

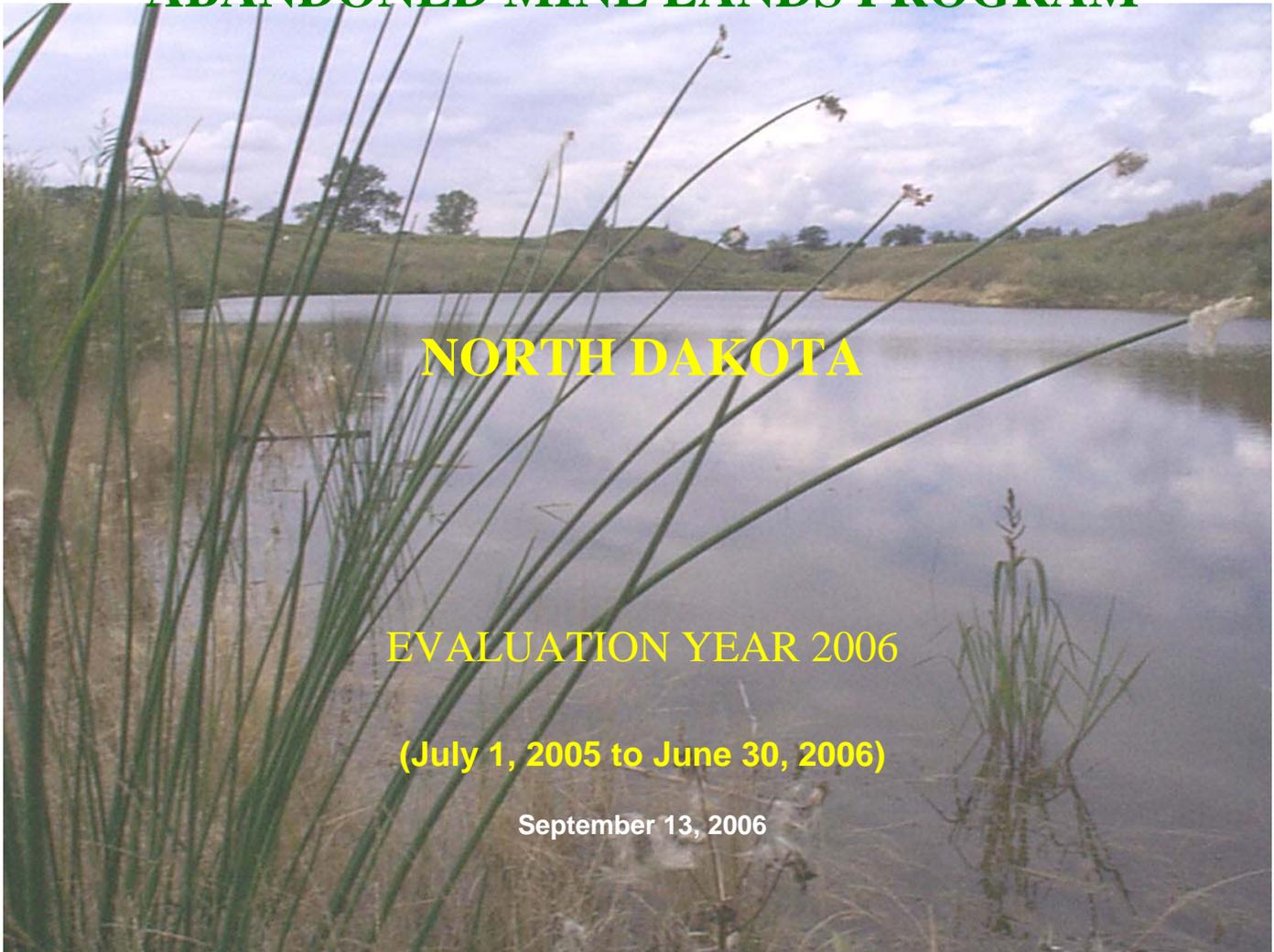


OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

ANNUAL EVALUATION SUMMARY REPORT

FOR THE

ABANDONED MINE LANDS PROGRAM



NORTH DAKOTA

EVALUATION YEAR 2006

(July 1, 2005 to June 30, 2006)

September 13, 2006

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ABANDONED MINE LANDS 2006 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 (OSM). The 2006 evaluation period started on July 1, 2005 and concluded June 30, 2006. 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 AMLR program, is achieving the overall objective of Section 102 of 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 Abandoned Mine Land Reclamation (AMLR) Plan under the provisions of Title IV of the Surface Mining Control and Reclamation Act (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) currently administers these programs.

The North Dakota 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 administers an excellent AMLR program in full compliance with their approved AMLR Plan.

North Dakota is a minimum program state that receives only \$1.5 million dollars each year to accomplish the necessary reclamation of hazardous abandoned mines. With this limited funding, the AMLD must complete reclamation work in an efficient and cost effective method to stretch their fiscal capabilities as far as possible. 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 minimum funding does not allow for completion of the majority of the projects in one construction season, so larger projects must be phased over a period of years to achieve adequate reclamation.

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. 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 ten to fifteen years to reclaim the coal problems now listed on their inventory with the present minimum program funding level (see Part VIII., **Chart #2**).

The State is in the tenth year of a potential fifteen year project to grout underground voids in the Beulah/Zap area of North Dakota. This is a heavily undermined area, and some of the earliest abandoned mine reclamation was completed here. This project consisted of grouting voids under heavily used roadways, commercial structures and private residences. The drilling projects to locate the voids were usually completed during the winter months when other reclamation work was not possible. Once the voids were located and cased, they were grouted during the summer construction season. This project undoubtedly prevented severe damage to the structures and roadways, and allowed local residents and visitors to use the area with a higher degree of safety.

Historically, North Dakota has done an excellent job of reclaiming the hazards of past mining. Projects that have been completed for two years or more are identical to the surrounding terrain and impossible to identify unless they are pointed out by someone who was familiar with the site prior to reclamation.

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, 2006. 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
NDPSC	North Dakota Public Service Commission
OIG	Office of the Inspector General
OSM	Office of Surface Mining
PA	Performance Agreement
SMCRA	Surface Mining Control and Reclamation Act

PART III. NOTEWORTHY ACCOMPLISHMENTS

The AMLD staff continues to be a major contributor of technical articles in the newsletter of the National Association of Abandoned Mine Land Programs. New and innovative reclamation techniques are presented for the benefit of the entire association in most issues of the newsletter. In addition, the staff contributes technical papers at many of the national conferences and workshops. All of the papers presented at the various conferences have been placed on the North Dakota AMLD website to make them available for use on a permanent basis by other reclamation programs and the general public.

PART IV. 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, seventy-five dangerous sinkholes caused by collapse of abandoned underground coal mines were filled at eight properties in western North Dakota. The minimum program funding does not allow for all the subsidence holes to be filled at this time. The AML program should be continued, and funding should be increased, 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 V. RESULTS OF EVALUATION YEAR 2006 REVIEW

The North Dakota Abandoned Mine Land PA was signed on February 8, 2006. It will apply to each year's evaluation through the 2007 evaluation year. 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 2006 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 2006 evaluations of four topics selected for review during the 2006 evaluation year.

A. Summary Evaluation of Overall Reclamation Success

Our 2006 evaluation of overall reclamation success determined if NDPSC-AMLD's reclamation met project goals. The 2006 review sample included three major reclamation projects completed during evaluation year 2006, six major reclamation projects completed during evaluation years 2004 and 2005, and one minor maintenance project completed during 2004. The projects completed during evaluation years 2004 and 2005 were evaluated to determine long-term reclamation success. One of the projects completed during evaluation year 2006 addressed approximately 5,000 linear feet of dangerous highwall associated with an abandoned surface coal mine and sinkholes associated with abandoned underground mining. The other two projects completed during evaluation year 2006 addressed underground mine voids beneath private residences, commercial structures and heavily utilized roadways. One of the projects evaluated for long-term reclamation success addressed approximately 3,200 feet of dangerous highwall and radioactive uraniferous spoil material. The maintenance project evaluated for long-term reclamation success addressed water structure maintenance associated with a previously reclaimed abandoned surface coal mine. The other five projects evaluated for long-term reclamation success addressed underground mine voids beneath private residences, commercial structures and heavily utilized roadways.

We compared NDPSC-AMLD's reclamation to project specifications, results of interagency consultation, and other information. Our 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, we agreed projects met their goals if abatement and reclamation measures were intact and functional and if no problems compromising those measures were apparent. We considered site conditions improved overall if hazards to public health and safety were abated and associated reclamation reduced environmental problems such as erosion and sedimentation while promoting revegetation.

We concluded that the projects we 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.

B. Summary Evaluation of AML Emergency Investigations and Abatement Efforts

Our 2006 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 2006 review sample included all AML emergency complaints received during the evaluation year, and all emergency projects completed during the evaluation year. During evaluation year 2006 the NDPSC-AMLD received three citizen complaints of AML emergencies. All three complaints resulted in AML emergency reclamation projects. Two projects addressed the sudden occurrence of sinkholes resulting from pre-SMCRA underground coal mining. The other emergency project addressed a coal refuse fire burning in refuse resulting from pre-SMCRA surface coal mining.

We 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. Our 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.

We concluded 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, conducting 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. All three emergency projects were completed as described in the AML Emergency Investigation reports and specifications contained in bid solicitations.

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

Our 2006 evaluation of AMLIS determined if the State has a system in place to make sure the data it enters into AMLIS match data 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 "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 FY2006 oversight. The evaluation goal was to determine if North Dakota has such a system in place and document what it consists of.

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.

We concluded NDPSC-AMLD's system is adequate to ensure accurate data is entered into AMLIS. With any system, there is potential for human transcription error and data entry error at the point of data entry into AMLIS. However, due to the minimal number of staff, the potential for error is reduced.

D. Summary Evaluation of Public Outreach

Our 2006 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 2006 review sample included file data of project areas selected for AML reclamation during the 2006 evaluation year. During the evaluation year NDPSC-AMLD selected and/or conducted reclamation on six project areas. 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.

We 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 VI. COAL OUTCROP FIRE PROGRAM

The AMLD conducted its second coal outcrop fire suppression project during the 2005 evaluation year. Federal funding for coal outcrop fire suppression during evaluation year 2006 was not available. The AMLD intends to submit another outcrop fire grant application when additional funding becomes available.

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 necessary clearances and permits are obtained for the whole project during the initial phase. Planning for reclamation construction is also done for the entire project at this time. 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 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.

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 I**. 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 II** shows hazard categories reclaimed during the 2006 evaluation year and the status of hazard categories remaining at the end of the 2006 evaluation year. The hazard categories reclaimed during the 2006 evaluation year were addressed by the individual projects listed in **Chart III**.

**CHART #1
NORTH DAKOTA
CONSTRUCTION READY PROJECTS
July 2006**

Project	Cost	Economic Impact*	Environmental Benefits
Lehigh Projects Phase IX-XI	\$1,000,000	Income: \$3.0 Employment: 80	Subsidence Prevention Public Safety
Beulah/Zap Phase XI through XV	\$1,250,000	Income: \$3.75 Employment: 100	Subsidence Prevention Public Safety
Maintenance, Drilling Appraisals, etc.	\$100,000	Income: \$.3 Employment: 8	Reclamation Preparation
Wilton Project	\$350,000	Income: \$1.0 Employment: 28	Subsidence Prevention Public Safety
Williston Project Phase II through VI	\$2,000,000	Income: \$6.0 Employment: 160	Subsidence Prevention Public Safety
Garrison Project Phase V through VII	\$600,000	Income: \$1.8 Employment: 48	Subsidence Prevention Public Safety
Columbus Project Phase IX-XI	\$1,200,000	Income: \$3.6 Employment: 96	Dangerous Highwall Rec. Public Safety
Scranton-Bowman Reeder	\$600,000	Income: \$1.8 Employment: 48	Subsidence Prevention Public Safety
TOTAL	\$7,100,000	Income: \$21.25 Employment: 568	Restoration of Land and Public Safety

*Income expressed in millions of dollars
Employment expressed in number of persons employed as a result of the expenditure

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

Hazard ¹	July 1, 2005 Status ²	FY 2006 Additions ³	Reclaimed in FY2006 ⁴	July 1, 2006 Status ⁵
CS Clogged Stream	None	None	None	None
CSL Clogged Stream Lands	None	None	None	None
DH Dangerous Highwalls	98,575	None	5,000 Lin. Ft.	93,575
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	16 acres	None	None	16 acres
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	3,182	None	10	3,172
SB Surface Burning	None	1 acre	1 acre	None
VO Vertical Opening	125	100	40	185
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	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 FY07

CHART #3
NORTH DAKOTA
COMPLETED PROJECTS - EVALUATION YEAR 2006
July 1, 2005 to June 30, 2006

Project Name	Project Cost	Economic Impacts	Environmental Benefits
2005 Beulah/Zap IX AML Pressure Grouting Project	\$282,172.11	Income: \$.8 million Employment: 23	Subsidence Prevention
2005 Garrison IV AML Pressure Grouting	\$304,223.50	Income: \$.9 million Employment: 24	Subsidence Prevention
2005 Leith AML Surface Mine Project	\$229,783.75	Income: \$.7 million Employment: 18	Dangerous highwalls
Haynes/New Leipzig Maintenance Project	\$3,480.00	Income: \$.01 million Employment: 3	Subsidence Reclamation
Leith AML Tree and Shrub Planting	\$7711..20	Income: \$.02 Employment: 3	Revegetation
Haynes Maintenance	\$23,320.00	Income: \$.07 Employment: 3	Subsidence Reclamation
2005 Maintenance Project Numerous Sites	\$18,329.50	Income: \$.05 million Employment: 3	Subsidence Reclamation
Beulah Coal Fire Emergency Project	\$2,500.00	Income: \$.01 million Employment: 3	Coal Fire Suppression
2006 Haynes Emergency Project	\$6,932.50	Income: \$.02 million Employment: 3	Subsidence Reclamation
2006 Garrison Emergency Project	\$2,070	Income: \$.01 million Employment: 3	Subsidence Reclamation
TOTAL	\$880,522.56	Income: \$2.59 million Employment: 86	

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.



Leith Project (prior to reclamation)
dangerous highwalls



Leith Project (during reclamation) elimination of dangerous highwalls



Leith Project (August 2005 photo) immediately after reclamation--
5,000 ft. of dangerous highwalls eliminated



Sinkhole (typical), resulting from subsidence due to collapse of underground coal mine voids



Garrison Phase IV Project drilling in residential area in preparation for pressurized grout injection



Garrison Phase IV Project pressurized grout injection in residential area



Garrison Phase IV Project (August 2005 photo) two weeks after injection of pressurized grout through reclaimed drillhole in center of photo



2004 Belfield Project (prior to reclamation) dangerous highwalls and radioactive material associated with surface mining of uraniumiferous lignite



2004 Belfield Project (during reclamation) installation of polyethylene liner to segregate radioactive material



2004 Belfield Project (August 2005 photo) approximately one year after completion of reclamation