



# OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

## ANNUAL EVALUATION SUMMARY REPORT FOR THE ABANDONED MINE LANDS PROGRAM OF NORTH DAKOTA



**EVALUATION YEAR 2008**

**(July 1, 2007 to June 30, 2008)**

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# ABANDONED MINE LANDS 2008 ANNUAL REPORT FOR NORTH DAKOTA

## **PART 1. INTRODUCTION**

Evaluation of the state reclamation program is conducted by the Casper Field Office (CFO) of the Office of Surface Mining Reclamation and Enforcement (OSM). The 2008 evaluation period started on July 1, 2007 and concluded June 30, 2008. Evaluation methods are based upon OSM Directive AML-22 and a Performance Agreement (PA) between the State and OSM. This agreement incorporates a shared commitment by the State and OSM in determining how annual evaluations will be conducted. The State takes an active role in the entire evaluation process. The process is designed to evaluate whether the State, through its Abandoned Mine Land Reclamation (AMLR) program, is achieving the overall objective of Section 102 of the Surface Mining Control and Reclamation Act (SMCRA) which states that AMLR programs are to:

"... promote the reclamation of mined areas left without adequate reclamation prior to the enactment of this Act and which continue, in their unreclaimed condition, to substantially degrade the quality of the environment, prevent or damage the beneficial use of land or water resources, or endanger the health or safety of the public ..."

As a result of the PA, specific topics were identified for review and review methodologies were developed for the evaluation period, in concert with the State. The review methodologies are described in detailed oversight work plans, developed for the review of each specific topic. The reviews were designed to result in an overall measure of the State's success in achieving planned reclamation goals. By focusing on end results, OSM is able to determine the root causes of problems (if any) and concentrate its resources on prevention by providing assistance to the State for any needed program improvement. The specified topics selected for review were those identified by OSM and the State from past experience which have the most potential for preventing the State from achieving their planned reclamation goals. At the end of the evaluation period, OSM prepared this annual report and gave the State the opportunity to comment on its contents.

## **PART II. GENERAL INFORMATION ON THE NORTH DAKOTA PROGRAM**

On December 23, 1981, the Secretary of the Department of the Interior approved the North Dakota AMLR Plan under the provisions of Title IV of SMCRA. With that approval, the State assumed primary authority for the reclamation of non-emergency abandoned mine land (AML) reclamation projects within the State. On September 27, 1993, the Secretary approved North Dakota's May 25, 1993 amendment to its AMLR Plan allowing North Dakota to assume responsibility for an emergency response reclamation program. The North Dakota Public Service Commission (NDPSC), Abandoned Mine Lands Division (AML D) currently administers these programs.

The North Dakota AMLR program continues to operate under the guidelines of SMCRA, the approved State Reclamation Plan, the Federal Assistance Manual, and associated rules, regulations and policy decisions. The State administers an excellent AMLR program in full compliance with their approved AMLR Plan.

North Dakota received \$3,072,803 in EY2008 to accomplish the necessary reclamation of hazardous abandoned mines. All of the project design work is completed in house by staff personnel, and the actual reclamation work is contracted out to private construction firms.

The AMLD initiates reclamation activities each spring as soon as weather conditions allow. Many of the rural sites are accessible only by dirt and gravel roads, which must be allowed to dry sufficiently before heavy equipment can travel on them. Work may start as much as two months earlier on sites that are located near the paved road system, and it continues until it is halted by the severe weather conditions usually encountered in North Dakota during the winter. Some types of work, such as drilling to locate underground voids, can be continued into the winter months. Coal outcrop fire suppression projects are also conducted during winter months. However, this is generally the time of the year when future projects are designed, and coordination necessary to get projects ready for the next construction season takes place. All of the reclamation completed in North Dakota to date has been on abandoned coal mines, and no non-coal work is planned. The State estimates that it will take at least fifteen years to reclaim the coal problems now listed on their inventory. (see Part VIII., **Chart #2**).

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 goals of the program. The AMLD also maintains a good relationship with the other State and Federal agencies that must be contacted during the course of preparing projects for reclamation

One AMLR grant was awarded to the State during this evaluation period and it became active on March 1, 2008. The grant was approved well within OSM's performance period requirement of 60 days. No problems or issues exist in the North Dakota AMLR program.

The following is a list of acronyms used in this report:

AML	Abandoned Mine Land
AMLD	Abandoned Mine Land Division
AMLIS	Abandoned Mine Land Inventory System
AMLR	Abandoned Mine Land Reclamation
CFO	Casper Field Office
GPS	Global Positioning Satellite
NDPSC	North Dakota Public Service Commission
OIG	Office of the Inspector General
OSM	Office of Surface Mining Reclamation and Enforcement
PA	Performance Agreement
PAD	Problem Area Description
SMCRA	Surface Mining Control and Reclamation Act
TIPS	Technical Innovation and Professional Services

### **PART III. NOTEWORTHY ACCOMPLISHMENTS**

The AMLD staff is active in several national organizations dedicated to reclamation of abandoned mined lands including the National Association of Abandoned Mine Land Programs (NAAML), Interstate Mining Compact Commission (IMCC), Interstate Technical Group on Abandoned Underground Mines (ITGAUM) and Western Regional Technical Team (WRTT). AMLD staff has participated in benchmarking workshops to develop training courses in underground mine mapping with GIS and AML Drilling and Grouting.

The AMLD staff has authored technical articles for the NAAML newsletter and papers for national conferences and workshops. All of these papers and articles have been placed on the North Dakota AMLD website to make them available for use by other reclamation programs and the general public.

The AMLD is scanning and filing most of its documents and reports digitally in a central directory. This eliminates the need to retrieve paper copies. The division has also scanned most available maps and inventory information for abandoned mines in North Dakota and is currently developing a GIS database for all known abandoned mine information. This database will aid the division in project selection, prioritization and design; and will also allow public access to information on abandoned mines via the Internet.

The AMLD utilizes new technologies to aid in reclamation including geophysical void detection, borehole camera, RTK survey-grade GPS, GPS Camera, and mobile computing using ArcPAD.

The NDPS-AML was recognized for environmental excellence by OSM at its annual Abandoned Mine Land Reclamation Awards held at the National Association of Abandoned Mine Land Programs annual conference September 26, 2006. The Western Regional award for outstanding reclamation went to the NDPS's Garrison Abandoned Mine Land Project. Tackling a series of collapsing – and often hidden and forgotten -- underground coal mines, the NDPS developed a detailed, persistent approach to locating, mapping and filling underground mines before they could create dangerous sinkholes. This proactive approach has resulted in safer conditions for ranchers, farmers, houses, city streets and modern highways located over abandoned mines.

### **PART IV. NORTH DAKOTA UTILIZATION OF OSM TECHNOLOGICAL ASSISTANCE**

Technology Transfer is cooperating with the North Dakota AML program on the acquisition, scanning and geo-referencing of underground mine maps through a Cooperative Agreement with Applied Science funding. Through support of Applied Science funding in FY06 and FY08, the North Dakota Program will have implemented a web based application for the public to access all known digitally preserved abandoned coal mine maps by 2010.

Additionally, the TIPS and Technology Transfer Program facilitated AML activities by providing use of the TIPS GPS Enabled Camera, Real Time Kinematics (RTK) GPS System, and

the downhole camera. The North Dakota Program continues to take advantage of availability of these tools to enhance the quality of the end product. Use of OSM TIPS equipment compliments use of TIPS supported GIS, Mobile Computing, Hydrology, AutoCAD, and Remote Sensing software used by North Dakota Program staff.

The North Dakota AML Program has an active representative on the Western Region Technology Transfer Team. Continued involvement in technical conferences and teams will foster additional partnerships and innovative approaches to resolve technical challenges.

An OSM service manager visit was conducted with the Title IV and Title V Programs in Bismarck to better understand the programs needs, to deliver shared equipment for project use, and to identify opportunities where Technology Transfer can better partner with North Dakota personnel as we work to implement regulatory solutions. Software updates to Galena and SedCAD TIPS core software were distributed to designated contacts during this reporting period. Additionally, 10 licenses of ArcPad were provided for mobile computing purposes.

Two North Dakota AML employees attended a total of four NIIP training classes. Two North Dakota AML employees attended a total of five TIP's classes.

OSM's Technical Librarian filled one reference request and provided three article reprints to the North Dakota SRA staff members.

## **PART V. POST RECLAMATION MAINTENANCE**

The North Dakota AMLD post reclamation monitoring schedule calls for each project to be closely monitored for a period of three years after it is completed. However, the most heavily undermined parts of the State do not have significant rock strata to support the soil over the abandoned underground mines. Large, deep subsidence holes often appear overnight, and history shows that once they are filled additional slumping will probably occur at some point. Also, once a subsidence event appears, others usually follow in a short time in the same general area. The AMLD has adopted a policy of checking all known subsidence prone areas every time any of the staff are in the area, to keep better control of any hazards that exist, and to better correct recurring problems on sites that have been reclaimed. The monitoring process is assisted by the good relationship and close contact the AMLD has with the landowners. The staff is often notified of new subsidence events the same day that they occur on private land. Only the subsidence events that are hazardous to livestock or humans are presently being reclaimed.

During the evaluation year, approximately seventy dangerous sinkholes caused by collapse of abandoned underground coal mines were filled at properties in western North Dakota. The AML program should be continued, so that the subsidence problems that are posing safety hazards and taking large amounts of crop and pasture land out of use in parts of North Dakota can be addressed.

## **PART VI. RESULTS OF EVALUATION YEAR 2008 REVIEW**

The North Dakota AML Performance Agreement (PA) was signed on June 3, 2008. Since the oversight review and technical assistance processes are continuous and not limited to one year, this Agreement contains the basic framework for oversight/technical assistance activities in North Dakota until it is amended or terminated. Both parties may amend the agreement at any time if necessary to meet the objectives of Directive AML-22. This arrangement will also provide the necessary flexibility to include unforeseen program problems or technical assistance requests as additional review topics at any time. The PA describes the team's purpose and the topics selected for review to evaluate the performance of the AML program. On-the-ground, performance-based results were the principal focus of program evaluation and documentation.

Results of the 2008 evaluations are summarized below. The evaluations included field visits to AML projects, interviews with NDPSC-AMLD staff, and reviews of the AMLR Program's project specifications, grant applications and reports, and internal State and AMLIS inventories. The evaluation results are described in greater detail in evaluation reports, written for each review topic. Those reports are on file in OSM's CFO. Each topic was reviewed according to the methodology described in detailed oversight work plans. This report and the supporting topic evaluation reports describe the 2008 evaluations of five topics selected for review during the 2008 evaluation year.

### A. Summary Evaluation of Overall Reclamation Success

OSM's 2008 evaluation of overall reclamation success was designed to determine if NDPSC-AMLD's reclamation met project goals. The 2008 review sample included two major reclamation projects and a sinkhole maintenance project completed during evaluation year 2008. Two major reclamation projects completed during evaluation year 2007 were evaluated to determine long-term reclamation success. One of the projects completed during evaluation year 2007 addressed approximately 1,000 linear feet of dangerous highwall associated with an abandoned surface coal mine. The other project completed during evaluation year 2007 addressed underground mine voids beneath heavily utilized roadways. Over 6,000 cubic yards of grout were pressure pumped into the mine voids to help prevent subsidence from occurring in the future. One major project completed during evaluation year 2008 addressed approximately 1,500 feet of dangerous highwall associated with an abandoned surface coal mine. The other major project completed during evaluation year 2008 addressed underground mine voids beneath heavily utilized roadways. The sinkhole maintenance project involved elimination of numerous sinkholes beneath crop and pasture lands in various areas of the western part of the state.

NDPSC-AMLD's reclamation was compared to project specifications, results of interagency consultation, and other project information. The evaluation focused on determining whether reclamation met project goals by implementing the scope of work to abate original hazards, complying with conditions (if any) resulting from interagency consultation, and improving overall site conditions compared to pre-reclamation conditions. Generally, OSM agreed projects met their goals if abatement and reclamation measures were intact and functional and if no problems compromising those measures were apparent. Site conditions were considered improved if hazards to public health and safety were abated and associated reclamation reduced

environmental problems such as erosion and sedimentation while promoting revegetation.

This evaluation concluded that the projects visited met their respective goals. NDPSC-AMLD met the goals of abating hazards and improving site conditions at the ten projects. Highwalls associated with abandoned surface coal mines were properly eliminated and the regraded areas were revegetated. Underground mine voids were backfilled remotely with injection of pressurized grout through drilled injection holes, to eliminate the threat of subsidence. The injection holes were properly reclaimed. Sinkholes associated with underground mine voids were properly eliminated and the backfilled areas were revegetated.

#### B. Summary Evaluation of AML Emergency Investigations and Abatement Efforts

OSM's 2008 evaluation of AML emergency investigations and abatement efforts determined if the emergency criteria of the State AMLR plan are satisfied and the project(s) are completed as described in the AML Emergency Investigation report. The 2008 review sample included all AML emergency complaints received during the evaluation year, and all emergency projects completed during the evaluation year. During evaluation year 2008 the NDPSC-AMLD received three citizen complaints of AML emergencies. All complaints resulted in AML emergency reclamation projects. One project used pressure grouting to address underground mine collapse beneath a structure. The other two projects addressed the sudden occurrence of sinkholes resulting from pre-SMCRA underground coal mining.

OSM reviewed all files of emergency complaints received during the evaluation year, AML Emergency Investigation reports, work specifications contained in bid solicitations and results of interagency consultations. The evaluation focused on determining whether proper consideration was given to all citizen reports of emergency conditions, and determining if the emergency reclamation projects were completed as described in the AML Emergency Investigation reports.

It was concluded that the NDPSC-AMLD is adhering to the provisions of the emergency program contained in the State AMLR plan. The AMLD promptly responded to each emergency complaint received, conducted thorough investigations of each complaint, and properly submitted AML Emergency Investigation reports to CFO in order to obtain authorization for expenditure of AML emergency funding. The emergency projects were completed as described in the AML Emergency Investigation report and specifications contained in bid solicitations.

#### C. AML Grant Fiscal and Administrative Controls

OSM's 2008 evaluation of AML grant fiscal and administrative controls determined the level of excellence with which the state has properly managed funds. The state's drawdown of AML grant funds was examined in accordance with the requirements of Chapter 5-55 of the Federal Assistance Manual. Drawdown reports from fiscal years 2006, 2007 and 2008 were sampled to determine the actual and optimum days that the State Program takes to pay out funds to its customers.

Different fund numbers are assigned for the different types of grants that are issued to the North Dakota, Public Service Commission by OSM. Project numbers are then assigned to the various

project subaccounts that occur within a given grant to keep track of expenditures. Time sheets are kept to show hours worked by PSC employees; travel costs are also kept, along with expenses for each project or activity. Expense vouchers are coded by project work and a warrant is issued later to pay for all expenses and work done.

The Administrative Staff Officer keeps Oracle Journal entries of accounts and runs trial balances to cross check monthly expenses. A running total of expenses is kept and compared with the Automated Standard Application for Payments (ASAP) report from the U.S. Treasury. A Month Ending Report is prepared that contains all revenue and expenditures that are charged to each grant. The North Dakota Program submits a report of monthly expenditures to the U.S. Treasury ASAP system for reimbursement. The evaluation found that the State of North Dakota's A&E Regulatory and AML Programs are on a cash reimbursement basis. All costs are paid up-front by the State accounting system and then the State is reimbursed for the amount it paid out to cover program expenses. The State of North Dakota does not operate on a cash advance system.

This review of the North Dakota, Public Service Commission's records revealed that the State does not receive advances of Federal funds but operates on a cash reimbursement basis. This means that the State does not need to concern itself with how long it keeps cash on hand before services, customers or contractors are paid. The actual and optimum days required to pay funds under the State's system are not a concern since the State chooses to pay all debts from its treasury first. North Dakota maintains a financial drawdown system which complies with Federal and State requirements. Since the North Dakota, Public Service Commission operates on the cash reimbursement method of payment; it is in keeping with the requirements of Chapter 5-55 of the FAM and the Cash Management Act of 1990.

#### D. Summary Evaluation of Abandoned Mine Land Inventory System (AMLIS)

OSM's 2008 evaluation of AMLIS determined if the information the State entered into AMLIS agrees with information in its files. This topic was mandated for review due to a September, 2004 report issued by Interior's Office of the Inspector General (OIG). The report criticized the accuracy of AMLIS data, based on the OIG review of AMLIS data for four eastern States' AML programs. The OIG's review concluded that AMLIS data did not match data in those States' files and 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 the OIG's recommendation, OSM required its field offices to implement two requirements. The first requirement is to "assure that each State and Indian Tribe AML program has procedures in place to ensure and certify the accuracy of data entered into AMLIS" as part of the FY2004 oversight (subsequently changed to FY2005). OSM Headquarters subsequently advised field offices to drop the certification requirement. As a result, the focus is to make sure States and Tribes have requisite systems in place. The CFO and NDPSC-AMLD chose to include this assurance as part of the evaluation year 2006 oversight. The evaluation year 2006 oversight determined North Dakota has such a system in place that is adequate to ensure accurate data is entered into AMLIS.

The second requirement implemented by OSM in response to the OIG's recommendation stated, "[o]nce these State and Indian Tribe procedures are in place, OSM will annually review a

random sample of Problem Area Descriptions (PADs) to see if the information entered into AMLIS agrees with the information in the PAD.” As a result, the focus is to make sure the data States and Tribes entered into AMLIS PADs (an integral part of AMLIS) agrees with the information in their files. The CFO and NDPSC-AMLD chose to include this assurance as part of the evaluation year 2007 oversight. The evaluation goal was to determine if the information North Dakota enters into AMLIS, for projects completed during the evaluation year, agrees with information in its files.

The NDPSC-AMLD compiles data from various sources for input into AMLIS. These sources include project information spreadsheets, project diaries, close-out reports to the PSC and meeting minutes from PSC-approved payment of contractor invoices. Data pertaining to emergency projects include procurement and contract data compiled in Project Summary Books, site-specific project data and site photographs. Project completion data is tracked on an EXCEL spreadsheet. Information in the spreadsheet includes project name, location, contract number, contractor, year of contract, year of completion, cost and method of reclamation.

Information entered into AMLIS is performed by designated Project Managers on the NDPSC-AMLD staff. This information is based on the above-mentioned data sources. Since AMLIS data is not intended to include maintenance project information, maintenance project data is housed in a separate location from other project data. The NDPSC-AMLD keeps records of maintenance projects in a separate booklet describing procurement, contracting, scope of work and photographs for each of the maintenance projects.

Completion information entered into AMLIS for the five projects completed during the evaluation year was analyzed and compared to the information contained within the NDPSC-AMLD files.

This evaluation concluded the information NDPSC-AMLD entered into AMLIS for completed projects agrees with the information in its files.

#### E. Summary Evaluation of Public Outreach

OSM’s 2008 evaluation of public outreach determined if the NDPSC is performing public outreach efforts by (1) holding public meetings before applying for grants for new potential project areas, and (2) obtaining consent for right of entry prior to conducting AML reclamation of specific projects. The North Dakota AMLR Plan requires that the public be afforded the opportunity to offer comments on abandoned mine reclamation projects. The NDPSC-AMLD considers the public an important component of the reclamation program, and conducts a public meeting in the community nearest each project. The meetings are well publicized and are held in the evenings or on weekends to allow maximum citizen participation. The overall plan for the project area, construction design, maps, overlays and aerial photographs are available and discussed at each public meeting. Individuals may submit comments in writing, or meet with the project managers at any time prior to completion of the comment period on a project. Project managers also meet with affected landowners to explain each project in detail, and keep them informed of the progress throughout the construction phase. Work plans are often altered to conform to comments received from landowners, contractors and the general public.

The 2008 review sample included file data of project areas selected for AML reclamation during the 2008 evaluation year. During the evaluation year NDPSC-AMLD selected and/or conducted reclamation on two major project areas. In addition, reclamation was conducted at numerous sites across the western part of the state in conjunction with the 2007 Sinkhole Maintenance Project. The file data contained Public Meeting Attendance Records for each new project area and Consent for Right of Entry Forms, signed by each affected landowner.

This investigation concluded the NDPSC is adhering to the public participation and involvement policy of the State AMLR plan by holding public meetings regarding potential AML project sites. The NDPSC also obtains consent for right of entry prior to conducting AML reclamation.

## **PART VII. PUBLIC AND INTERAGENCY PARTICIPATION**

The AMLD goes to great lengths to develop and maintain a good working relationship with all the State and Federal agencies it works with. This carries over into the relationship with local agencies and groups, and to the landowners who have AML sites on their land. When a project must be completed in phases, the AMLD designs each phase consulting with several agencies to obtain the necessary clearances and permits. Each phase is bid and implemented separately, while planning for reclamation construction is done for the entire project. This saves a lot of staff time for the AMLD and the other agencies involved, and the private landowner can be given a schedule of when his property will be in use by the reclamation contractor. Habitat enhancement for wildlife and waterfowl is incorporated into each project where it is feasible, and the retention of surface water for landowners is a high priority. 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. They have also recorded a significant amount of the mining history of the State to be provided to educational facilities, and to mitigate the loss of important cultural resources during the reclamation process.

The NDPSC provides further opportunities for public participation and involvement through its internet website and public service announcements. The AMLD posts current consumer bulletins pertaining to AML hazards, project specifications and technical articles produced by NDPSC-AMLD staff.

The photographs on pages 14 through 18 further demonstrate the degree of hazardous conditions encountered in various areas of the State, and the excellent reclamation accomplished by the AMLD to eliminate the hazards.

## **PART VIII. ACCOMPLISHMENTS AND INVENTORY REPORTS**

Several projects are presently ready for immediate construction if additional funding were to become available. These are listed in **Chart #1**. Since implementation of their approved AMLR program, the AMLD has eliminated safety hazards and threats to the environment posed by abandoned coal mines, as provided for in SMCRA. **Chart #2** shows hazard categories reclaimed

during the 2008 evaluation year and the status of hazard categories remaining at the end of the 2008 evaluation year. The hazard categories reclaimed during the 2008 evaluation year were addressed by the individual projects listed in **Chart #3**.

**CHART #1  
NORTH DAKOTA  
CONSTRUCTION READY PROJECTS\*  
June 2008**

Project Site	Cost	Environmental Benefits
Williams – Williston Phases 4-5	\$1,500,000	Subsidence Prevention Public Safety
Hazen West Phase 2	\$1,500,000	Dangerous Highwall Elimination Public Safety
Beulah/Zap Phases 11 through 13	\$2,000,000	Subsidence Prevention Public Safety
Buechler/Velva Highwalls	\$3,000,000	Dangerous Highwall Elimination Public Safety
Garrison Phase 5	\$700,000	Subsidence Prevention Public Safety
Columbus Phase 10	\$700,000	Dangerous Highwall Elimination Public Safety
Scranton-Bowman Reeder	\$700,000	Subsidence Prevention Public Safety
Wilton	\$700,000	Subsidence Prevention Public Safety
Exploratory Drilling & Site Investigation	\$600,000	Reclamation Preparation
Maintenance	\$600,000	Sinkhole Filling, Site Repair, Tree Planting
<b>TOTAL</b>	<b>\$12,000,000</b>	<b>Restoration of Land and Public Safety</b>

- ❖ Construction ready projects are those for which information is available for preliminary project designs.



**CHART #2  
NORTH DAKOTA  
ACRES AND HAZARDS REMAINING**

Hazard <sup>1</sup>	July 1, 2007 Status <sup>2</sup>	EY 2008 Additions <sup>3</sup>	Reclaimed in EY2008 <sup>4</sup>	July 1, 2008 Status <sup>5</sup>
CS Clogged Stream	None	None	None	None
CSL Clogged Stream Lands	None	None	None	None
DH Dangerous Highwalls	97,475 feet	None	1,500 Lin. Ft.	95,975 feet
DI Dangerous Impound.	None	None	None	None
DPE Dangerous Piles and Embankments	None	None	None	None
DS Dangerous Slides	None	None	None	None
GHE Gas and Hazardous Equipment	None	None	None	None
UMF Underground Mine Fire	None	None	None	None
HEF Hazardous Equipment and Facilities	5	None	None	5
HWB Hazardous Water Body	25	None	None	25
IRW Industrial/Residential Waste	1 acre	None	None	1 acre
P Portals	10	None	None	10
PWAI Polluted Water, Agr. and Industrial	1	None	None	1
PWHC Polluted water, Hu. Cons.	1	None	None	1
S Subsidence	3,224.6 acres	11.6 acres	22.5 acres	3213.7 acres
SB Surface Burning	None	None	None	None
VO Vertical Opening	155	None	18	137
SA Spoil Areas	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 Equipment and Facilities	None	None	None	None
DP Industrial/Residential Waste	None	None	None	None
WA Water Problems	10 GPM	None	None	10 GPM

<sup>1</sup> AMLIS Keyword

<sup>2</sup> A "snapshot" of the status at the beginning of the evaluation year

<sup>3</sup> PAD additions, by keyword, during the year

<sup>4</sup> Reclamation accomplishments-GPRA requirement

<sup>5</sup> A "snapshot" of the status at the beginning of EY08

**CHART #3**  
**NORTH DAKOTA**  
**COMPLETED PROJECTS - EVALUATION YEAR 2008**  
**July 1, 2007 to June 30, 2008**

<b>Project Name</b>	<b>Project Cost</b>	<b>Environmental Benefits</b>
2007 Columbus VIII Surface Mine Project	\$249,638	Dangerous Highwalls
2007 Williams Co 9 Pressure Grouting Project	\$664,155	Subsidence Prevention
2007 Havelock SW (Maintenance) Surface Mine Project	\$64,466	Dangerous Highwalls
2007 Exploratory Drilling Underwood & Beulah	\$75,490	AML Investigation
2007 Maintenance 1 Sinkholes - Hanks & Noonan	\$21,188	Subsidence Reclamation
2007 Maintenance 2 Sinkholes - Sawyer	\$13,230	Subsidence Reclamation
2007 Beulah Emergency Sinkhole Filling	\$5040	Subsidence Reclamation
2008 Wilton Emergency Sinkhole Filling	\$2016	Subsidence Reclamation
2008 Columbus Maint. Tree Planting	\$16,560	Tree Planting
2008 Williston (Njos) Emergency Pressure Grouting Project	\$108,235	Subsidence Prevention
<b>TOTAL</b>	<b>\$1,220,018</b>	

## **PART IX. PHOTOS**

The following photographs have been attached to this report to further demonstrate the degree of hazardous conditions encountered in various areas of the State, and the excellent reclamation accomplished by the AMLD to eliminate the hazards.



**2008 Sinkhole  
Maintenance Project**  
Subsidence feature



**2008 Williston (Njos) Project**  
Pressurized grout injection hole.



**2008 Williston (Njos) Project**  
Grout injection under structures.



**2007 Sinkhole Maintenance Project (Noonan)**  
Recently filled sinkholes.



**2008 Columbus 9 Project**  
Highwall to be eliminated



**Highwall** hazard adjacent to N.D. Highway 200 between  
Beulah and Hazen, North Dakota



**Highwall** hazard adjacent to N.D. Highway 200 between Beulah and Hazen, North Dakota



**2008 Wilton Emergency**  
Recently filled sinkhole



**2007 Columbus VIII Project**  
Highwall eliminated and Spoil piles graded

# Appendix A:

## North Dakota's Comments and Casper Field Office Responses

North Dakota PSC relayed the following comments about the draft EY2008 OSM Annual Evaluation Report for North Dakota's AML program (from email dated August 22, 2008):

Cover Page - The beginning of the evaluation year should be July 1, 2007, not 2008.

Page 4 – In the first complete paragraph, we do not believe that North Dakota should be considered a minimum funded program for EY 2008 since we received over \$3 million in the latest AML grant. This should be revised along with a similar statement in the last paragraph on page 6.

We recommend modifying the second sentence in the third complete paragraph on page 4 that indicates “projects that have been completed for two years or more are identical to the surrounding terrain and impossible to identify . . .”. This statement does not accurately reflect the post-reclamation conditions of abandoned surface mine reclamation projects where highwalls are backfilled and backsloped and graded spoil areas that have not been respread with topsoil.

Page 6 – The first complete paragraph incorrectly indicates that a North Dakota AML staff member attended the OSM TIPS Geospatial Conference. While two staff members from our regulatory program attended the conference, no AML staff members attended this conference.

The discussion on staff that attended OSM NTTP and TIPS training courses appears incorrect. Our records show that two AML staff members attended a total of four NTTP courses and two staff members attended five TIPS courses. Please correct the discussion in the middle of page 6.

Page 15 – The second photo appears to be mislabeled. We believe the photo was taken at the 2008 Williston (Njos) project site.

Page 16 – The first photo is mislabeled as this photo was taken at the 2008 Williston (Njos) project site rather than at the Wilton project.

CFO agrees with all comments made by NDPSC and appropriate revisions have been made.