abandoned Mine Land Reclamation Program
Administered by the State
of

WYOMING

for

Evaluation Year 1997
(October 1, 1996 to September 30, 1997)

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(Cover - A portion of the Ferris-Haggarty mine in the Sierra Madre Range in the Medicine Bow National Forest near Encampment, Wyoming, August 28, 1997)

ANNUAL REPORT

Part I. General

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior to oversee the regulation of coal exploration and surface coal mining and reclamation operations and the reclamation of lands adversely affected by past mining practices. SMCRA provides that, if certain conditions are met, a State may assume primary authority for the reclamation of abandoned mine lands within its borders. Once the State has obtained such approval, OSM has the responsibility to make investigations, evaluations, and inspections necessary to determine whether the State Abandoned Mine Land (AML) program is being administered in accordance with the approved program provisions.

OSM's evaluation methods are based upon OSM Directive AML-22 and a Programmatic Agreement between Wyoming AML and OSM. The Agreement was signed March 25, 1997 and covers the period of October 1, 1996 to September 30, 1997. The agreement establishes a shared commitment and shared responsibilities between the State and OSM as to how oversight will be conducted. This new approach allows the State to take a more active role in the entire oversight process. The State and OSM staff develop topics for review, specific methodologies for evaluation, and assist one another in the preparation of the final report.

During the year Wyoming AML began changing the review and recommendation process for public facility construction funding through AML. A citizens advisory board appointed by the Governor previously reviewed, ranked, and made recommendations to the Governor on applications for funding of public facilities. DEQ-AML has made a proposal to the Wyoming State Land and Investment Office which calls for a coordinated effort with the Wyoming State Land and Investment Board where the State Land and Investment Board would become the AML Advisory Board and rank the AML public facilities construction requests. If the Wyoming State Land and Investment Board becomes the AML Advisory Board, it will be necessary for Wyoming AML to amend their Reclamation Plan to make the change from a citizen board appointed by the Governor to elected officials.

OSM's Casper Field Office (CFO) in partnership with Wyoming AML Division identified specific topics to be reviewed during the review period. Wyoming AML Division and the CFO worked in concert to write the Programmatic Agreement.

The assessment of the Wyoming AML program included enhancement and performance review of selected topics and the State's citizen participation efforts. Specific topics are past reclamation, ongoing reclamation, public facility projects, and financial administration. Results of these reviews are available in Part III of this report. The State's citizen participation efforts were not evaluated. OSM only observed whether citizens were given the opportunity to

participate in the State program.

The State certified on May 25, 1984 that all inventoried coal mines eligible for AML reclamation have been completed, or are under reclamation, or design. As new coal sites are found, the State gives them first priority over non-coal sites and starts reclamation as soon as possible. Wyoming was certified to initiate public facility projects five years ago. After such certification a state is allowed to initiate public facility projects. Consequently, Wyoming currently concentrates on the reclamation of non-coal mine sites and constructing public facility projects.

Wyoming does not have an AML Emergency program and therefore emergency projects are administrated by OSM. However, Wyoming AML Division assists OSM with AML emergencies, since most emergencies are initially reported to Wyoming AML. When this occurs, Wyoming contacts the OSM Casper Field Office and the Western Regional Coordinating Center and assists in the abatement of such emergencies. In many instances, Wyoming has AML projects in the area of the emergency and offers assistance through their existing contractors. Wyoming has developed an excellent rapport and trust with the public, cities, counties, other State and Federal agencies and contractors.

Overall, Wyoming administers its AML program in a professional manner resulting in high quality performance in all aspects of the program. Excellent communication and cooperation between OSM and the Wyoming AML program staff continue.

Part II. Noteworthy Accomplishments

In 1990 Congress amended SMCRA to allow use of AML funds for construction of public facilities through applications from communities, counties, special districts or joint powers boards. Wyoming is a pioneer in public facility project development in that they are one of the first States to be heavily involved in such projects. Other states and tribes have contacted Wyoming for advice regarding processes and procedures for establishing public facility projects under their programs.

Wyoming AML's first public facility project, the University of Wyoming Mineral Reclamation and Research Center is completed. It is one of the first public facility projects approved by the Secretary of the Interior under the 1990 amendment to SMCRA. This complex is part of the School of Geology and will be used in all technical aspects of geologic research, including state-of-the art computer training (OSM TIPS training), reclamation research, and mineral development. This new facility complemented with the latest technical equipment, enables the University of Wyoming's School of Geology to be in the forefront of research in geology, mineral development and reclamation.

One of Wyoming's notable accomplishments this past year was the successful completion of the Becor-Ronco Mine. This high priority coal site posed multiple threats to public health and safety. This site was typical of the reclamation challenges posed by many abandoned underground coal mines, and this site included examples of nearly all hazards. Included in the

environmental and safety hazards at this site were open shafts and adits, subsidence holes, mine fires, dilapidated buildings, hazardous materials, abandoned equipment, vehicles, oil drums, and abandoned electric transformers. There also were contaminated soils, coal slack piles, an underground fuel storage tank and asbestos on the site contributing to the threat to the public, property, wildlife and livestock. All hazards were eliminated and the majority of the site was regraded and seeded.

Another highly notable accomplishment was the elimination of environmental and safety hazards associated with an abandoned iron ore mine near Hartville, Wyoming. Work was completed in August of 1997 on the Colorado Fuel and Iron (CF&I) Corporation's Sunrise Mine. Over the past twelve years, a total of thirteen construction bid packages have addressed varying degrees of problems left behind from past mining. These hazards have been both physical and environmental. Approximately $4.5 million has been spent to abate these hazards including: asbestos abatement; environmental restoration, regrading two rock dumps; regrading and reclaiming two open pit mines; fencing three extremely large open pits; and closing 176 shafts and adits by plugging, backfilling or installing doors grates. The work was done in three phases and performed by three engineering firms and ten construction contractors.

Part III. Results of Enhancement and Performance Reviews

AML Inventory - Public Facilities Inventory.

Again, Wyoming is a pioneer in the AML inventory program for public facility projects. Wyoming is a leader in development of its criteria, processes and procedures for considering and approving public facility projects using AML funds. Information gathered in the evaluation of Wyoming's efforts may be useful for other states.

Two projects were selected for evaluation. Those projects are the Sheridan street project and a sewage lagoon near Guernsey, Wyoming.

Sheridan serves as a bedroom community for a large number of coal miners who work in Montana. However, the City of Sheridan receives no tax income or royalties from the mining but has to provide services and support the infrastructure for the miners. The lack of revenue lead Sheridan to request AML assistance.

The Sheridan City Street project consists of paving unimproved city streets for the purpose of reducing fugitive dust to meet Environmental Protection Agency (EPA) air quality standards. The EPA issued a violation to the City of Sheridan for air pollution and creating a health risk. The source of much of the pollution was dust form dirt/gravel roads and streets. To eliminate the environmental degradation to the air quality, the City matched funds with Wyoming AML, the Farm Loan Board, Joint Powers Board, and the Department of Transportation to pave these specific roads and streets, thus eliminating the major source of air pollution from fugitive dust. AML funds were used only for street paving. Other street improvements such as sidewalks, curbs, or utility upgrades were funded by the City of Sheridan or through other sources of

funding. Construction work began with street paving in the summer of 1997.

The second public facility project selected for oversight evaluation, the Guernsey sewage lagoon, is located adjacent to the North Platte river and was determined to be connected hydrologically to the river. Raw sewage is entering or has the potential for entering the river and the river is a source of drinking water for communities downstream. To address this health risk, Wyoming AML is planning to construct a minimum maintence multi-celled series of lagoons. This facility will serve the town of Guernsey, the nearby National Guard Camp, and nearby railroad facilities.
No problems or issues were identified during this evaluation. No corrective action is required.

Past AML Reclamation

Two completed projects were selected as sample sites for oversite evaluation. These projects were the Becor-Ronco underground mine site near Thermopolis and the Sunrise Iron Mine near Guernsey. No problems were observed during the field site visits nor identified throughout the evaluation.

The Becor-Ronco site was completed in 1997. As previously described, there were a number of health and safety hazards and environmental degradation concerns. Mine fires were extinguished. Open shafts and audits were sealed. Hazardous waste was removed. Coal waste was buried. Subsidence pits were filled. At the time of the site inspection, there was evidence of recent heavy precipitation. The vegetation on portions of the site had not emerged sufficiently to retard erosion particularly on one reclaimed slope. The Wyoming AML will monitor the site for three years and will perform remedial measures needed to reduce the chance of future erosion.

The Sunrise iron ore mine reclamation was also completed in 1997. This site included significant hazards to public health and safety. Three large pits created by both mining and the subsidence of underground workings were fenced off to prevent unauthorized access into or around the extremely hazardous areas. Two other open pits have been reclaimed. Open shafts were sealed by backfilling and adits were plugged. Bat grates were added to other adits. In addition the Wyoming AML staff eliminated health and safety threats posed by hazardous solid and liquid waste materials.

No problems or issues were identified during the evaluation. No corrective action is required.

On-going AML Projects

Two ongoing projects were selected for the purpose of measuring the process and uniqueness of each. The two projects selected were the Ferris-Haggarty underground copper mine in Carbon County and the Yellowstone gravel pit reclamation projects in Yellowstone National Park.

The Ferris-Haggarty mine is in the first stage of investigation and cleanup of acid mine drainage. This site contains high concentrations of copper which has been entering Haggerty Creek in

Carbon County since the mine's abandonment nearly a century ago. The mine's main tunnel has been rehabilitated and shored up to allow engineers to install pilot water treatment systems and evaluate the high copper concentration source. The State assumed control of the cleanup project in 1996 after the U.S. Environmental Protection Agency agreed with a state request not to include the mine on the EPA's Superfund list of hazardous waste sites. Wyoming Game and Fish Department officials have stated that cleaning up the mine site could also help reestablish the Colorado cutthroat trout (endangered species) populations in nearby Haggarty Creek.

Two gravel pits and one road was being reclaimed this fall inside Yellowstone National Park. Reclamation goals included reducing the amount of sediment entering the nearby Little Thumb Creek. The creek is a major spawning area for the Yellowstone Lake cutthroat trout and is an important fishing area for the Grizzly bears during the late spring.

Financial Administration

The Casper Field Office reviewed drawdowns, timeliness of grant applications and reports, audits and audit resolution, accounting procedures, internal controls, procurement and management of property and services.

Wyoming has a U.S. Treasury agreement affecting the AML Program and therefore no drawdown analysis was conducted. The agreement has been updated and applies to OSM's 1997 evaluation year.

Wyoming is submitting required reports in a timely fashion.

CFO is relying upon A-128 Audits for (1) accounting procedure controls to include payroll, accounts payable, travel, and (2) procurement and management of property and services. All findings from A-128 Audits were resolved. There were no questioned costs. Wyoming revised their property inventory as a result of a previous A-128 Audit. No other problems were identified.

One previous finding was checked. This issue was that vendor invoices were being paid without full authorization. Vendor files were sampled and no problems were found.

Summary

Site visits were coordinated with the Wyoming AML Division Administrator for on-the-ground and office evaluation of all topics. No issues or problems are identified in the evaluation of public facility projects, past projects, on-going projects, or financial administration.

Citizens input and concerns are monitored through various contacts with the public. OSM observed such contacts as Wyoming's AML Advisory Board meetings, AML's participation in local city and county public forums, public information meetings, published public notices, news releases and reports.

Part IV. Accomplishments and Inventory Reports

The Wyoming AML program accomplishments in the past ten years include: 27,528 surface mined acres reclaimed including highwalls, landslides, refuse, and water impoundments; 1,289 mine openings safeguarded including shafts, portals, adits, stopes, and subsidence; 18 coal fires abated or controlled; and one acid mine drainage project completed. A total of $334 million dollars in AML funds have been awarded the Wyoming AML Program.

Wyoming has completed seven projects during the past year. Work included closing twenty seven shafts and adits, grouting under thirty one residential and commercial structures, and reclaiming over 400 acres. Wyoming also completed three public facility projects; the Sheridan County road 74, a Crook County Road construction project, and Gillette Beltloop road construction project.

As reclamation of coal related sites in Wyoming are completed Wyoming AML continues to increase funding for non-coal reclamation and public facilities projects. During the past year Wyoming AML made significant initial progress in reclamation efforts at the Atlantic City iron ore mine, resume reclamation at the Gas Hills Uranium District and complete closure of several hazardous shafts, portals, and reclamation of bentonite mines. The inventory data base in 50% complete.

Wyoming has completed 50% of an update of its inventory. The update is two fold. The first is to update the reclamation cost estimates and the second is to add new sites to the inventory. The inventory will be used as a planning tool for the AML program.

APPENDIX A

ENHANCEMENT AND PERFORMANCE REVIEW

REPORTS

WYOMING AML PROGRAM
ENHANCEMENT AND PERFORMANCE REVIEW REPORT
EVALUATION YEAR 1997

Principles Being Evaluated: AML - Public Facilities Inventory

Review Dates: July 30, 1997, and August 13, 1997

Personnel: Stan Barnard (WY AML), Morris Elliott (OSM)

Background: Wyoming has established a public facilities program that includes a procedure whereby AML funds can be used for public facilities related to mining impacts. The criteria set forth in the SMCRA and the Federal regulations, as well as, the Wyoming AML program allow Wyoming to assist Wyoming communities in eliminating hazards to the public and the environment through the construction of public facilities. This portion of Wyoming AML program is being reviewed due to its experience in a field that few agencies have ever experienced. Other States and the Hopi tribe have contacted Wyoming AML for advice and other information regarding public facility projects.

Review Methodology: Field site visits were conducted to perform on the ground evaluations of the projects. The criteria used to evaluate these project were the overall success in eliminating potential hazard to the public and the environment..

Population / Sample: There are seven completed and eleven ongoing public facility projects in Wyoming. Two current projects were selected for evaluation. They were the Guernsey Sewage Lagoon system and the Sheridan road and street paving projects

Findings and Conclusions: Overall no problems or issues were observed during the field site visits. Both projects are ongoing and progressing in a workman like manner.

The Guernsey Sewage Lagoon project was selected so that there would be elimination of the threat of water pollution from the existing lagoon which leaks untreated effluent into the North Platte River. The inspection team observed the location of the present lagoon to be within 100 feet of the river bank. Thus demonstrating a high probability of hydro logic connection between the lagoon and the river. Design and engineering work is ongoing. Considerations were given to the size of the towns budget, workforce, and expertise when designing a system to replace the

faulty existing one. A multi celled passive series of lagoons system was proposed.

The EPA had issued a violation to the City of Sheridan for air pollution. The source of much of the pollution was a dirt / gravel roads on the northeast side of town used by county residents commuting to the mines. To eliminate the environmental degradation to the air quality, the city matched funds with Wyoming AML to pave the road, thus eliminating this source of air pollution.

Corrective Actions: No problems or issues were identified during this evaluation. No corrective action is required.

WYOMING AML PROGRAM
ENHANCEMENT AND PERFORMANCE REVIEW REPORT
EVALUATION YEAR 1997

Principles Being Evaluated: AML - Ongoing AML Projects

Review Dates: August 28, 1997 and September 18, 1997

Personnel: Stan Barnard (WY AML), Morris Elliott (OSM), and Mark Humphrey (OSM)

Background: The State is certified, meaning that all inventoried coal mines eligible for AML reclamation are completed or currently under reclamation. Coal mine reclamation projects are becoming fewer as each project is completed. Currently, the new projects are those that were not identified earlier as eligible for AML reclamation or consent for reclamation has been recently obtained. Sufficient funding is available to reclaim newly identified coal sites. As new coal sites are found, the State allows them first priority and starts reclamation.

Review Methodology: Site visits were coordinated with the Wyoming AML Division Administrator for on the ground evaluation of the sites. If no issues or problems are identified in the field, no further evaluation will take place. However, if an issue or problem is identified the source will be investigated and a resolutions will be worked out with the State.

Population / Sample: There are forty-eight completed and nine ongoing non-coal reclamation projects. Two ongoing projects were selected to evaluate process and uniqueness of each. The two projects selected were: the Ferris-Haggerty copper mine in the Sierra Madre Mountains west of Encampment; and, the Yellowstone (National Park) Project west of Yellowstone Lake and north of West Thumb Junction.

Findings and Conclusions: Ferris-Haggerty is a 100 year old abandoned underground copper mine on private land within the boundary of the Medicine Bow National Forrest near Encampment, Wyoming. The main environmental cleanup challenge presented by the mine is a substandard water discharge from the ore transporting/drainage tunnel. This water contains 4 mg/l of copper and discharges into Haggerty Creek at a rate ranging from 50 gpm to 500 gpm, depending upon the time of year. This amount of copper has rendered the stream directly below the mine virtually lifeless.

The first phase of the project was to reopen and stabilize the Osceola tunnel where the mine drainage accumulates and discharges. A small scale pilot water treatment process constructed last summer has demonstrated the ability to remove the copper. The inspection team traveled 1,500 feet back into the Osceola tunnel and observed the sources of the copper leachate, the location of an old small scale treatment system, and the rehabilitation of the tunnel integrity. Plans are now to install a much larger, more permanent passive water treatment system either inside the tunnel near the source or above ground at the mine mouth discharge.

The preliminary studies indicate that low PH water containing high amounts of copper commingle with more neutral water containing moderate amounts of copper prior to discharging at the mine mouth. Further studies should shed light on the most efficient means of treating this substandard mine drainage.

The access road into the site needs upgrading before larger amounts of equipment and materials can be transported to the site. The access road leading to the Ferris-Haggerty mine is 4.5 miles long and goes through several private landowners and U.S. Forrest Service lands. The road is a two track trail with several stream crossings. The plan is to widen the road and build crossing using an innovative low impact method by using recycled railroad flat cars for bridges.

Corrective Actions: No problems or issues were identified during this evaluation. No corrective action is required.

The Yellowstone Project entailed the reclamation of the Little Thumb Creek gravel pit and Dry Creek gravel pit and the Old Craig Pass Access road. Reclamation of the Little Thumb Creek gravel pit was nearly complete. Debris and surplus road pavement materials were buried in the pit and back filled with material on site. The highwall was retained due to a lack of material to back fill it. The pit was graded for positive drainage flow with riprap channels and large trees used to reduce flow velocities. Two settling ponds were constructed to reduce sediment to the Little Thumb Creek. The creek is a major spawning area for the Yellowstone Lake cutthroat trout that migrate up the Little Thumb in the late spring and early summer during high water levels. The streambed was reconstructed to reestablish habitat and reduce other damage that occurred from the mining operations. At the time of the site visit, the contractor was finishing the second settling pond and was going to remove the culvert at the stream crossing and reclaim the access road and staging area all the way back to the highway. After the contractor has finished, the Park Service will plant trees and seed the area with a permanent seed mix. The following year, the Park Service will remove the silt fences installed to reduce sediment flow into the creek. No problems or issues were identified.

Dry Creek gravel pit and the Old Craig Pass Access road was complete. The contractor had backfilled and graded the pit. Also the pavement material was removed and disposed of in the pit. The roadbed was ripped and blended into the adjacent topography. All that remains is the tree planting and reseeding that the Park Service will perform. While onsite, the Park Service had a crew broadcast seeding the roadway.

Corrective Actions: No problems or issues were identified during this evaluation. No corrective action is required.

WYOMING AML PROGRAM
ENHANCEMENT AND PERFORMANCE REVIEW REPORT
EVALUATION YEAR 1996

Evaluation Topic: Program Administration -- Title IV

Review Dates: July 1 and 2, 1997

Personnel: Neal Jacquot (CFO), Steve Toalson (DEQ)

Background: Program administration topics reviewed are: (1) Drawdowns, (2) Accounting procedures to include payroll, accounts payable, travel, and (3) Procurement and management of property and services. CFO is relying on annual A-128 Audit findings for items (2), (3) and (4) and is not specifically reviewing those topics unless there are findings.

For AML, Wyoming has a US Treasury agreement. Therefore, no specific drawdown analysis is required. Monitoring of DEQ's timely reporting to Treasury is sufficient.

Review Methods: For Title IV, no AML drawdowns were conducted; only a review of DEQ's required reporting to US Treasury was done. DEQ is reporting timely.

Since CFO is relying on A-128 Audit findings, all pertinent A-128 Audits were reviewed. One audit remains in the resolution process and CFO just recently responded to all assigned resolutions. There were no questioned costs that pertained to OSM. There was a previous finding that pertained to mismanagement of property. CFO interviewed DEQ staff who was assigned the responsibility of property management. DEQ recently took a physical inventory of all property and is currently in the process of resolution of all items not resolved on the property list.
It will take the State 8-10 months to resolve these items. CFO will monitor progress and end result.

CFO considers all other issues pertinent to OSM resolved.

Findings and Conclusions: Wyoming has an adequate AML administration program.

Corrective Action: None