

**Office of Surface Mining
Reclamation and Enforcement**

Title V

Annual Evaluation Summary Report

for the

NORTH DAKOTA

PUBLIC SERVICE COMMISSION



EVALUATION YEAR 2005
(October 6, 2005)

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(Cover photo: Reclamation being prepared for seeding at the Freedom Mine)

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I. Introduction

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. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standard specified by SMCRA. This report contains summary information regarding the North Dakota program and its effectiveness in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the period from July 1, 2004 to June 30, 2005. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Casper Field Office (CFO).

Comments regarding the oversight process, recommendations for additional review topics and suggestions for improving future reports are encouraged and should be submitted to the Director of the Casper Field Office.

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

A&E	Administration and Enforcement
CFO	Casper Field Office
EY	Evaluation Year
GIS	Geographic Information System
GPS	Global Positioning System
NOV	Notice of Violation
OSM	Office of Surface Mining Reclamation and Enforcement
OTT	Office of Technology Transfer
PSC	North Dakota Public Service Commission
RSI	Random Sample Inspection
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDN	Ten Day Notice
TIPS	Technical Information Processing System
WRCC	Western Regional Coordinating Center

II. Overview of the North Dakota Coal Mining Industry

The coalfields in North Dakota are located in the Williston Basin, which is part of the Great Plains Coal Province. They underlie approximately 40 percent of the State's surface area. Most of the coal is produced commercially from two mining districts located in the western part of the State: (1) Beulah-Zap and (2) Hagel. Recoverable coal reserves in North Dakota are generally classified as lignite, which is characterized by low heating value (6,600 BTU), average high moisture content (40 per cent) and low sulfur

content (less than 1.0 per cent). The mineable beds in the Williston Basin vary in thickness from three to 30 feet; economic stripping ratios range from 1.5:1 to 11:1. All active mines in North Dakota are currently large-scale surface mines that provide coal for mine-mouth or regional electrical generation facilities and a nearby coal gasification facility.

The first commercial mine in North Dakota opened in Morton County in 1873. As the railroad developed across the State, demand for coal increased and was supplied by underground mines. North Dakota was one of the first states to shift from underground to large-scale commercial surface mining. By 1927, 40 per cent of the State's production was by surface mining methods, compared with 2 per cent for the nation. In 1959, 86 per cent of North Dakota's coal production was from surface mines, and since 1966, the State's total production has been derived from this mining method. In 1884, North Dakota produced 35 thousand tons of lignite; in 2004 it produced 29.9 million tons using modern surface mining methods and equipment..

Coal mining in North Dakota is concentrated around the western half of the State. This area consists of approximately 28,000 square miles, and has an estimated total resource of 350 billion tons of coal, or about two-thirds of the total lignite reserves of the United States. North Dakota has a demonstrated recoverable coal reserve base of 35 billion tons. North Dakota enacted its first reclamation law in 1969 and major revisions to that law followed in 1973 and 1975. A new law was enacted by North Dakota in 1979 that is consistent with SMCRA.

North Dakota mines provide direct employment for approximately 3900 people in five counties with another 18,000 people indirectly employed but affected by the lignite industry, which has an annual payroll of over \$584 million. However, the coal industry's substantial impact on the State's population and economy has secondary in-state multiplier effects, since most of the State's coal production also fuels electric power generation plants within North Dakota that supply most of the State's electrical needs.

III. Opportunities for Public Participation

The North Dakota coal reclamation and enforcement program allows for and encourages public input and participation throughout the program. The North Dakota Public Service Commission (PSC) is the State agency charged with the responsibility for the permitting and regulation of the coal mining industry in North Dakota. OSM's programmatic reviews of the North Dakota program indicate that the PSC is adhering to the State's policies and procedures regarding opportunities for public participation.

IV. Major Program Accomplishments / Issues / Innovations

The North Dakota Public Service Commission (PSC) administers a very efficient and successful coal regulatory program as set forth in Section 102 of the Surface Mining

Control and Reclamation Act of 1977. North Dakota's permanent regulatory program has been in-place since 1980.

North Dakota's regulatory program is handled by a relatively small number of staff (see Table 8) considering the amount of land mined and reclaimed each year. Reclamation Division staff members who review permit and revision applications also carry out the compliance inspections and evaluate bond release applications. This arrangement allows them to remain very familiar with field operations and approved mining and reclamation plans. The PSC maintains a very good working relationship with their customers that include industry, landowners, citizen groups, and other governmental agencies, including OSM. The Reclamation Division carries out its duties using the appropriate technical expertise and with a high level of professionalism.

Excellence in mine land reclamation is one of the most notable aspects of the North Dakota coal regulatory program. The high quality reclamation work is reflected in the number of national Excellence in Surface Mining and Reclamation awards that North Dakota mines have received. Since the program was initiated in 1986, North Dakota mines have received fourteen national reclamation awards. The sense of environmental responsibility on the part of mining companies is also reflected in the low number of violations that have occurred in the past.

The PSC continues to encourage mining companies to file bond release applications as reclaimed land becomes eligible for release at the end of the ten-year revegetation responsibility period. Over 6000 acres of reclaimed lands that were subject to North Dakota's permanent regulatory program have received final bond release. All of the post-SMCRA acreages at the former Indian Head and Velva Mines have been totally released from bond. Reclaimed lands that have received final bond release under the permanent program include lands reclaimed to cropland, hayland, native grassland, tame pastureland, woodland, permanent impoundments, industrial, recreational and residential use.

The Reclamation Division has also been working closely with mining companies on the submittal of permit related applications in an electronic format. All four active permits for the Falkirk Mine are now in electric format as well as a 17,000 acre permit area for the Freedom Mine. Another pending permit application for the Freedom Mine is also in an electronic format. All premine environmental resource information, detailed mining and reclamation plans and other information for these large permit areas have been stored on CD or DVD formats. This information is then copied to the PSC's computer network where staff members have access to the entire permits from their desktop PC's. The Reclamation Division has been encouraging other companies to submit applications in an electronic format and it is expected that at least one of the permits for the Beulah Mine will be converted to the electronic format within the next year or so.

The Reclamation Division has also scanned and converted many of its paper documents to electronic files. This includes historic inspection reports, annual mine maps, surface and ground water monitoring reports, and wildlife monitoring reports. Most of these

reports and many other documents are now filed electronically. Other incoming correspondence is being scanned and filed electronically using a structure that is very similar to the paper filing system.

The Reclamation Division has also started development work on a Geographic Information System (GIS). The primary purpose of the GIS will be to track mining and reclamation activities and conduct technical analysis of plans and data provided by the mining companies. More specifically, GIS objectives include: storing and accessing annual mine maps that have been scanned; storing and accessing premine and postmining land use maps; recording results of soil probing when checking respread thickness (also involves the use of Global Positioning Satellite (GPS) systems); tracking the history of mining and reclamation activities at each mine (including bond release); storing and accessing massive amounts of water monitoring data and carrying out hydrologic analyses when investigating complaints or other concerns; conducting other hydrologic modeling; determining specific vegetation success standards for tracts by postmining land use; storing data associated with bond release applications; carrying out technical analysis of postmining topographic plans; identifying no disturbance buffer zones on mine-wide basis; etc. This will be a multi-year project and the PSC eventually plans to link the GIS to an agency-wide integrated database and workflow system that is also being developed. OSM's Office of Technology Transfer in the Western Regional Coordinating Center (WRCC) and TIPS have provided very valuable assistance with the GIS initiative.

Overall, North Dakota has an excellent coal regulatory program and staff at the PSC continue to implement the program in a highly professional, cooperative, and fair manner. The Reclamation Division is using new technology to become more efficient while making information more readily available to the public. The PSC has the necessary technical expertise for carrying out its functions to ensure that all of the requirements of SMCRA are met.

V. Success in Achieving the Purposes of SMCRA

A. Off-Site Impacts

No offsite impacts were observed during oversight inspections, bond release inspections or aerial overflight inspections in North Dakota this evaluation year (see Table 4). No offsite impacts were documented in any NDPSC inspection report. The PSC has agreed to include a special section in each report describing any off site impact that is observed.

B. Reclamation Success

The success of reclamation was assessed by the CFO at North Dakota mines by several means. First, an electronic copy of each PSC inspection report is forwarded to CFO inspectors. CFO inspectors review all reports. Second, CFO inspectors accompany PSC

inspectors on most bond release inspection involving federal lands. Third, the CFO inspectors complete a partial inspection of each active mine from the air. And finally, the CFO accompanies PSC inspectors on oversight inspections as specified by the Performance Agreement. All these methods were utilized during this evaluation year to assess overall reclamation success. Overall reclamation success in North Dakota continues to be good. Lands mined are being reclaimed in a timely manner to productive land uses that existed prior to mining. The success of reclamation is demonstrated by the diverse vegetative cover of the native lands and the high production from hayland and croplands.



(Thousands of snow geese coming off a reclaimed wetland at the Falkirk Mine)

The data listed below, identifies the different post mining land use categories and the number of acres reclaimed to those land uses upon bond release by mine.

**North Dakota Permanent Program
Permits**
(As of Dec. 31, 2004 - For OSM's 2005
oversight report)

	Total Final Bond Release Acreage	Postmining Land Use									
		Undisturbed	Cropland	Hayland	Native Grassland	Tame Grassland	Recreation	Industry	Wood- land	Ponds	Residential
Mine											
Beulah	655	50	266	0	1	0	0	337	0	1	0
Center	404	11	0	51	90	0	0	252	0	0	0
Falkirk	266	3	0	0	0	0	165	82	0	0	16
Freedom	823	167	0	0	0	0	367	289	0	0	0
Gascoyne	753	167	52	0	0	0	0	534	0	0	0
Glenharold	512	140	0	0	0	0	0	372	0	0	0
IndianHead	3,085	681	910	281	1,054	17	0	118	6	18	0
Larson	143	73	15	2	0	0	0	53	0	0	0
New Leipzig	35	10	0	25	0	0	0	0	0	0	0
Royal Oak- JK	10	0	0	0	0	0	0	10	0	0	0
Royal Oak	257	20	79	0	0	0	0	158	0	0	0
Velva	802	415	94	0	277	0	0	0	14	2	0
Totals	7,745	1,737	1,416	359	1,422	17	532	2,205	20	21	16

C. Customer Service

The PSC uses a computer program to record requests for information and any concerns or complaints that are received. The PSC's Public Contact System is used to record the date, name of the person contacting the Reclamation Division, the nature of the request or concern, and resolution of the matter.

Answers to requests are usually provided immediately, except in instances where the subject matter has to be researched before a verbal or written response can be provided. This may involve either the review of past decisions or researching new rationale for a particular requirement.

About four requests per month are received from landowners and the general public. The Reclamation Division provides the appropriate information to those requestors. If a question pertains to matters under the jurisdiction of another agency, the requestor is referred to that agency. Commonly asked questions and information requests are generally related to reclamation requirements, general mining plans for a particular area, the status of mining and reclamation activities at a mine, and other mine specific questions.

The PSC responds to customer requests for information and complaints in an appropriate, timely and professional manner.

VI. OSM Assistance

A. Grant Assistance

The State received \$501,824 in OSM support for permitting, inspection and enforcement and administration of their permanent program through an Administration and Enforcement (A&E) grant. This assistance represents 65 percent of the total cost of the North Dakota program (see Table 9). This one year grant was extended approximately one month and closed July 31, 2005.

B. Office of Technology Transfer (OTT)

Having successfully developed the paperless permitting process, North Dakota Public Service Commission staff continue to participate in technological advances, exchanging electronic information with their industries, converting non-electronic documents to electronic format, and developing a GIS for managing data, assisting in technical reviews and tracking bond release activities. North Dakota staff made significant contributions to the new technologies workshops conducted by OTT this year by attending, participating, and sharing their expertise. Dave Bickel, Bruce Johnson, and Steve Kahl attended the two workshops – for a total of six attendees. Steve Kahl and Dave Bickel presented in Anchorage, Alaska, A Case Study – Developing an Integrated, Agency-Wide GIS, and Supported Work Flow Management System for ND PSC, and Steve Kahl presented Impact of GIS on Human Resources. At the Helena workshop Dave Bickel presented an Update of North Dakota GIS Initiative.

To support the new technologies implementation, in 2005, OTT purchased the following: a Fujitsu Color Scanner at \$2,550, and seven Nikon CoolPix 4800 Digital Cameras with memory cards for \$2,372 for a total of \$4,922.

To support North Dakota's new technologies implementation, this year OTT provided contract services of Entrada/San Juan, Inc. in the area of CAD maps interface with GIS, as well as a one-day GIS workshop for 14 attendees for a total cost of \$ 4,679.

In the arena of bonding, OTT provided contractor services in the amount of \$140.

OSM's Technical Librarian provided 44 journal articles to North Dakota staff on various topics.

OTT added Dr. Stephen Schroeder's Revised Universal Soil Loss Equation (RUSLE) tutorial, and RUSLE narrative, to its e-learning page on the WRCC/OTT website.

C. Technical Information Processing System (TIPS)

In August 2004, TIPS personnel put on a three day on-site “Introduction to ArcGIS for Mining and Reclamation” course in Bismarck that was open to PSC staff representing the Reclamation Division, Abandoned Mine Lands Division and others. Significant cost savings were realized and a larger audience exposed to GIS by having the course taught in Bismarck and only the TIPS instructors having to travel.

The TIPS program also provides software and hardware support to North Dakota throughout the evaluation year.

During the evaluation period, PSC staff attended the following TIPS training courses:

<u>Course Title</u>	<u>No. Attendees</u>
Intro to ArcGIS for Mining and Reclamation	17
Blasting Log Evaluation	1
<u>ArcPAD6 for GIS</u>	<u>1</u>

PSC staff member Dave Bickel was a co-instructor for a Stratgraphics course held during the evaluation year. OSM also paid the travel costs for one person from the PSC Reclamation Division to attend the TIPS sponsored geospatial conference that was held in Atlanta, Georgia.

D. National Technical Training Program (NTTP)

OSM also offers reclamation training courses to state regulatory authority employees at no expense to the state (other than salary and benefits) or the attendee. OSM’s National Technical Training Program (NTTP) provides a wide range of courses including engineering, hydrology, soils & revegetation, inspection & enforcement, and computer software. Training was provided to 3 PSC staff members during this evaluation year.

PSC staff members participated in each of the following NTTP sponsored training courses during the evaluation year:

<u>Course Title</u>	<u>No. Attendees</u>
Historic and Archeologic Resources	1
Subsidence	1
<u>Surface and Groundwater Hydology</u>	<u>1</u>

OSM also paid the travel costs for two PSC staff members to attend the training course on the Federal Budget Management System’s electronic grants software during the evaluation year.

VII. General Oversight Topic Reviews

A. State Program Amendments

Overall, the PSC has kept its program in compliance with SMCRA and any changes to the counterpart Federal regulations. The North Dakota program has been maintained in a contemporaneous and professional manner. At this time, North Dakota has one outstanding program amendment currently under review by OSM. This amendment consists of statutory changes made to the North Dakota Century Code by the 2005 Legislature which address changes to North Dakota's notice requirements for bond release applications.

North Dakota does an excellent job of keeping OSM informed of any proposed changes to its program. Their informal process allows for input from industry, citizen groups, the general public and other agencies like OSM, prior to formalized rulemaking. Any issues or problems with the proposed rule changes can then be identified and dealt with early in the process, making the formal program changes proceed through the rulemaking process easier and more efficiently.

B. Inspection and Enforcement

The CFO conducted one oversight inspection in North Dakota during EY2005 to evaluate North Dakota PSC's inspection and enforcement program. In addition to the one oversight inspection, a partial inspection of each active mine was conducted during an annual aerial flyover review. One bond release inspection was also attended by CFO.

Each inspection report, mine plan revision, and enforcement action was reviewed by the CFO for compliance purposes. No compliance issues were identified. The PSC issued no Cessation Orders and no Notices of Violation (see Table 10) No citizens complaints were received by the PSC during the evaluation period.

The PSC continues to conduct more than the minimum amount of inspections at each mine. Inspection reports are well written and clearly document the conditions observed. Inspection reports contain a narrative that provides continuity with previous reports. An accurate inventory of inspectable units is kept current on all mines.

C. Financial Administration

CFO conducted financial oversight during the evaluation period. CFO visited PSC offices in Bismarck, North Dakota and reviewed financial information. Specifically, drawdowns, timeliness of grant applications and reports, program income, travel, accounting, audits, and property were reviewed.

A drawdown analysis was conducted for the existing Administration and Enforcement grant. A sample of draws from the current grant was reviewed. North Dakota drew the correct amounts for each draw, and the draws followed appropriate expenditures, i.e., all draws were reimbursable.

The PSC was timely in both reporting of financial status of the existing Administration and Enforcement grant and filing their grant application.

Travel policies and procedures were reviewed and travel vouchers were sampled to ensure that the PSC is following their own travel policies and procedures. One person's travel was reviewed for the past year. Authorization, per diem and other cost allowances were found to meet the requirements of the policies and procedures.

A review was made of the salary and benefits spent from both existing grants to ensure that only individuals conducting Title V work were being paid from OSM grant funds. The accounting system was reviewed and no problems were found.

No A-133 Audit was performed for the Title V program because under A-133 procedures the program does not meet the program dollar criterion as qualifying for audit. State Auditors had performed a recent risk analysis as required by A-133 and an audit was not deemed necessary.

The PSC Title V program does not have any grant-purchased property. The property inventory for the Title V program lists property furnished by OSM-TIPS.

D. Bond Release

The PSC has taken several steps over the past several years to encourage mining companies to file bond release applications as reclaimed land becomes eligible for release. The PSC also worked closely with an interim legislative committee that studied this issue between North Dakota's 2003 and 2005 legislative sessions. The legislative committee met several times during that interim period and the Reclamation Division explained the reclamation requirements and bond release procedures under North Dakota's reclamation law and SMCRA. As a result of this study, only two minor statutory changes were recommended in a legislative bill considered during North Dakota's 2005 Legislative Session. These changes involved notices that mining companies must provide for bond release applications and the bill was enacted during the 2005 session, with an effective date of August 1, 2005.

For workload planning and to keep a focus on bond release, the Reclamation Division has met with each of the major mining companies in North Dakota for the last two years to discuss specific plans that each company has for submitting final bond release applications. Prior to these meetings, staff reviewed annual mine maps to identify possible bond release areas based on reclaimed tracts that are approaching the end of the minimum ten-year revegetation liability period. These discussions also included more specific plans and methods that companies will use to collect the vegetative data needed for bond release. It is hoped that these discussions will minimize any problems or issues that may otherwise arise when final bond release applications are filed. Following the meetings in the spring of 2005, the Reclamation Division prepared detailed file memos that summarized the bond release plans for each mine. The PSC plans to continue holding annual meetings with North Dakota mining companies to discuss bond release plans.

APPENDIX A

Tabular Summaries of Data Pertaining to Mining, Reclamation and Program Administration

These tables represent data pertinent to coal mining operations, State and Federal regulatory activities within North Dakota. They also summarize funds provided by OSM and the North Dakota Public Service Commission.. Unless otherwise specified, the reporting period for the data contained in all tables is the 2005 evaluation year (July 1, 2004 – June 30, 2005). Additional data used by OSM in its evaluation of North Dakota's performance is available for review in the evaluation files maintained by the Casper Field Office.



(Reclaimed wetland at the Center Mine)