

***OFFICE OF SURFACE MINING RECLAMATION
AND ENFORCEMENT***

***Annual Evaluation Summary Report
for the
Abandoned Mine Lands Program
Administered by the Public Service Commission
of the State of
NORTH DAKOTA
for
Evaluation Year 1999
(October 1, 1998 to September 30, 1999)***



Abandoned Mine Lands Director Dr. Louis Ogaard and reclamation specialist Bruce Beechie inspect one of several subsidence openings near the radio station in Beulah, North Dakota.

1999 ANNUAL REPORT FOR NORTH DAKOTA

Part I. Introduction

The North Dakota Abandoned Mine Land Reclamation (AMLR) program continues to operate under the guidelines of the Surface Mining Control and Reclamation Act (SMCRA), the approved State Reclamation Plan, the Federal Assistance manual, and associated rules, regulations and policy decisions. The State program is administered by the Abandoned Mine Land Division (AMLD) of the North Dakota Public Service Commission (PSC). The State was granted primacy in 1981 and they administer an excellent AMLR program in full compliance with their approved AMLR Plan. Oversight of the program is conducted by the CFO, and the topics of this report were selected in a shared commitment process with the State. Annual Evaluation methods are based on OSM Directive AML-22 and the PA. This report covers the period of October 1, 1998 to September 30, 1999.

North Dakota is a minimum program State. This means that they receive \$1.5 million each year to accomplish the necessary abandoned mine reclamation, and the work must be completed in a very efficient and cost effective manner to stretch this funding as far as possible. All of the design work for each reclamation project is completed in house by the existing AMLD staff, and then the actual reclamation work is contracted to private construction firms. Minimum funding does not allow the majority of the projects to be completed in one construction season, so they must be phased over a period of years to achieve adequate reclamation. Chart #1 lists projects that are ready for construction if additional funding were to become available, as well as the estimated cost for each of the future projects.

Construction work begins each spring as soon as weather conditions allow heavy equipment to traverse the rural road system in order to get to the sites. Work continues until it is halted by the severe weather conditions usually encountered in North Dakota during the winter. Some types of reclamation activities can continue into the winter months, but this time of year is generally reserved for the design of future projects and other duties necessary to get the projects ready for the next construction season. All of the reclamation completed by the AMLD has been associated with abandoned coal mining, and the State does not expect to complete all proposed reclamation listed on their inventory before the proposed expiration of the AMLR funding in 2004.

The CFO continues to enjoy an excellent working relationship with the staff of the North Dakota AMLD. Their personnel are experienced, knowledgeable and dedicated to the program goals. The AMLD also maintains good relationships with the other State and Federal agencies that must be contacted during the course of preparing projects for reclamation. One AML reclamation grant was awarded to North Dakota during this evaluation period and it was approved within the government performance requirement of 60 days. No problems or issues exist in the North Dakota AMLR program.

Part II. Noteworthy Accomplishments

During this evaluation period, Bill Dodd, who is a member of the AMLD staff was selected by OSM to go to East Kalimantan, Indonesia, as a member of a team of State and Federal personnel. He was in the country for a 45 day period to instruct Indonesian workers on techniques in fighting coal fires. He also assisted in the extinguishing of coal fires that had been burning for extended periods of time. Mr. Dodd gained considerable expertise in working with fires in North Dakota, and was responsible for the reclamation of two emergency projects that were very serious coal spoil fires during the 1998 evaluation period.

The North Dakota AMLD has enhanced its web page design by adding photographs of AML projects, including emergency projects, taken with its digital video and still cameras. Visitors to this site can now see these photos of AML project areas before reclamation and after the projects have been completed to gain a total understanding of the problems encountered and the success of the final product.

PART III. ON-SITE EVALUATION OF RECLAMATION PROJECTS

During this evaluation period visitations were made to one pre-construction site, one project that was under construction, and thirteen projects which have been completed. In addition, the one emergency project completed during the evaluation year was visited. The pre-construction site will undoubtedly evolve into several projects, or phases of a single large project. It is located in Beulah, North Dakota, and this is an area that has been heavily undermined. Several AMLR projects have been completed in this area and subsidence activity continues to appear on a constant basis. The emergency project was a subsidence event in the front yard of a residence in Beulah, (see chart #IV) and exploratory drilling of the adjacent streets and residences found several other voids. The most dangerous group of the voids are scheduled for reclamation during the next construction season. One project was also completed in the Beulah area during this evaluation period (see chart #III).

The one project under construction that was visited was the Lehigh Road Project, Phase IV. This is another heavily undermined area near Dickinson, North Dakota, and a major road through the area has suffered several subsidence events. Winter drilling projects have located abandoned mine voids under the road and previous phases of the construction project have resulted in stabilization by grouting during the summer construction seasons. The road is a primary route for school buses and emergency vehicles and is the only route to the city landfill, and several residences, without taking a twenty mile detour. As shown in chart #I, phases V through VII of the Lehigh Road Project are in the planning stage for future reclamation.

The thirteen completed projects evaluated consist of four projects to eliminate subsidence from shallow underground mines, eight uraniferous projects and one pit/highwall combination. The uraniferous sites were very unique and were some of the first abandoned mine projects completed in North Dakota. There was a serious hazard of exposure to uranium residue by humans, wildlife and livestock. This was especially true when residents of nearby towns took dirt from these pits to spread on lawns, driveways and around their homes, not knowing of the danger. It all started when uranium was discovered in the lignite coal but transportation costs to haul the coal to the processing plants in Colorado and New Mexico were prohibitive. Since fire did not alter the

properties of the uranium, the decision was made to mine the coal, burn it on site, and haul the resulting ash to the processing plant to extract the uranium. This was a much more cost effective process for the uranium owners, but it produced a hazard to the health of humans and animals. Large piles of lignite coal were gathered and burned, and sometimes a strong wind would come up before the ash could be collected and placed in containers. The ash would be blown around inside the pit and would then be too costly for the operator to collect. In these cases the pit was usually abandoned and future winds would tend to swirl the ash into windward areas of the pit. High radioactive concentrations were noted and reclamation was a high priority. Pre and post reclamation radiation surveys were conducted with the assistance of the North Dakota Health Department and the U.S. Geological Survey. Reclamation consisted of placing the radioactive material in lined and capped repositories to prevent any leaching of toxic material into surface or underground water sources. These repositories were then buried under several feet of topsoil and revegetated. All known uranium sites have now been reclaimed and the AMLD is concentrating on eliminating the massive subsidence problems in the more densely populated parts of the State. Monitoring of these reclaimed sites has shown that no leaching of the toxic material has occurred. Various types of projects have been reclaimed with expertise and professionalism, and the overall reclamation success of the AML program in North Dakota has been excellent.



The Fritz uranium abandoned mine site before reclamation in 1988.



The Fritz site in 1999 after its reclamation and return to productive use.

PART IV. STATUS OF THE APPROVED RECLAMATION PLAN

No amendments to the approved reclamation plan were made during this evaluation period, and no amendment activity is scheduled for the future.

PART V. FISCAL AND ADMINISTRATIVE CONTROLS

During this evaluation period drawdowns, timeliness of grant applications, reports and audits, payroll activities, and travel payments and authorizations were reviewed. For the drawdown analysis of the existing AML grant three monthly draws were sampled. Each drawdown was completed after the respective expense was incurred and was for the proper amount. A review of payroll and benefits was also conducted to ensure that these costs for personnel charged to OSM grants were legitimate and that OSM was not supporting unauthorized activities. Records were also checked to ensure that the AMLD payroll was being approved by the proper supervisory authorities. All charges and approvals were proper and complete.

An A-133 audit was conducted for the two years ending June 30, 1998. No unallowable costs were found. For future years A-133 audits in North Dakota will be based on risk analysis as allowed by the A-133 procedures. The AML competitive bidding process for construction and professional service contract selection was reviewed. The State is following their regulations and policies. Property management and travel procedures were reviewed relative to the State regulations. All charges and approvals were proper and no problems were noted. In addition, all grant applications and reports are being submitted in a timely manner and are accurate.

PART VI. POST RECLAMATION MAINTENANCE

All AML projects are evaluated at least once a year after completion. The outcome of the evaluation will determine the number and timing of future evaluations. After three years of close monitoring, AMLD visits to individual sites are discontinued unless there are compelling reasons to continue. The greatest majority of the AML sites are located on private land or land managed by the State Game and Fish Department. The AMLD maintains a good relationship with land owners and managers, and is notified immediately if problems arise on sites that have been reclaimed. Corrective actions are taken promptly to preclude a worsening of the problem. The AMLD applies good, sound reclamation techniques and the State has good topsoil conditions and ample moisture to promote good revegetation. In most cases, at the end of the three year monitoring period it is extremely difficult, if not impossible, to tell the reclaimed sites from the adjacent natural terrain.

PART VII. INVENTORY MAINTENANCE

The State has had a few problems getting into the AMLIS. Because of incompatibilities with the computer systems that will not allow them to use the 1-800 number, the State has had to go through the internet to enter the system. However, the AMLD staff has a high degree of computer expertise so this has been more of an inconvenience than a problem. As with most of the AML programs in this part of the country, staff personnel spend the entire construction

season in the field supervising reclamation contractors and do not compile and enter information into AMLIS until winter weather closes down outside work. North Dakota considers inventory maintenance a high priority and it is accomplished in an excellent manner.

PART VIII. INTERAGENCY COOPERATION

The AMLD maintains a good working relationship with all the State and Federal agencies it works with. This also carries over into the relationships with local agencies and groups, and to the landowners who have AML sites on their property. As mentioned above, many of the projects are done in phases over a period of several years, and the necessary clearances and permits are obtained prior to the first phase to cover the entire project. This saves a lot of staff time for both the personnel of the AMLD and the other agencies involved. The State Game and Fish Department has been very pleased with the habitat enhancement incorporated into AML reclamation on land that they manage. North Dakota is in the center of one of the major waterfowl flyways in the United States so the retention of surface water is always a high priority in reclamation planning. The AMLD has worked closely with the Game and Fish Department and Ducks Unlimited in the design of impoundments and establishing seed mixtures for revegetation.

**CHART # I
NORTH DAKOTA
CONSTRUCTION READY PROJECTS**

Project	Cost	Economic Impact *	Environmental Benefits
Lehigh Project-Phase V thru VII	\$765,000	Income: \$1.9 Employment: 60	Subsidence Elimination Public Safety
Beulah Project-Phase IV thru VII	\$1,000,000	Income: \$2.6 Employment: 90	Subsidence Elimination Public Safety
Noonan Highwall Project	\$200,000	Income: \$0.9 Employment: 25	Highwall Rem oval Public Safety
Columbus-Phase IV	\$700,000	Income: \$1.7 Employment: 56	Highwall Rem oval Public Safety
Mainten ance, Drilling, Appraisals, ect.	\$100,000	Income: \$0.6 Employment: 14	Reclamation Preparation
Wilton Project	\$381,600	Income: \$1.0 Employment: 29	Subsidence Elimination Public Safety
Total	\$3,146,600	Income: \$8.7 Employment: 274	Restoration of Land Public Safety

*Income expressed in millions of dollars

Employment expressed in number of persons employed as a result of the expenditure

**CHART # II
NORTH DAKOTA
ACRES AND HAZARDS**

Hazard ¹	Oct 1, 1998 Status ²	FY 99 Additions ³	Reclaimed in FY99 ⁴	Oct 1, 1999 Status ⁵
CS Clogged Stream	None	None	None	None
CSL Clogg. Stream Lands	None	None	None	None
DH Dangerous Highwalls	103,825 Lin. ft.	None	3800 Lin. ft.	100,025 Lin. ft.
DI Dangerous Impound.	None	None	None	None
DPE Dngr. Piles & Embk.	30 acres	None	15 acres	15 acres
DS Dangerous Slides	None	None	None	None
GHE Gas & Haz. Expl.	None	None	None	None
UMF Undrgrnd Mine Fires	None	None	None	None
HEF Hazard Eqpt & Facil.	5	None	None	5
HWB Hazard Water Body	None	None	None	None
IRW Indust/Resid Waste	17 acres	None	None	17 acres
P Portals	10	None	None	10
PWAI Pol. Wtr. Ag & Inds	5	None	None	5
PWHC Pol. Wtr. Hu. Cons.	1	None	None	1
S Subsidence	1,897 acres	None	4 acres	1,893 acres
SB Surface Buming	10 acres	None	10 acres	None
VO Vertical Opening	155	None	None	155
SA Spoil Area	110 acres	None	None	110 acres
BE Bench	None	None	None	None
PI Pits	None	None	None	None
GO Gobs	1 acre	None	None	1 acre
SL Slurry	None	None	None	None
HR Haul Roads	None	None	None	None
MO Mine Openings	None	None	None	None
SP Slump	None	None	None	None
H Highwalls	None	None	None	None
EF Eqpt & Facilities	None	None	None	None
DP Indus/Resident Waste	30 acres	None	None	30 acres
WA Water Problems	10 GPM	None	None	10 GPM

¹ AMLIS Keyword

² A snapshot of the status at the beginning of the year

³ PAD additions, by keyword, during the year

⁴ Reclamation accomplishments-GPRA requirement

⁵ A snapshot of the status at the beginning of FY99

**CHART III
NORTH DAKOTA
COMPLETED PROJECTS**

Project Name	Project Cost	Economic Impacts	Environmental Benefits
Custer Project Phase III	\$117,002.69	Income: \$.4 million Employment: 15	Elimination of a dangerous highwall
1998 Beulah/Zap, Phase III	\$333,000	Income: \$.9 million Employment: 30	Subsidence reclamation
Lehigh Road Phase IV Pressure Grouting	\$232,500	Income: \$.5 million Employment: 20	Roadways stabilized to prevent subsidence
Noonan A (5)	\$298,969.75	Income: \$.7 million Employment: 26	Elimination of a dangerous coal slack piles and high wall
Wilton Maintenance (RAMP coop. Project)	\$35,000	Income: \$.09 million Employment: 3	Subsidence reclamation
Hazen West Maintenance	\$2,935	Income: \$.007 million Employment: 1	Erosion repair work
Tree Planting Project Central Scranton Proj. Graf Proj. Custer Proj.	\$11,465.83	Income: \$.02 million Employment: 2	Tree replacement
Columbus Project Maint.	\$14,060	Income: .03 million Employment: 2	Erosion repair work

