



Annual Evaluation Report for the
Regulatory Program
Administered by the Public Service Commission

Of North Dakota



For Evaluation Year 2014
July 1, 2013 to June 30, 2014
Prepared by Casper Area Office/Denver Field Division
September 2014

EXECUTIVE SUMMARY

Introduction and General Conclusions

The North Dakota Public Service Commission (NDPSC) is the State Agency charged with the responsibility for regulating coal mining in North Dakota. Over the past year, the Office of Surface Mining Reclamation and Enforcement (OSMRE) monitored North Dakota's performance in meeting the goals and objectives of the approved state program. Based on the topics evaluated this year, North Dakota has an effective program with no issues that need corrective action. Reclamation is occurring as contemporaneously as possible and the State conducts the appropriate number of mine inspections that are thorough and complete.

Overview of Public Participation and Outreach Efforts

North Dakota continues to solicit public comment and input on individual projects and the regulatory program at large. OSMRE also solicits input on oversight review topics and in March 2014 the Western Organization of Resource Councils (WORC) responded with suggestions for study topics. An evaluation of soil handling practices and how they impact microbial and nutrient levels in topsoil is addressed in Section VI of this report. Another suggested topic is an analysis of operator's abilities to establish warm and cool season vegetation capable of withstanding regional climatic conditions. This topic has been included in the EY 2015 performance agreement with North Dakota and will be addressed in the OSMRE's oversight report for that evaluation period.

Oral arguments before the US District Court for both *Dacotah v. Jewell* (SMCRA prohibited financial interest case) and *Dakota v. NDPSC* (policy memoranda case) were heard on August 16, 2013. The District Court rejected both lawsuits and found in favor of the defendants in both cases.

Major Accomplishments and Innovations

During EY2014, mines in North Dakota achieved final bond release for a total of 364 acres. This includes 134.2 acres from Permit KRGC-8101 at the Gascoyne Mine, 52 acres from Permit BNCR-9401, at the Center Mine, and 177.7 acres from Permit NAFK-8705 at the Falkirk Mine.

Mining operations have started in two recently issued permits: NACC-1301 at the Coyote Creek Mine and BNCR-1101 at the Center Mine. Permit NACC-1301 encompasses 84.2 acres, used primarily for facilities at the new start up mine. Permit BNCR-1101 contains 8,360 acres for a new mine area at the Center Mine. A second permit application for the Coyote Creek Mine, Permit NACC-1302, is currently under review and covers 8,092 additional acres that include the actual mine areas. The NDPSC continues to meet state inspection frequency requirements.

Off-Site Impacts

All twenty six inspectable units were free of negative off-site impacts during the evaluation year.

Reclamation Success

Currently in North Dakota, a total of 125,881 acres have been permitted, with approximately 73,575 acres (58%), disturbed by mining activity to date. Of these disturbed acres, approximately 49,151 acres have been backfilled, graded, topsoiled and seeded; or 67% of the lands disturbed have been reclaimed to the point of establishing vegetation. Of the 49,151 acres that have been reclaimed and seeded, 15,196 acres have received Phase III (final) bond release.

Customer Service

The OSMRE evaluated the Reclamation Division's customer service by reviewing public outreach associated with bond release and permit applications. The Reclamation Division provided the required notices to landowners and other interested parties for significant revision applications, renewals and bond release applications. Neither the OSMRE nor the NDSPC received any citizen complaints during EY2014.

Maintenance of the Approved Program

The notice approving ND-052 (State Program Amendment XL) was published in the Federal Register on June 6, 2014. The final rule federal register notice for approving ND-053 (State Program Amendment XXXIX) has been sent to headquarters for final publication. ND-052 revised certain North Dakota provisions pertaining to ownership and control and the use of the OSMRE's Applicant Violator System. ND-053 involves the financial information and notices that banks issuing a letter of credit must provide to the North Dakota Public Service Commission.

Evaluation of Soil Handling Practices in North Dakota

The Denver Field Division (DFD) conducted an evaluation of soil handling practices in North Dakota. State rules found in NDAC Chapter 69-05.2-15 were reviewed and compared to conditions observed in the field. Focused federal inspections were conducted at the Center Mine on June 10, 2014 and at the Falkirk Mine on June 12, 2014, to observe and review on-site examples of soil removal, storage and replacement activities. In every observed case, operators strictly adhered to State Rules regarding topsoil and subsoil removal, storage and redistribution. A document search was also conducted to research the effects of soil handling practices on the long term health of microbial communities in topsoil and subsoil.

Development of a Joint GIS

The CAO is currently attempting to expand its existing GIS to incorporate CAD data from the end-of-year mine maps that operators routinely supply to the NDPS. The hope is to use the spatial database to assist the OSMRE in tracking reclamation and other oversight duties.

OSMRE Assistance

The North Dakota Regulatory Program submitted a total budget for FY2014 of \$1,475,152. The OSMRE awarded the program \$944,097, or 64% of the total budget, in federal assistance. NDPS Reclamation Division staff attended three NTTP classes and three TIPS training courses during the evaluation period.

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Cover Page Photograph: Abandoned underground workings being re-mined and reclaimed at the Falkirk Mine, Permit NAFK-8405, June 12, 2014

I. INTRODUCTION

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSMRE) in the Department of the Interior. SMCRA provides authority to the OSMRE to oversee the implementation of, and provide federal funding for, the state regulatory programs and abandoned mine land programs that have been approved by the Secretary of the Interior as meeting the minimum standards specified by SMCRA. In addition to conducting oversight of approved state programs, the OSMRE provides technical assistance, staff training, financial grants and assistance, as well as management assistance to each state program. This report contains summary information regarding the North Dakota Regulatory program and the effectiveness of the North Dakota Regulatory program in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the 2014 Evaluation Year (EY) July 1, 2013 to June 30, 2014.

Detailed background information and comprehensive reports for the program elements evaluated during the EY are available for review and copying at the OSMRE, Denver Field Division (DFD), Casper Area Office (CAO), 150 East B St., Room 1018, Casper, WY 82602. To arrange an appointment time, contact Jeff Fleischman via telephone (307) 261-6550 or email jfleischman@osmre.gov.

The reports are also available at the OSMRE Oversight Documents website at <http://odocs.osmre.gov/>. Adobe Acrobat Reader® is needed to view these documents. Acrobat Reader® is free and can be downloaded at <http://get.adobe.com/reader/>. Follow these steps to gain access to the document of interest:

1. Select North Dakota from the drop down box labeled “State”. Also select 2014 as the “Evaluation Year”, and then click “Submit”. The search can be narrowed by choosing selections under the “Keyword” or “Category” headings.
2. The oversight documents and reports matching the selected state and evaluation year will appear at the bottom of the page.
3. Select “View” for the document that is of interest and the report will appear for viewing, saving, and/or printing.

The following acronyms are used in this report:

AOC	Approximate Original Contour
AVS	Applicant Violator System
CAO	OSMRE’s Casper Area Office
CO	Cessation Order
DFD	OSMRE’s Denver Field Division
DOJ	Department of Justice
EY	Evaluation Year
FAM	OSMRE’s Federal Assistance Manual

GIS	Geographic Information System
GPS	Global Positioning System
NDCC	North Dakota Century Code (Law)
NDAC	North Dakota Administrative Code (Rules)
NDPSC	North Dakota Public Service Commission
NOV	Notice of Violation
NTTP	National Technical Training Program
OSMRE	Office of Surface Mining Reclamation and Enforcement
REG-8	OSMRE Directive REG-8
SMCRA	Surface Mining Control and Reclamation Act of 1977
SPGM	Suitable Plant Growth Material
TDN	Ten-Day Notice
TIPS	Technical Innovation and Professional Services
WR	OSMRE Western Region

II. OVERVIEW OF COAL MINING INDUSTRY IN NORTH DAKOTA

Coal is the most abundant fossil fuel in the world. The United States holds the world’s largest estimated recoverable reserves of coal at approximately 27%. Based on current production levels, the United States has enough estimated recoverable reserves of coal to last more than 200 years. Coal is classified into four main types or ranks (anthracite, bituminous, subbituminous, and lignite), depending on the amounts and types of carbon it contains and on the amount of heat energy it can produce. North Dakota has approximately 25 billion tons of recoverable coal reserves consisting of primarily of lignite.

The coalfields of 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 (6,500 BTU), average high moisture content (40 percent) and low sulfur content (less than one percent). The mineable beds in the Williston Basin vary in thickness from 3 to 30 feet; economic stripping ratios range from 1.5:1 to 11:1. All active coal mines in North Dakota are currently large-scale surface mines that provide for mine-mouth or regional electrical generation facilities and a nearby coal gasification facility.

The first commercial mines 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 percent of the State’s production was by surface mining methods, compared to two percent for the nation. By 1959, eighty six percent 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 2013, it produced just under 28 million tons (Appendix 1, Table 1) 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 25 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.

According to a study published by the Department of Agribusiness and Applied Economics at North Dakota State University, preliminary estimates for 2012 show that Lignite Related activities provide direct employment for 4,097 people and indirect employment for an additional 13,347 people. The coal industry’s substantial impact on the State’s population and economy has secondary in-state multiplier effects. 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. In 2012, tax revenues from coal mining in North Dakota were estimated at more than \$101 million.

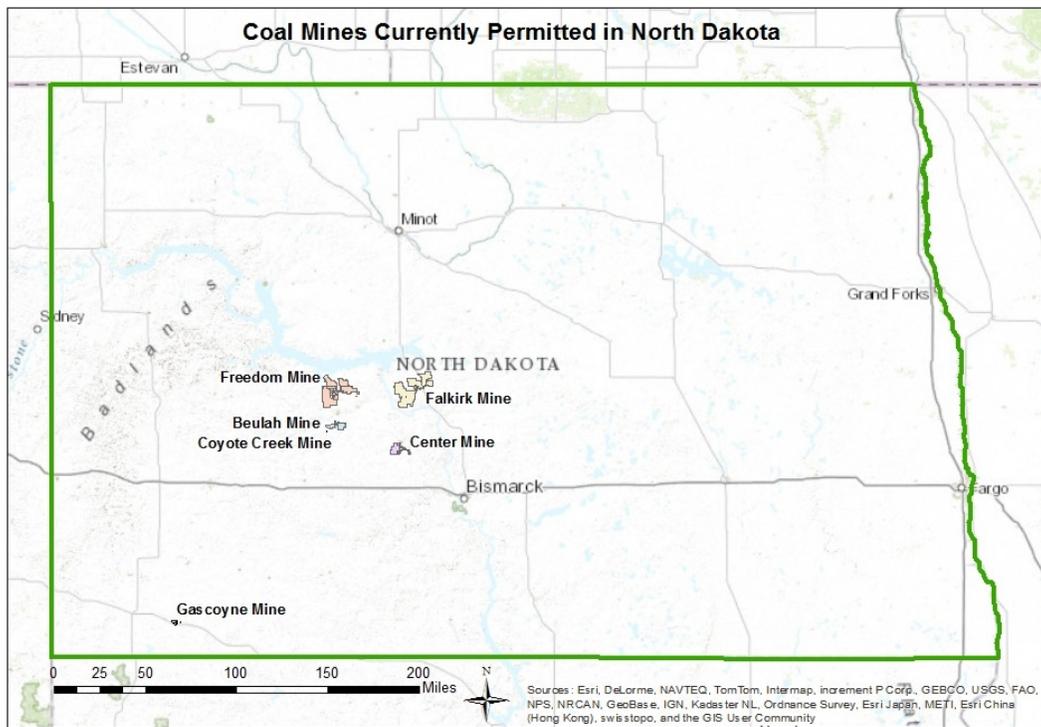


Figure 1: Map of Permitted Coal Mines in North Dakota

North Dakota currently has six surface coal mining operations, with a total of 26 permits. Twenty permits are actively mining while the remaining six are exclusively in reclamation. A total of 125,881 acres are currently permitted and bonded in North Dakota (Appendix 1, Tables 2 and 6). Approximately 73,575 of those permitted acres have been disturbed by mining operations, and 49,151 of those acres have been backfilled, graded, topsoiled and seeded to achieve the intended post-mining land use (Chart 1). Of the 49,151 acres that have been reclaimed and seeded, 15,196 acres have received final bond release.

III. OVERVIEW OF THE PUBLIC PARTICIPATION AND OUTREACH EFFORTS

The term “public” includes all stakeholders (i.e., citizenry at large, industry, other federal, state or local agencies, and environmental groups). Opportunities for public participation occur at significant points in the North Dakota Regulatory Program and involve the ability of the public to:

- Request that areas be designated as unsuitable for mining;
- Receive notification by advertisement of permit application receipt;
- Review permit and revision applications;
- Contest the decision of the Commission on permit applications and revisions;
- Request an inspection of a mine site;
- Submit blasting, groundwater well, and/or general permit complaints if public believes a violation of regulations is taking place;
- Object to proposed bond releases;
- Initiate civil suits; and
- Petition to initiate rulemaking.

The public can also access the OSMRE annual reports and Performance Agreements (PA) via the internet at the OSMRE Oversight Documents website at <http://odocs.osmre.gov/>. The Introduction section of this report (page 3) details how to access information using this website.

Public participation for this year includes:

A. OSMRE

The OSMRE (DFD) provides for transparency in the oversight process by conducting outreach to stakeholders and encouraging public participation throughout the OSMRE-DFD’s annual oversight activities.

Each evaluation year, the OSMRE-DFD solicits input from the public and interested parties to comment on oversight and provide suggestions for potential oversight evaluation topics. Sharing of information with the public is highly encouraged by both

the OSMRE and the State. The public may include a variety of stakeholders, including, but not limited to; citizenry at large, other Federal, State, or Local agencies, or environmental groups.

On March 28, 2014, the OSMRE received input from the Western Organization of Resource Councils (WORC) regarding topics that deserve special attention in upcoming OSMRE evaluation reports. One of those suggested topics is an evaluation of topsoil handling practices and the ability of operators to maintain soil microbes and nutrients for the establishment of vegetative communities. This topic is addressed as a special study topic in Section VI of this report. Another topic suggested by the WORC is an evaluation of operator's abilities to establish diverse communities of both warm and cool season vegetation that is capable of withstanding the harsh weather conditions of the region. This topic has been included in the EY2015 performance agreement between the OSMRE and the NDPSC and will be addressed in the EY2015 OSMRE evaluation report.

On March 26, 2012, the Dakota Resource Council and the Dacotah Chapter of the Sierra Club sent the OSMRE and the State of North Dakota a Notice of Intent (NOI) to pursue a civil lawsuit against both entities, alleging that campaign contributions given to two Commissioners of the NDPSC violated SMCRA, and that the OSMRE failed to formally approve policy memoranda on the topic. On May 30, 2012, the OSMRE obtained a copy of a civil lawsuit filed in US District Court naming the Secretary of the Interior as the sole defendant in one of the lawsuits. In that lawsuit, the environmental groups claimed that three Commissioners accepted campaign contributions from parties with coal related financial interests. Two of those Commissioners no longer serve on the Commission. SMCRA prohibits State employees from having direct or indirect financial interests in any underground or surface coal mining operation. The Department of Justice (DOJ) was served with a summons in this case on June 22, 2012 and the NDPSC was granted intervention in this case.

At the same time, the Dakota Resource Council filed a lawsuit in US District Court against North Dakota regarding policy memos. Although the OSMRE was not named in this lawsuit, the OSMRE and DOJ were granted intervention in this case. The Dakota Resource Council alleged that State policy memoranda require a formal program amendment.

Oral arguments before the US District Court for both Dacotah v. Jewell (SMCRA prohibited financial interest case) and Dakota v. NDPSC (policy memoranda case) were heard on August 16, 2013. The District Court rejected both lawsuits and found in favor of the defendants in both cases. A decision on Dacotah v. Jewell was announced on

October 22, 2013. A decision on Dakota v. NDPSC was announced on September 3, 2013.

B. North Dakota

The North Dakota Public Service Commission (NDPSC) is the State agency charged with the responsibility for the permitting and regulation of the coal mining industry in North Dakota. North Dakota continues to solicit public comment and input on individual projects and the regulatory program at large. North Dakota publishes notices for proposed permit revisions in local and state newspapers and on its website, and solicits public comment and requests for public meeting participation.

The NDPSC maintains a web site at: <http://www.psc.nd.gov/> that includes links to information on state laws and rules, interpretive documents, formal notices, consumer information, and a list of mine operators.

The NDPSC encourages public participation through public meetings, press contacts, and by responding to public inquiries. The NDPSC commonly hosts, or participates in a variety of public meetings, conferences, and workshops. Reclamation staff also participate in the Lignite Energy Council's annual teacher's seminar on coal mining and reclamation.

OSMRE's programmatic reviews of the North Dakota program indicate that the NDPSC is adhering to the State's policies and procedures regarding opportunities for public participation in all phases of their reclamation program.

IV. MAJOR ACCOMPLISHMENTS AND INNOVATIONS

This year marks the 34th anniversary of the primacy program in the State of North Dakota. The maturation of the program has helped protect the public and minimize environmental impacts within the North Dakota coalfields.

Over the past year, the OSMRE monitored North Dakota's performance in meeting the goals and objectives of the approved state program. North Dakota's regulatory program is handled by a relatively small number of staff (Appendix 1, Table 8) considering the amount of land mined and reclaimed each year. The NDPSC Reclamation Division staff members that review permit and revision applications also carry out the compliance inspections and evaluate bond release applications. This allows staff to remain very familiar with the ongoing field operations and approved mining and reclamation plans. The NDPSC has a very good working relationship with their customers that include industry, landowners, citizen groups, and other governmental agencies, including the OSMRE. The Reclamation Division carries out its duties using the

appropriate technical expertise and with a high level of professionalism. Once again, the OSMRE finds that North Dakota is successful in implementing its regulatory mine land program. The OSMRE looks forward to working cooperatively with North Dakota during the next year.

The Reclamation Division continues to work closely with mining companies and encourages the submittal of permit related applications in an electronic format. All four active permits for the Falkirk Mine, two large active permits for the Freedom Mine, two permits for the Center Mine, and one active permit for the Beulah Mine and the new permit issued for the Coyote Creek Mine are all in an electronic format. Much of the monitoring data submitted by the mining companies is now submitted in an electronic format. Most incoming correspondence is also scanned and filed electronically using a structure that is very similar to the paper filing system.

The Reclamation Division has developed a Geographic Information System (GIS) to track mining and reclamation activities and conduct technical analysis of plans and data provided by the mining companies. Information entered into the GIS for all mines include recent high altitude air photos, permit boundaries, roads, stockpile locations, ponds and related features. Boundaries for many final bond release tracts are also being entered. More information is being added as time allows. Much of this information is being loaded onto tablet computers and iPads equipped with Global Positioning System (GPS) receivers that inspectors use when carrying out mine inspections. This allows for accurate tracking and recording of activities during mine inspections.

Development of the North Dakota Regulatory Program's GIS is an ongoing and dynamic project. The OSMRE's Office of Technology Transfer in the Western Region (WR) and Technical Innovation and Professional Services (TIPS) have provided valuable assistance with the GIS and mobile computing initiatives. The Reclamation Division has been able to move forward with these initiatives while ensuring the necessary mine inspections are conducted and timely action is taken on applications.

During the course of this evaluation year, mines in North Dakota achieved final bond release for a total of 363.9 acres. This includes 134.2 acres from Permit KRGC-8101 at the Gascoyne Mine, 52 acres from Permit BNCR-9401 at the Center Mine, and 177.7 acres from Permit NAFK-8705 at the Falkirk Mine. (See Appendix 1, Table 6).

The NDPSC staff continues to implement the program in a professional, cooperative, and fair manner. The Reclamation Division uses new technology to become more efficient and make information more readily available to the public. The NDPSC 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

To further the concept of reporting end-results and on-the-ground success, the findings from performance reviews and public participation evaluations are collected by the OSMRE for a national perspective on the number and extent of observed off-site impacts, the number of acres that have been mined and reclaimed to meet bond release requirements for the various phases of reclamation, and the effectiveness of customer service provided by the state. Individual topic-specific reports that provide additional details on how the following evaluations and measurements were conducted, are available online at <http://odocs.osmre.gov/> or at the Casper Area Office.

A. Off-site Impacts

For the purpose of oversight, a negative off-site impact is defined as anything resulting from a surface coal mining and reclamation activity or operation that causes a negative effect on people, land, water, or structures outside the permit area. The State program must regulate or control either the mining or reclamation activity, or the resulting off-site impact. In addition, the impact on the resource must be substantiated and be related to mining and reclamation activity. It must be outside the area authorized by the permit for conducting mining and reclamation activities.

Several sources of information have been selected for identifying off-site impacts. These include but are not limited to: State and OSMRE inspection reports, enforcement actions, civil penalty assessments, citizens’ complaints, special studies and information from other environmental agencies. If an off-site impact is identified, the sources of information and the basis used to identify and report these impacts will be clearly recorded. Field evaluations for off-site impacts were conducted during routine inspections by the NDPSC and the DFD. During EY2014, North Dakota reported that twenty six out of twenty six (100%) inspectable units were free of off-site impacts. (Appendix 1, Table 5).

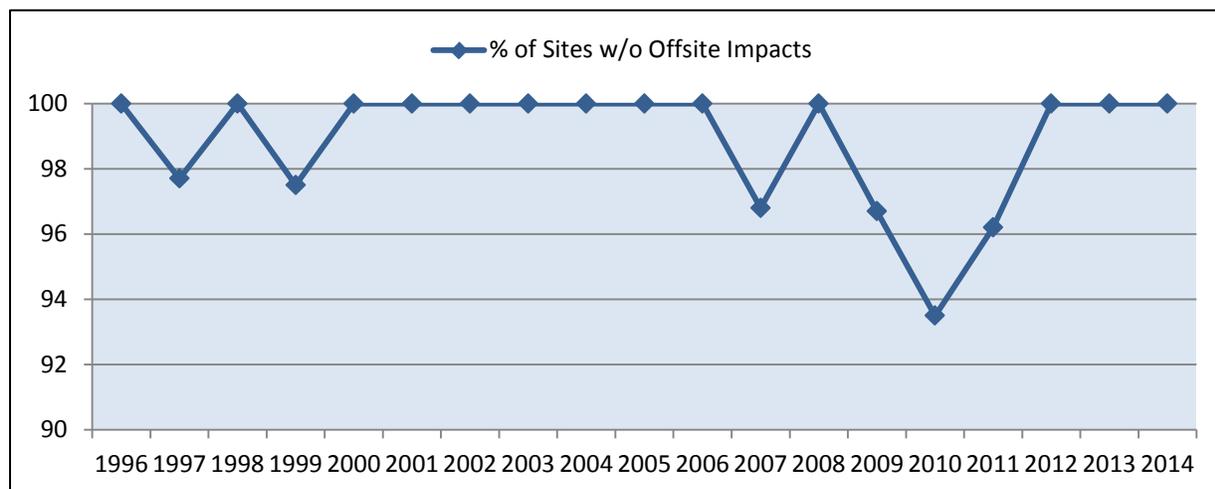


Figure 2: Percent of Sites free of off-site impacts

Since no off-site impacts were reported during EY2014, no topic specific oversight report was prepared regarding this topic.

B. Reclamation Success

The OSMRE Directive REG-8 states that the OSMRE will evaluate and report on the effectiveness of state programs in ensuring successful reclamation on lands affected by surface coal mining operations. Success will be determined based on the number of acres that meet the bond release standards and have been released by the state. In addition to the nationwide information reported, Field or Area Offices and States may conduct specific evaluations. Table 6 of Appendix 1 catalogues the acreage of land released from bond for OSMRE Phase I, II, and III.

OSMRE Phase I bond may be released after the operator completes the backfilling, re-grading (which may include the replacement of topsoil) and drainage control of a bonded area in accordance with the approved reclamation plan. Phase II bond may be released after re-vegetation has been established on the re-graded mined lands in accordance with the approved reclamation plan. Phase III bond (final bond release) may be released after the operator has completed successfully all surface coal mining and reclamation activities, but not before the expiration of the period specified for operator responsibility. In North Dakota, a 10-year revegetation liability period is required prior to final bond release.

When this report refers to Phase I, II and III bond release, it should be assumed that the intended meaning is OSMRE's definition of bond release. The North Dakota Program has adopted a four phase bond release system. According to Chapter 38-14.1-17 (7) of the North Dakota Laws Governing Surface Mining and Reclamation Operations, forty percent of a bond may be released when a permittee completes backfilling, re-grading, and drainage control. This meets OSMRE requirements for Phase I bond release. An additional twenty percent of the bond may be released after suitable plant growth material (SPGM) or other suitable strata has been spread on the re-graded land. Additional bond may also be released after vegetation standards have been met and any commitments for future maintenance of permanent impoundments have been established. State requirements for establishment of SPGM, vegetation and future maintenance standards meet OSMRE requirements for Phase II bond release. All remaining bond may be released once the permittee has completed all surface coal mining and reclamation operations and the required re-vegetation liability period has expired. This is equivalent to OSMRE's Phase III or final bond release.

REG-8 further requires that bond release information is collected to measure program performance in the following areas: a. Land form/Approximate Original Contour, b. Land Capability, and c. Hydrologic Reclamation.

a. Land form/Approximate Original Contour (AOC)

MEASUREMENT: AOC achievement is measured by the acres of Phase I bond released. Approximately 26% (19,343 acres) of the disturbed lands (73,575 acres) have received Phase I Bond Release.

b. Land Capability

There are several measurements that are conducted to demonstrate the reestablishment of land capability on mined areas.

MEASUREMENT: Proper replacement of soil resources is measured by acres of Phase II bond release. Approximately 21% (15,209 acres) of the disturbed lands (73,575 acres) have received Phase II Bond Release.

MEASUREMENT: Vegetation stability is measured by acres of Phase II bond release. Approximately 21% (15,209 acres) of the disturbed lands (73,575 acres) have received Phase II Bond Release.

MEASUREMENT: Achievement of postmining land uses is measured by acres of Phase III bond release. Approximately 21% (15,196 acres) of the disturbed lands (73,575 acres) have received Phase III Bond Release.

MEASUREMENT: Successful re-vegetation is measured by acres of Phase III bond release. Approximately 21% (15,196 acres) of the disturbed lands (73,575 acres) have received Phase III Bond Release.

c. Hydrologic Reclamation

MEASUREMENT: Achievement of surface water quality and quantity restoration are measured by acres of Phase III bond release. Approximately 21% (15,196 acres) of the disturbed lands (73,575 acres) have received Phase III Bond Release.

MEASUREMENT: Achievement of groundwater recharge capacity and ground water quantity and quality restoration are measured by acres of Phase III bond release.

Approximately 21% (15,196 acres) of the disturbed lands (73,575 acres) have received Phase III Bond Release.

It should be noted that both State and Federal regulations do not require that a permittee file for bond release at any prescribed time. Therefore, using bond release statistics only to evaluate reclamation success can be misleading. Typically, permittees do not file for Phase II or Phase III bond release until completion of the entire mining operation, including a 10-year re-vegetation liability period. As a result, the number of acres released from Phase II and Phase III bond in North Dakota is relatively small compared to the number of acres actually re-graded, soiled and seeded.

C. Customer Service

One of the requirements of a regulatory authority for reclamation programs implemented under SMCRA is to develop and encourage open communication not only with the industry being regulated, but also the citizenry and communities in the coalfields around the mines. To accomplish this requirement, SMCRA programs must involve the public in all phases of coal mine permitting. North Dakota's program provides for public involvement of permitting actions when a new application is received, when a permit is renewed, when any significant permit revision is proposed and when a phase of reclamation is completed to the point of requesting bond release from a tract of reclaimed land. The provisions of the North Dakota program that extensively describe these procedures can be found at sections NDCC 38-14.1-18 (North Dakota Century Code) and NDAC 69-05.2-10 and 69-05.2-12 (North Dakota Administrative Code).

The Reclamation Division provided the required notices to landowners and other interested parties for significant revision applications, renewals and bond release applications. Staff encourages participation in bond release inspections by the landowners and county officials. Neither the OSMRE nor the NDSPC received any citizen complaints during EY2014.

The NDSPC provides service to all parties requesting assistance, documents or information, and regulates the coal mining industry within the State. Its services include, but are not limited to attending or making presentations at public meetings, discussions with individuals or groups regarding the North Dakota regulatory program, reclamation, or government activities.

In addition to the services provided to the general public, the regulatory program staff and management also contribute to task forces and ad-hoc committees in relation to inter-agency and intra-agency problem solving committees and panels. Some coal program personnel also plan and/or participate in various symposia, seminars, and workshops in relation to technical and legal aspects of coal prospecting, mining, and reclamation.

VI. NATIONAL PRIORITY AND GENERAL OVERSIGHT TOPIC REVIEWS

National priority reviews and general oversight topic reviews can be located and reviewed at the OSMRE's website as listed at the Introduction (page 3) of this report. Individual reports prepared by the OSMRE are part of the oversight process of each state and contains findings and details regarding the evaluation of specific elements of the state program.

A. National Priority Reviews

National Priority Reviews are oversight topic reviews selected by the OSMRE to review nationwide. This EY, there were no National Priority Reviews.

B. General Oversight Topic Reviews

General Oversight Topic Reviews are conducted as specified in the North Dakota Performance Agreement. For EY2014, CAO has elected to evaluate the following topics:

Contemporaneous Reclamation

Contemporaneous reclamation specifically refers to the timeliness that reclamation is occurring. Currently in North Dakota, a total of 125,881 acres are permitted, with approximately 73,575 acres (58%), disturbed by mining activity to date. Of these disturbed acres, approximately 49,151 acres have been backfilled, graded, topsoiled and seeded; or 67% of the lands disturbed have been reclaimed to the point of establishing vegetation. This ratio of disturbed vs. reclaimed (graded/soiled/seeded) acres is a measure of how contemporaneous (timely) the State's mines are reclaiming acres to the point of establishing vegetation. Once the re-vegetated acres have fulfilled their 10-year liability period and met other requirements, they may be available for Phase III or final bond release. The DFD's analysis shows that the State program is effective in achieving its goal of having disturbed lands reclaimed to the approved post-mining land use as contemporaneously as possible.

Another general measurement for contemporaneous reclamation is a comparison of the rate at which lands are being permanently reclaimed (seeded) to the rate of disturbance. The following Chart (1) and Graph (1) are used to show the rate at which lands are being permanently reclaimed (seeded) compared to the rate of disturbance. Lands in these charts are considered permanently reclaimed when they are seeded with permanent vegetation consisting of species as prescribed in the reclamation plan of the approved permit. These permanently reclaimed (seeded) lands include lands that have obtained Phase II bond release status, lands that have obtained Phase III bond release status and permanently reclaimed (seeded) lands for which Phase II bond release has not yet been sought.

Low ratios of reclamation to disturbance indicate that reclamation is not progressing at the same rate as mining, resulting in an increasing acreage of disturbed lands.

Conversely, high ratios of reclamation to disturbance indicate that reclamation is occurring faster than disturbance.

Chart 1 and Graph 1 illustrate the overall mining and reclamation activities for the North Dakota coal mines since 1999. Note that the lines indicating disturbed (blue line) and graded/soiled/seeded (red line) in Graph 1 are roughly parallel, indicating the rate of reclamation is roughly the same as the rate of disturbance.

Chart 1: North Dakota Reclamation Summary

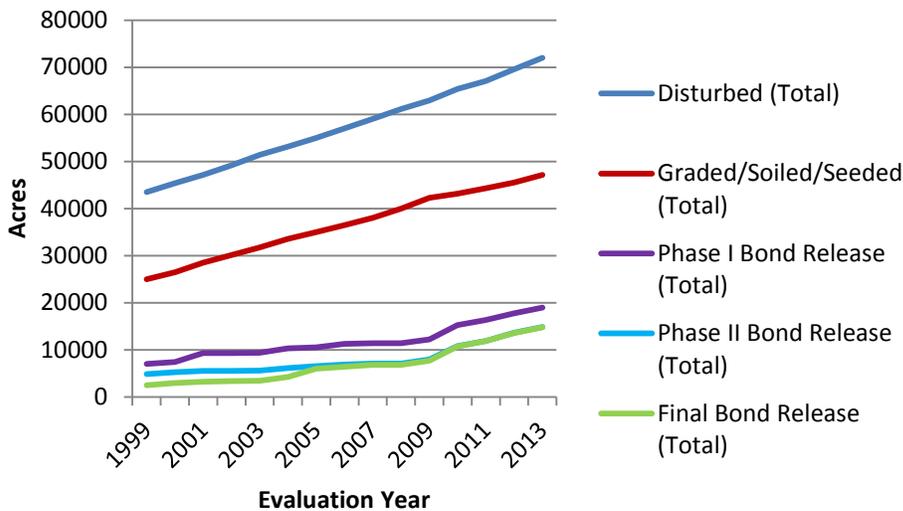
EVAL. YEAR	ACRES DISTURBED	Cumulative Acres Dist.	ACRES RECLAIMED (graded/soiled/seeded)	Cumulative Acres Recl.	Annual RATIO OF RECLAM VS DISTURB	Cumulative RATIO OF RECLAM VS DISTURB
1999	1,725	43,484	2,270	24,979	1.32	0.58
2000	1,913	45,397	1,518	26,497	0.79	0.58
2001	1,738	47,135	1,998	28,495	1.15	0.61
2002	2,036	49,171	1,610	30,105	0.79	0.61
2003	2,242	51,413	1,678	31,783	0.75	0.62
2004	1,772	53,185	1,775	33,558	1.00	0.63
2005	1,796	54,981	1,458	35,016	0.81	0.64
2006	2,004	56,985	1,463	36,479	0.73	0.64
2007	2,085	59,070	1,787	38,046	0.86	0.64
2008	2,045	61,115	1,934	39,980	0.95	0.65
2009	1,873	62,988	2,322	42,302	1.24	0.67
2010	2,429	65,417	851	43,153	0.35	0.66
2011	1,654	67,071	1,153	44,306	0.70	0.66
2012	2,530	69,601	1,208	45,514	0.48	0.65
2013	2,413	72,014	1,692	47,146	0.70	0.65
2014	1,561	73,575	2,005	49,151	1.28	0.67

Source of data: ND-PSC

Chart 1 (above) provides the actual acres disturbed and reclaimed (graded/re-soiled/seeded) annually for all mines. The cumulative reclamation to disturbance ratio has remained relatively steady and is currently 0.67, as indicated on the chart. This ratio indicates that 67 percent of the cumulative acres disturbed in North Dakota have been reclaimed to the point of being backfilled, graded and seeded. This reflects favorably on the contemporaneous nature of reclamation efforts in North Dakota.

Graph 1

All Coal Mines in North Dakota



Source of data: ND-PSC

Graph 1 (above) plots the number of acres disturbed, acres graded/soiled/seeded and acres of Final Bond Release. Acres of Phase I and Phase II bond release are included for reference. The rate (change over time) of disturbance or reclamation is indicated by the slope (rise over run) of each line. Ideally, the line showing the rate of reclamation should parallel the line showing the rate of disturbance.

Graph 1 shows that the rate of disturbance (slope of the blue line) at mines in North Dakota has remained very consistent since 1999. The rate of acres being graded/soiled/seeded (slope of the red line) has remained very consistent with the rate of disturbance, indicated by the fact that the red and blue lines are nearly parallel. Recent years have seen the opening of several new pits, resulting in a slight dip in the red line. The rate of final bond release (slope of the green line) has historically been less than the rate of disturbance, but recent years indicate an upturn.

Mechanisms are in place to ensure that land disturbed by surface coal mining operations will be reclaimed. SMCRA requires that every permitted acre in a surface coal mine is bonded to ensure that sufficient funds will be available to reclaim that land in the event that an operator fails to fulfill their responsibilities.

More detailed information concerning this topic is available in a topic specific oversight report available in the annual evaluation file. The evaluation file is available for review at the Casper Area Office or online at the following OSMRE website:

<http://odocs.osmre.gov/>

Maintenance of the Approved Program

ND-052 (State Program Amendment XL)

On October 2, 2009, the OSMRE notified the NDPSC that, under 30 CFR 732.17(d), certain North Dakota provisions pertaining to ownership and control and the use of the OSMRE's Applicant Violator System (AVS) need to be revised. The NDPSC sent the OSMRE draft AVS and other Ownership and Control rules for review in late 2011. Following receipt of the OSMRE's comments in early 2012, a revised draft rule change package was distributed for informal review. In May, 2012, the NDPSC issued a Notice of Rulemaking for these and other rule changes. A public hearing regarding the rulemaking cases was held on July 12, 2012. The proposed rule changes were sent to the State Attorney General's office for legal opinion. The OSMRE received the formal North Dakota Program Amendment (SATS No. ND-052-FOR) on November 14th, 2012. The OSMRE announced receipt of the proposed amendment in the January 29, 2013 Federal Register (78 FR 6062), which also opened the public comment period and provided an opportunity for public hearing. No public hearing or meeting was requested. On May 10, 2013, NDPSC submitted a modification to North Dakota State Program Amendment XL in response to concerns raised by the OSMRE technical reviews. The modification corrects a drafting error in NDAC 69-0.5-10-09 to coincide with similar language in federal regulations. ND-052: The final rule federal register notice approving the amendment was sent to headquarters on July 2, 2014.

ND-053 (State Program Amendment XXXIX)

On February 2, 2012, the OSMRE received a North Dakota program amendment relating to letter of credit provisions in the collateral bond rule. The amendment change involves the financial information and notices that banks issuing a letter of credit must provide to the NDPSC. An option was added to allow a bank to provide a certified copy of financial reports that are already required by a federal agency instead of a balance sheet that is certified by a certified public accountant. Another change affects the provision requiring banks to give the Commission notice of actions alleging insolvency or bankruptcy. Requests for public comment have been sent and responses have been received. The approval notice for Amendment ND-053 was published in the June 6th, 2014 Federal Register.

At this time, there are no other outstanding programmatic issues unresolved in the North Dakota program.

North Dakota's Soil Handling Practices

The OSMRE and the NDPSC jointly conducted a review of North Dakota's soil handling practices to determine whether the NDPSC is effectively implementing its program in accordance with applicable state laws and regulations and as approved in NDPSC permits.

State rules governing the removal of topsoil and subsoil can be found at NDAC69-05.2-15-02. Rules regarding storage and protection of topsoil and subsoil can be found at NDAC69-05.2-15-03, and standards for redistribution are at NDAC69-05.2-15-04. North Dakota Rules refer to topsoil and subsoil as first and second lift Suitable Plant Growth Materials (SPGM). Topsoil and Subsoil materials must be identified by soil survey and removed and segregated if the cover vegetation is removed. Rules do allow for substitute materials to be used if suitable SPGM is not available or if other materials are deemed of better quality. Storage of SPGM is allowed only when direct redistribution is impractical. Stockpiles must be located on stable areas, protected from wind and water erosion, unnecessary compaction, and contaminants. An effective cover of quick growing non-noxious vegetation must be established to help protect the quality of SPGM stockpiles. Prior to redistribution, re-graded land must be scarified or otherwise treated to prevent areas of compaction and promote root penetration. Topsoil and subsoil must also be redistributed to a uniform thickness. In areas of graded spoil, the total redistribution thickness depends on the graded spoil characteristics.

Focused federal inspections were conducted at the Center Mine on June 10, 2014 and at the Falkirk Mine on June 12, 2014, to observe and review on-site examples of soil removal, storage and replacement activities. In every observed case, operators strictly adhered to State Rules regarding SPGM removal, storage and redistribution. The following are photos from June 10th and 12th inspections, emphasizing soil handling practices at the Center and Falkirk Mines.

Center Mine photos



Photo 1: This cut is for a new haul road. Topsoil and subsoil are being removed from the sides as the existing haul road is widened to connect to Permit BNCR-1101 at the Center Mine. Topsoil is being removed and separated. Dozers separate topsoil using color as a guide. The backhoe loads soil into scrapers for direct respreads in the “Butterfly Pit”. Approximately 60 inches of topsoil and subsoil are being removed.



Photo 2: Actively re-spreading topsoil from Photo 1 at the “Butterfly Pit”.



Photo 3: Sec. 3 Ash Pit 118. This area has been bond released as industrial and is permitted for bottom ash disposal with the ND Dept. of Public Health. To help meet AOC requirements, excess subsoil is being used as a fill material and better quality overburden material is being used as a subsoil replacement.



Photo 4: This pile is composed of the overburden mentioned in Photo 3. It is to be used as a subsoil replacement in Ash Pit 118 (Sec 3).

Falkirk Mine Photos



Photo 5: Pedestal showing topsoil depth. Subsoil removal occurring to right of the pedestal and topsoil removal occurring left of the pedestal. In the background is a ridge of topsoil that has been pushed up with a dozer and is waiting to be removed by shovel and truck.



Photo 6: Photo shows 542 truck fleet handling topsoil from a private surface owner. North Dakota rules require the segregation of soil separately from different landowners unless they otherwise agree to mixing. Falkirk is in negotiations with this owner to allow the mixing of topsoil and subsoil removed from his property with soil owned by others.



Photo 7: Photo shows an area of sodic topsoil. This topsoil is chemically unsuitable for use as SPMG and has been cut out of the lift area.

In a letter received March 28, 2014, the WORC specifically requested that the OSMRE address the question of how soil handling practices affect soil microbes. While no studies were found that specifically addressed the effect of soil handling practices on microbial health in North Dakota soils, the following two studies offer some valuable insight.

The first is entitled, “SOIL AGGREGATE AND AGGREGATE ASSOCIATED CARBON RECOVERY IN SHORT-TERM STOCKPILES”, by Abbey F. Wick, et.al., Post-doctoral Research Associate, Virginia Polytechnic Institute and State University, Department of Crop and Soil Environmental Sciences, Blacksburg, VA. The paper was presented at the 2008 National Meeting of the American Society of Mining and Reclamation in Richmond, VA. In this study, a topsoil stockpile at the Belle Ayr Mine, near Gillette Wyoming was sampled and compared to an adjacent undisturbed, native site. It appears that soil properties can be dependent on the methods of stripping and storage as well as the amount of time in storage. However, that impact appears to be more pronounced in cold, wet climates. Soil properties of the stockpiled topsoil actually exceeded native conditions at the Belle Ayr Mine.

Wick found variable results concerning the ability of stockpiles soil to recover to native conditions. The amount of soil Carbon and microbial biomass do not appear to reach native levels in colder or wetter climates, however, they have been found to exceed native levels in

semi-arid environments. The impact of storage on soil properties seems to be highly dependent on the method of topsoil stripping and storage and the amount of time in storage.

A copy of this paper can be found at the following link:

<http://www.asmr.us/Publications/Conference%20Proceedings/2008/1389-Wick-WY.pdf>

The next insightful reference is entitled, “THE INFLUENCE OF MANAGEMENT ON MICROBIAL BIOMASS AND SOIL ORGANIC CARBON IN RECLAIMED SURFACE COAL MINES OF WYOMING”, by Jonathan D. Anderson, et.al., a Graduate Student at the University of Wyoming, Laramie, WY. This paper was presented at the 2006 Billings Land Reclamation Symposium, in Billings MT.

This study attempted to determine the long term influence of different reclamation management practices, including topsoil stockpiling and direct respread of topsoil, on Microbial Biomass Carbon (MBC) and Soil Organic Carbon (SOC) in reclaimed soils from several surface mines located in Wyoming. In this paper, Anderson acknowledges that topsoil stockpiling is known to result in a decline in SOC and adversely impact soil organisms. He also hypothesizes that sites reclaimed with directly hauled topsoil would have greater concentration of SOC and MBC than sites reclaimed with stockpiled topsoil.

However, no differences were found in SOC or MBC between sites reclaimed with directly hauled or stockpiled topsoil at mines where this comparison was made. Use of directly hauled topsoil may avoid or minimize some of the problems associated with long-term topsoil storage, including a decline in fungal and bacterial populations and losses of Carbon. He found that MBC generally appears to recover slowly to levels found in undisturbed soils in semiarid regions, but that it is site specific to some degree.

A copy of this paper can be found at the following link:

<http://www.asmr.us/Publications/Conference%20Proceedings/2006%20Billings/0049-Anderson-WY.pdf>

While these studies point out that the degree to which soil handling practices have an effect on microbial health can be very site specific, the following generalizations can also be made:

- Direct haul vs stockpiled
 - Direct haul may avoid some impact to microbes when compared to long term stockpiling, however direct haul is not always feasible.
- Length of time soil is stockpiled
 - The longer soil is stored, the more microbes are impacted.
- Vertical height of stockpiles soil

- Soil microbes naturally tend to be more abundant near the surface, and stockpiling decreases the surface area of a given volume of topsoil. So, it follows that the greater the height of a stockpile, the more microbes are likely impacted.
- Climate
 - Studies done in colder/wetter climates observed microbes did not reach levels found in native soil while studies done in hotter/drier climates observed that microbes exceed native soil conditions.
- Salvaging soil in one lift vs. two lifts
 - The more topsoil is segregated, the fewer microbes are negatively impacted. This is mostly due to the mixing of topsoil and subsoil. Subsoil tends to possess conditions that are less favorable to microbial communities than topsoil, so it follows that the mixing of topsoil and subsoil could potentially have a negative impact on the quantity of microbes. Note that this is currently not an issue in North Dakota as the mixing of topsoil and subsoil is prohibited by the North Dakota program.

Development of a Joint GIS by the OSMRE and the NDPSC

The Casper Area Office is attempting to expand its existing GIS to further assist in both the inspection and enforcement and the oversight duties of this office. North Dakota has developed a significant database of GIS information at the field level, due to the fact that all their field personnel are skilled in the data collection and processing aspects of a GIS. Inspectors routinely use ruggedized laptops computers and more recently they have begun using tablets to collect and track data in the field. This technology is imperative to keeping track of your location on the mine site and the location of any number of features of interest. This ability to know your location on the mine site in real time is also invaluable to OSMRE inspectors, who do not have the opportunity to travel to mine sites as frequently as State personnel, and therefore are often less familiar with each mine and their unique features.

Currently, the CAO has a rudimentary GIS which is designed to give inspectors access to basic information, such as aerial photographs, and mine permit boundaries. This allows inspectors to have a better understanding of exactly where they are at on a mine and what features of interest to look for. This can be combined with field acquisition of GPS coordinates to produce track-logs of the path an inspection took and to identify the location of photos taken during the inspection. Recent efforts are attempting to add information contained in the required end-of-year mine maps to the GIS. This information is maintained by the mine operators as part of their daily operations, usually in CAD format. These end-of-year mine maps are integral to the OSMRE's efforts to track mining and reclamation activities for our annual oversight reports. It is hoped that with the assistance of both State and mine personnel, the OSMRE can incorporate this information into our existing GIS, thus making it easier and more accurate to track mining

and reclamation activities and conduct oversight of the State program. The following are some examples of what can be done using the CAO GIS.

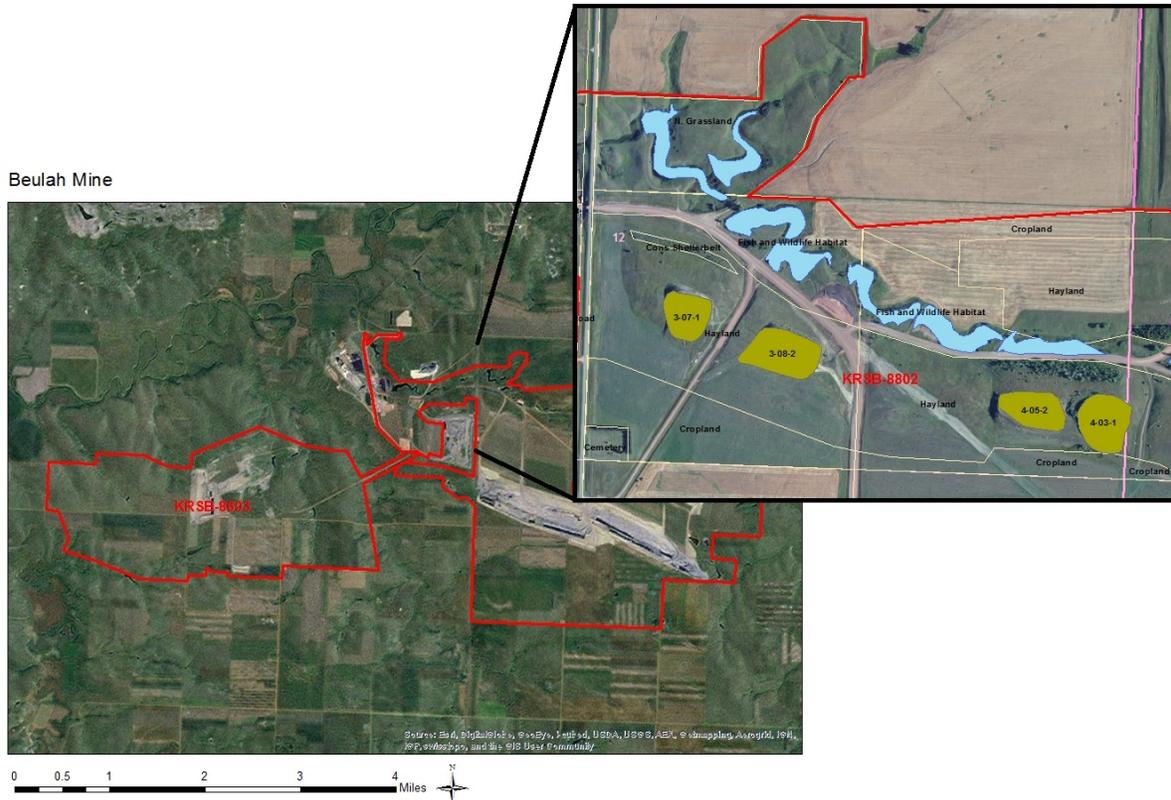


Figure 1: Example of Current GIS capabilities. The current CAO GIS is designed to assist the OSMRE inspector by giving him/her access to real time, on-the-ground information about surface features such as topsoil piles, water features, roads, and post mining land uses.

Beulah Mine

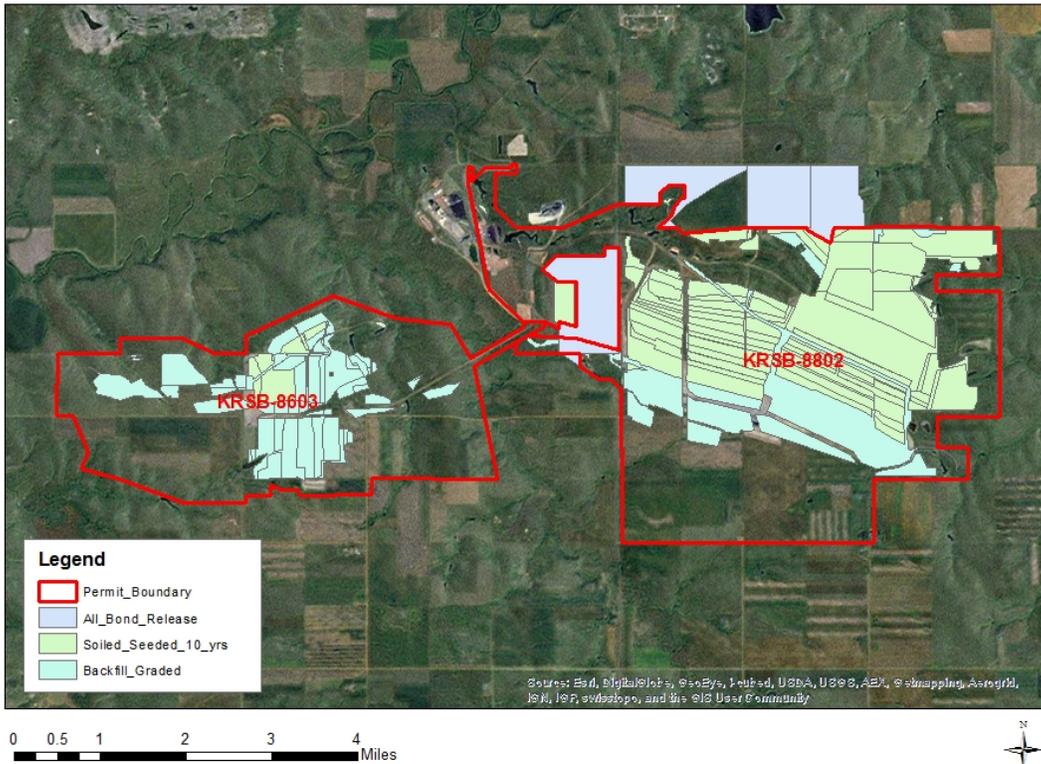


Figure 2: Example of Data from the End-of-Year Mine Maps converted into an ESRI format. This data is geared more towards tracking the mining and reclamation aspects of the operation. This information identifies areas of bond release, backfilled and graded areas, and areas that have been top-soiled and seeded, among other things, and can be very useful to the OSMRE oversight agent.

Evaluation of the State-Federal Cooperative Agreement with North Dakota

Plans to conduct this evaluation were included in the 2014 Performance Agreement between OSMRE and NDPSC, however, limitations in time and resources prevented this evaluation from being conducted this evaluation year. This topic is included in the 2015 Performance Agreement as an evaluation topic for next year’s OSMRE oversight evaluation report.

State Inspection Frequency

The NDPSC continues to conduct frequent and thorough inspections. North Dakota conducted 73 complete inspections and 452 partial inspections on all active mine sites during this evaluation year. North Dakota also conducted 24 complete inspections and 77 partial inspections on all inactive mine sites during this evaluation year. This comes to a

total of 97 complete inspections and 529 partial inspections conducted during EY2014. Using 26 inspectable units to calculate the number of inspections required annually, we come to a total of 104 complete and 160 partial inspections. However, two of those inspectable units are new permits that only recently became active. Permit BNCR-1101 from the Center Mine was issued on May 28, 2014 and Permit NACC-1301 from the Coyote Creek Mine was issued March 12, 2014. Of the two new permits, NACC-1301 is the only one that has been in existence for a full three month period, requiring one complete and two partial inspections from the NDPSC. To properly calculate the required number of state inspections, one must use 24 inspectable units, which totals 96 complete and 144 partial inspections. Adding the number required for one quarter of activity at the Coyote Creek Mine (one complete and two partial inspections), we come to a total requirement of 97 complete and 146 partial inspections. North Dakota has met and exceeded the number of inspections required on all mine sites during this evaluation year.

A Notice of Violation (NOV) issued during EY2013 was resolved during EY2014. On June 14, 2013, the NDPSC issued NOV 1301 to BNI Coal's Center Mine for its failure to construct and maintain a sump and silt fence to minimize sediment deposition on undisturbed areas. The sump and silt fence that had been installed failed to prevent the deposition of 2 to 4 inches of sediment on a small undisturbed area above a sedimentation pond. On July 11, 2013, the NDPSC issued a civil penalty of \$1,000 to BNI Coal Ltd. (Case No. RC-13-334). BNI requested an informal conference regarding this matter to be held on August 19, 2013, but later withdrew that request. A final order in the matter was adopted on September 11, 2013, affirming the violation and penalty.

The NDPSC issued one NOV during this evaluation period that was not associated with any of the OSMRE oversight inspections. On June 5th, 2014, the NDPSC issued NOV 1401 (Case No. RC-14-313) to the Dakota Westmoreland Corporation (DWC) for failure to properly implement and maintain water management plans at the Beulah Mine. DWC completed the prescribed remedial measures within the required time and the NOV was terminated on June 27, 2014. A civil penalty of \$1250 was assessed to DWC.

OSMRE Oversight Inspection Activity

The CAO conducted two complete oversight inspections and four partial oversight inspections. One of the partial inspections was also a federal land bond release inspection. One of the complete inspections was an unannounced independent inspection. No Ten Day Notices (TDNs) or Cessation Orders (COs) were issued by the OSMRE during EY2014.

OSMRE Inspections

EY2014 Inspections Conducted	EY2014 Inspection Target	Percent Target Inspections Completed
6	6	100%

Inspection Types

Complete	Partial	Focused	Joint	Non-Joint	Independent
2	4	0	6	0	1

VII. PROGRAM PROBLEMS AND ISSUES

The OSMRE will initiate a corrective action process that applies when problems are identified with a state’s approved regulatory program, or the state’s actions under that program, that could, if left unaddressed, result in a failure by the state to effectively implement, administer, enforce, or maintain its approved regulatory program. No site-specific issues identified by the CAO during inspections.

During the evaluation year, no regulatory program problems or issues were identified. No regulatory problems were identified that remain uncompleted at the end of the evaluation year.

VIII. OSMRE ASSISTANCE

The OSMRE provides technical assistance and technology support to state Regulatory Programs at the individual state level on project specific efforts, and at the national level in the form of national meetings, forums, and national initiatives. The OSMRE provides direct technical assistance in project and problem investigation, design and analysis, permitting assistance, developing technical guidelines, training and support. The OSMRE initiated a regional Technology Transfer Team in 2004 to support and enhance the technical skills needed to operate regulatory and reclamation programs which each state, including North Dakota, has a representative.

A. National Technical Training Program (NTTP)

The NDPSC sent two reclamation staff to a total of three NTTP classes during the evaluation year.

B. Technical Innovation and Professional Services (TIPs)

During the evaluation year, two NDPSC staff members attended a total of three TIPS training courses. The OSMRE's library services did not receive any requests from the NDPSC for references or article reprints.

C. Financial

The OSMRE contributed Federal funds to help administer and enforce the provisions of SMCRA on Federal and non-Federal lands pursuant to North Dakota's approved permanent program (approved December 1980) and their Cooperative Agreement with the OSMRE. The NDPSC uses these funds to conduct permitting, inspection and enforcement actions, and administrative functions using Federal and matching State funds.

The NDPSC uses these funds to provide State regulation on surface coal mining operations on both Federal and non-Federal lands within the State. For the Federal lands portion of the program, North Dakota was granted funding for Federal land activities pursuant to the Cooperative Agreement with the OSMRE. For non-Federal lands, the State shares one half the cost of the program with OSMRE. For the FY2014 grant period, North Dakota elected to use the Area-Weighted Average Option to calculate the overall Federal funding share for the Regulatory Program.

The North Dakota Regulatory Program submitted a total budget for FY2014 (July 1, 2013 to June 30, 2014) of \$1,454,399. OSMRE awarded the program \$930,777, or 64% of the total budget, in federal assistance. NDPSC maintains a cost effective program with over 65% of the budget dedicated to salary and benefits for 9.4 Full Time Employees (FTEs).

IX. CONCLUSION

Based on the topics evaluated this year, North Dakota has an effective program with no issues that need corrective action. NDPSC actively pursues public participation and outreach efforts. NDPSC employees demonstrate an appropriate level of technical expertise and take advantage of OSMRE and other training opportunities. They also make use of the latest tools and technology. During EY2014, no off-site impacts occurred. NDPSC issued one Notices of Violation (NOV 1401) and resolved another NOV (NOV 1301) issued during EY2013. Reclamation is occurring as contemporaneously as possible. NDPSC does an appropriate job of collecting and tracking the data necessary to accurately track and assess reclamation success as well as the contemporaneous nature of that reclamation. Customer service efforts have been demonstrated to be appropriate and scientifically sound. The State conducts the appropriate number of inspections and those inspections are thorough and complete.

APPENDIX 1: Summary of Core Data to Characterize the Regulatory Program**North Dakota Annual Evaluation Report
Evaluation Year 2014**

The following tables present summary data pertinent to mining operations and regulatory activities under the North Dakota regulatory program. Unless otherwise specified, the reporting period for the data contained in the tables is the Evaluation Year. Other data and information used by OSMRE in its evaluation of North Dakota performance are available for review in the evaluation file maintained by the DFD-CAO.

Because of the enormous variations from state to state in the number, size, and type of coal mining operations and the differences between state programs, the summary data should not be used to compare one state to another.

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North Dakota
 EY 2014, ending June 30, 2014

TABLE 1

COAL PRODUCED FOR SALE, TRANSFER, OR USE ^A			
(Millions of short tons)			
Calendar Year	Surface Mines	Underground Mines	Total
2010	28.9	0.0	28.9
2011	28.2	0.0	28.2
2012	27.8	0.0	27.8
2013	27.7	0.0	27.7

^A Coal production is the gross tonnage (short tons) and includes coal produced during the calendar year (CY) for sale, transfer or use. The coal produced in each CY quarter is reported by each mining company to OSM during the following quarter on line 8(a) of form OSM-1, "Coal Reclamation Fee Report." Gross tonnage does not provide for a moisture reduction. OSM verifies tonnage reported through routine auditing of mining companies. This production may vary from that reported by other sources due to varying methods of determining and reporting coal production.

North Dakota
EY 2014, ending June 30, 2014

TABLE 2

PERMANENT PROGRAM PERMITS, INITIAL PROGRAM SITES, INSPECTABLE UNITS, AND EXPLORATION															
Mines and Other Facilities	Numbers of Permanent Program Permits and Initial Program Sites										Area in Acres ⁵				
	Permanent Program Permits					Initial Program Sites					Permanent Program Permits (Permit Area)		Initial Program Sites		
	Active	Inactive	Abandoned	Total	Active	Inactive	Abandoned	Total	Insp. Units ²	Federal Lands	State/Tribal and Private Lands	Federal Lands	State/Tribal and Private Lands	Total Area	
Surface Mines	20	5	0	25	0	1	0	1	26	15,844	110,035	0	2	125,881	
Underground Mines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	20	5	0	25	0	1	0	1	26	15,844	110,035	0	2	125,881	
Permanent Program Permits and Initial Program Sites (Number on Federal Lands: 0)										Total Number:		26		Average Acres per Site: 4,841.58	
Average Number of Permanent Program Permits and Initial Program Sites per Inspectable Unit (IU):										Total Number:		1.00		Average Acres per IU: 4,841.58	
Permanent Program Permits in Temporary Cessation:										Total Number:		0		Number More than 3 Years: 0	
EXPLORATION SITES										Total Number of Sites		Sites on Federal Lands⁴		Exploration Inspectable Units	
Exploration Sites with Permits:										0		0		0	
Exploration Sites with Notices:										5		0		0	

¹An Inspectable Unit may include multiple small and neighboring Permanent Program Permits or Initial Program Sites that have been grouped together as one Inspectable Unit, or conversely, an Inspectable Unit may be one of multiple Inspectable Units within a Permanent Program Permit.

²Total Inspectable Units calculation includes Exploration Sites Inspectable Units

³When a Permanent Program Permit or Initial Program Site contains both Federal and State and Private lands, the acreage for each type of land is in the applicable column.

⁴The number of Exploration Sites on Federal lands includes sites with exploration permits or notices any part of which is regulated by the state under a cooperative agreement or by OSM pursuant to the Federal Lands Program, but excludes exploration sites that are regulated by the Bureau of Land Management

North Dakota
 EY 2014, ending June 30, 2014

TABLE 3

PERMITS ALLOWING SPECIAL CATEGORIES OF MINING			
Special Category of Mining	30 CFR Citation Defining Permits Allowing Special Mining Practices	Numbers of Permits	
		Issued During EY	Total Active and Inactive Permits
Experimental Practice	785.13(d)	0	0
Mountaintop Removal Mining	785.14(c)(5)	0	0
Steep Slope Mining	785.15(c)	0	0
AOC Variances for Steep Slope Mining	785.16(b)(2)	0	0
Prime Farmlands Historically Used for Cropland	785.17(e)	2	20
Contemporaneous Reclamation Variances	785.18(c)(9)	0	0
Mining on or Adjacent to Alluvial Valley Floors	785.19(e)(2)	0	0
Auger Mining	785.20(c)	0	0
Coal Preparation Plants Not Located at a Mine Site	785.21(e)	0	0
In-Situ Processing	785.22(e)	0	0
Remining	773.15(m) and 785.25	0	0
Activities in or Within 100 Feet of a Perennial or Intermittent Stream	780.28(d) and/or (e) 784.28(d) and/or (e)	2	4

North Dakota
 EY 2014, ending June 30, 2014

TABLE 4

PERMITTING ACTIVITY

Type of Application	Surface Mines			Underground Mines			Other Facilities			Totals		
	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres ¹	App. Rec.	Issued/ Appvd	Acres	App. Rec.	Issued/ Appvd	Acres
New Permits	0	2	8,444	0	0	0	0	0	0	0	2	8,444
Renewals	4	5		0	0		0	0		4	5	
Transfers, sales, and assignments of permit rights	0	0		0	0		0	0		0	0	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										0	0	
Exploration notices ²												
Revisions that do not add acreage to the permit area	19	21		0	0		0	0		19	21	
Revisions that add acreage to the permit area but are not incidental boundary revisions	0	2	1,074	0	0	0	0	0	0	0	2	1,074
Incidental boundary revisions	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	30	9,518	0	0	0	0	0	0	23	30	9,518

Permits terminated for failure to initiate operations:	Number:	0	Acres:	0.0
Acres of Phase III bond releases (Areas no longer considered to be disturbed):	Number:	0	Acres:	364.0
Permits in temporary cessation	Notices received:	0	Terminations:	0
Midterm permit reviews completed	Number:	9		

¹Includes only the number of acres of proposed surface disturbance
²State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

North Dakota
EY 2014, ending June 30, 2014

TABLE 5

OFF-SITE IMPACTS EXCLUDING BOND FORFEITURE SITES												
RESOURCES AFFECTED	People			Land			Water			Structures		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
DEGREE OF IMPACT	[REDACTED]											
NUMBER OF IMPACT EVENTS	[REDACTED]											
Blasting	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Inspectable Units ¹ : 26												
Inspectable Units with one or more off-site impacts: 0												
Exploration Inspectable Units with one or more off-site impacts ² : 0												
Inspectable Units free of off-site impacts: 26 % of Inspectable Units free of off-site impacts ⁴ : 100												
¹ Total number of Inspectable Units is (1) the number of active and inactive inspectable units at the end of the Evaluation Year and (2) the number of Inspectable Units that were final bond released or removed during the Evaluation Year												
² Exploration Inspectable Units with one or more off-site impacts is a subset of Inspectable Units with one or more off-site impacts												
OFF-SITE IMPACTS AT BOND FORFEITURE SITES												
RESOURCES AFFECTED	People			Land			Water			Structures		
	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
DEGREE OF IMPACT	[REDACTED]											
NUMBER OF IMPACT EVENTS	[REDACTED]											
Blasting	0	0	0	0	0	0	0	0	0	0	0	0
Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Inspectable Units ³ : 0												
Inspectable Units with one or more off-site impacts: 0												
Inspectable Units free of off-site impacts: 0 % of Inspectable Units free of off-site impacts ⁴ : 0												
³ Total number of Inspectable Units is (1) the number of bond forfeiture sites that were reclaimed during the Evaluation Year and (2) the number of bond forfeiture sites that were unreclaimed at the end of the Evaluation Year												

North Dakota
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TABLE 6
SURFACE COAL MINING AND RECLAMATION ACTIVITY
Areas of Phase I, II, and III Bond Releases During the Evaluation Year (EY)

Phase I Releases	Phase II Releases			Phase III Releases			Total Acres Released During the EY
	Total Acres Released in Approved Phase II Releases	Acres not previously released under Phase I	Total Acres Released in Approved Phase III Releases	Acres not previously released under Phase II	Acres not previously released under Phase I or II		
0	0	0	0	364	354	Phase I	354
0	0	0	364	0	0	Phase II	364
0	0	364	0	0	0	Phase III	364
Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year							
0							
Number of Permanent Program Permits with Jurisdiction Terminated Under Phase III Bond Release During the Evaluation Year							
0							
Number of Inspectable Units Removed							
0							
Other Releases - Acres							
Administrative Adjustments 39							
Bond Forfeiture 0							

Areas of Permits Bonded for Disturbance by Surface Coal Mining and Reclamation Operations

	Total Acres at Start of EY	Total Acres at End of EY	Change in Acres During EY
New Area Bonded for Disturbance	0	9,518	9,518
Total Area Bonded for Disturbance	116,766	125,881	9,115
Area Bonded for Disturbance without Phase I Bond Release	113,200	122,323	9,123
Area Bonded for Disturbance for which Phase I Bond Release Has Been Approved	3,566	3,556	(10)
Area Bonded for Disturbance for which Phase II Bond Release Has Been Approved	0	0	0
Area Bonded for Disturbance with Bonds Forfeited During Evaluation Year	0	0	0
Area Bonded for Remaining	0	0	0
Areas of Permits Disturbed by Surface Coal Mining and Reclamation Operations			
Disturbed Area	72,014	73,575	1,561

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TABLE 7

BOND FORFEITURE ACTIVITY (Permanent Program Permits)			
Bond Forfeiture and Reclamation Activity	Number of Sites	Dollars	Acres
Sites with bonds forfeited and collected that were un-reclaimed at the start of the current Evaluation Year (i.e. end of previous Evaluation Year) ¹	0		0
Sites with bonds forfeited and collected during the current Evaluation Year	0	0	0
Sites with bonds forfeited and collected that were re-permitted during the current Evaluation Year	0		0
Sites with bonds forfeited and collected that were reclaimed during the current Evaluation Year	0		0
Sites with bonds forfeited and collected that were un-reclaimed at the end of the current Evaluation Year ¹	0		0
Sites with bonds forfeited but un-collected at the end of the current Evaluation Year	0		0
Forfeiture Sites with Long-Term Water Pollution			
Bonds forfeited, lands reclaimed, but water pollution is still occurring	0		
Bonds forfeited, lands reclaimed, and water treatment is ongoing	0		
Surety/Other Reclamation Activity In Lieu of Forfeiture			
Sites being reclaimed by surety/other party at the start of the current Evaluation Year (i.e., the end of previous Evaluation Year) ²	0		0
Sites where surety/other party agreed during the current Evaluation Year to do reclamation	0		0
Sites being reclaimed by surety/other party that were re-permitted during the current Evaluation Year	0		0
Sites with reclamation completed by surety/other party during the current Evaluation Year ³	0		0
Sites being reclaimed by surety/other party at the end of the current Evaluation Year ²	0		0
¹ Includes data only for those forfeiture sites not fully reclaimed. ² Includes all sites where surety or other party has agreed to complete reclamation and the site is not fully reclaimed. ³ These sites are also reported in Table 6, Surface Coal Mining and Reclamation Activity, because Phase III bond release would be granted on these sites.			

North Dakota
 EY 2014, ending June 30, 2014

TABLE 8

REGULATORY AND AML PROGRAMS STAFFING	
Function	Number of FTEs
Regulatory Program	
Permit Review and Maintenance	5.20
Inspection	2.10
Other (supervisory, clerical, administrative, fiscal, personnel, etc.)	2.10
Regulatory Program Total	9.40
AML Program Total	4.50
TOTAL	13.90

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

U.S. Department of the Interior

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TABLE 9

FUNDS GRANTED TO STATE OR TRIBE BY OSM (Actual Dollars Rounded to the Nearest Dollar)			
Type of Funding	Federal Funds Awarded	Total Program Cost	Federal Funds Awarded as a Percentage of Total Program Costs
Regulatory Funding			
Administration and Enforcement Grant	944,097		
Other Regulatory Funding, if applicable	0		
Subtotal (Regulatory Funding)	944,097	1,475,152	64
Small Operator Assistance Program Grant Funding	0	0	
Abandoned Mine Land Reclamation Funding	3,573,845	3,573,845	100
Watershed Cooperative Agreement Program	0	0	
TOTAL	4,517,942		

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EY 2014, ending June 30, 2014

TABLE 10

STATE INSPECTION ACTIVITY INSPECTABLE UNITS FOR WHICH STATE MET REQUIRED INSPECTION FREQUENCY ON AN INSPECTABLE UNIT-BY-INSPECTABLE UNIT BASIS ¹												
Inspectable Units (IUs)	Total number of inspectable units ²	Number of inspections required annually		Number of inspections conducted		IUs Met Complete Inspection Frequency Requirement		IUs Met Partial Inspection Frequency Requirement		IUs Met Complete and Partial Inspection Frequency Requirements		
		Complete Inspections	Partial Inspections	Complete Inspections	Partial Inspections	Number	Percent	Number	Percent	Total number of IUs	Number that met inspection frequency	Percent
COAL MINES AND FACILITIES												
Active	20	73	146	73	452	20	100	20	100	20	20	100
Inactive	6	24	0	24	77	6	100	6	100	6	6	100
Abandoned	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS ³	26	97	146	97	529	26	100	26	100	26	26	100
Coal Exploration Activities ⁴												
Exploration sites with permits												
Exploration sites with notices												
							Complete Inspections				Partial Inspections	
							0				0	
							3				0	

¹ Calculated on a site-specific basis.

² Total number includes both permanent program permits and initial program sites.

³ OSM is assuming that all states have gone through the process described in 30 CFR 840.11(h) and 842.11(f) to reduce inspection frequency on abandoned/forfeited sites

⁴ Includes all valid notices and permits. No inspection frequency data are provided since SMCRA does not establish a minimum numerical inspection frequency for coal exploration activities.

⁵ Two inspectable units were approved in late March and late May, therefore the number of required inspections was adjusted to reflect the inspection frequency for these two inspectable units.

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TABLE 11

STATE OR TRIBAL ENFORCEMENT ACTIVITY		
Type of Enforcement Action	Number of Actions ¹	Number of Violations ¹
Notice of Violation	1	1
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0
¹ Does not include actions and violations that were vacated.		

North Dakota
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TABLE 12

LANDS UNSUITABLE ACTIVITY		
Activity	Number	Acres
Petitions Received	0	
Petitions Rejected	0	
Petitions Accepted	0	
Decisions Denying Petition	0	
Decisions Declaring Lands Unsuitable	0	0
Decisions Terminating Unsuitable Designations	0	0

North Dakota
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TABLE 13

OSM OVERSIGHT ACTIVITY					
Oversight Inspections and Site Visits					
	Complete		Partial		Total
	Joint	Non-Joint	Joint	Non-Joint	
Oversight Inspections	2	0	4	0	6
	Technical Assistance		Other		Total
Site Visits	0		0		0
Violations Observed by OSM and Citizen Requests for Inspection¹					
Type of Action					Total number of each action
How many violations were observed by OSM on oversight inspections?					0
Of the violations observed, how many did OSM defer to State action during inspections?					0
Of the violations observed, how many did OSM refer to the State through Ten-Day Notices? ²					0
How many Ten-Day Notices did OSM Issue for observed violations? ³					0
How many Ten-Day Notices did OSM issue to refer citizen requests for inspection?					0
How many Notices of Violation did OSM issue?					0
How many Failure-to-Abate Cessation Orders did OSM issue?					0
How many Imminent Harm Cessation Orders did OSM issue?					0
OSM Action for Delinquent Reporting or Non-Payment of Federal AML Reclamation Fees					
How many Ten-Day Notices for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
How many Notices of Violation for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
How many Federal Failure-to-Abate Cessation Orders for delinquent reporting or non-payment of Federal AML reclamation fees did OSM issue?					0
¹ This section does not include actions for delinquent reporting or non-payment of Federal AML fees that are reported in the last section of the table. ² Number of violations contained in Ten-Day Notices not including those issued to refer citizen requests for inspection. ³ Number of Ten-Day Notices issued not including those to refer citizen requests for inspection.					

North Dakota
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TABLE 14
STATUS OF ACTION PLANS

Action Plan ID	Problem Type ¹	Problem Title	Problem Description	Date Action Plan Initiated	Scheduled Completion Date	Actual Completion Date
250	PA	None				

¹ Problem Type: "PA" indicates a required Program change under subchapter T or 732
"RP" indicates a Regulatory Program implementation or administrative problem

North Dakota
 EY 2014, ending June 30, 2014

**TABLE 15
 (Optional)**

POST-MINING LAND USE ACREAGE OF SITES FULLY RECLAIMED (Phase III bond release or termination of jurisdiction under the Initial Program)	
Land Use¹	Acres Released
Cropland	151.00
Pasture/Hayland	0.00
Grazingland	0.00
Forestry	0.00
Residential	0.00
Industrial/Commercial	150.20
Recreation	0.00
Fish & Wildlife Habitat	23.40
Developed Water Resources	0.00
Undeveloped land or no current use or land management	0.00
Other - Public Utilities	0.00
Other - Roads	8.90
Other - Undisturbed	30.50
Other -	0.00
Sub-Total Other	39.40
Total	364.00

¹ Land uses as defined in 30 CFR 701.5 or "Other" as defined under the state or tribal program

APPENDIX 2: COMMENTS OF STATE OF NORTH DAKOTA ON THE REPORT

North Dakota Annual Evaluation Report

Evaluation Year 2014

North Dakota had the following comments on the EY2014 report:

The NDPSC responded with a list of additions and revisions to the EY2014 report. The CAO would like to thank NDPSC staff for their diligent review of this report and their professional input to its content. With the exception of the minor comments mentioned below, the CAO agrees with all of the comments offered by the NDPSC and has made the appropriate changes.

Figure 2, on Page 11, displays the percent of off-site impacts in North Dakota since 1996. It was suggested that the range of the y-axis on Figure 2, extend from 0 to 100 percent instead of the 90 to 100 percent that is currently displayed. While the greater range does help display the relatively small amount of off-site impacts that have occurred in North Dakota, the information does not display well on a graph at that scale. It was decided to display the y-axis using a range of 90 to 100 percent.

On pages 24 and 25, a series of bullet points identify generalizations about soil handling practices and how they can potentially affect microbial health in soils. It was pointed out that some of these generalizations are not supported by cited research within this report. Links to supporting research have been included. It was also pointed out that one of these generalizations specifically identified a practice (the mixing of topsoil and subsoil) that is not allowed by the North Dakota program. The point was made to identify soil handling practices that potentially impact soil microbial health. The fact that the North Dakota program does not allow this practice is a further testament to the effectiveness of their program. Wording has been added to the bullet points to further clarify these points and hopefully avoid further confusion.