



OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

**Annual Evaluation Summary Report
for the
Regulatory and Abandoned Mine Lands
Programs
Administered by the State of**

INDIANA

**Evaluation Year 2000
(October 1, 1999 to September 30, 2000)**

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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 standards specified by SMCRA. This report contains summary information regarding the Indiana Program and the effectiveness of the Indiana program in meeting the applicable purposes of SMCRA as specified in section 102. This report covers the period of October 1, 1999 to September 30, 2000.

The primary thrust of OSM's oversight policy is a strategy that evaluates the end result of State program implementation. Regulatory program oversight focuses on State success in ensuring that areas off the mine site are protected from impacts during mining, and that areas on the mine site are reclaimed contemporaneously and successfully after mining activities are completed. This policy emphasizes State-specific evaluation plans worked out by consensus between OSM and the State in an annual performance agreement. The policy also encourages public participation as part of the oversight strategy. Besides the primary focus on evaluating end results, oversight guidance makes clear OSM's responsibility to conduct inspections to monitor the State's effectiveness in ensuring compliance with SMCRA's environmental protection standards.

Oversight is an ongoing process. To further the purpose of continuous oversight, this report will present OSM and Indiana progress in conducting evaluations and completing oversight activities, as well as accomplishments during this evaluation period. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Indianapolis OSM Field Office, 575 North Pennsylvania Street, Indianapolis, Indiana 46204. The Field Office may also be reached at 317-226-6700, or via E-mail at ifomail@osmre.gov. The Indianapolis Field Office (IFO) will mail copies of specific reports, when requested.

The following acronyms are used in this report:

AMD.....	Acid Mine Drainage
AML.....	Abandoned Mine Land
AOC.....	Approximate Original Contour
AVS.....	Applicant Violator System
BCI.....	Bat Conservation International
IDOR.....	Indiana Department of Natural Resources, Division of Reclamation

EY Evaluation Year
IFO..... Indianapolis Field Office of the OSM
Karst..... Indiana Karst Conservancy
OSI..... Off-Site Inspection
OSM..... U. S. Department of the Interior, Office of Surface Mining
RA..... Regulatory Authority
SMCRA..... Surface Mining Control and Reclamation Act of 1977, PL 95-87

II. **Overview of the Indiana Coal Mining Industry**

Coal Resources

In Indiana, coal is mined from strata formed some 300 million years ago. The Indiana Coal Field occupies about 6,500 square miles in the southwestern part of the state, where the terrain varies from flat to hilly with small, steep sided hills.

The Indiana Coal Field constitutes the eastern edge of the roughly spoon-shaped Illinois Basin, a structural depression that covers part of a three state area, including Illinois and Western Kentucky. The Coal seams of Indiana dip about 25 feet per mile to the west toward the center of the Illinois Basin.

Three broad types of land which geographers call physiographic provinces are in the Indiana Coal Field. These regions reflect glacial activity as well as pre-glacial bedrock conditions. The northern fifth of the Coal Field lies within the flat to gently rolling Tipton Till Plain physiographic province, which owes its configuration particularly to the most recent glacial advance. The coal deposits in this region are quite small. Extending south from the Tipton Till Plain, the eastern border of the Coal Field lies within the Crawford Upland, a deeply dissected region of steep sided hills. Rocks beneath the coal bearing rock groups have eroded to form the lower slopes and bedrock bottoms of valleys. Most of the Crawford upland is rugged and missed the leveling effects of the glaciation. Coal deposits in the Crawford upland are so small and scattered that only small mining operations work them. West of the Crawford upland, lies an area of gently rolling hills and flat river valleys and bottom lands which comprise the Wabash Lowland. Within this lowland, rocks of the Pennsylvanian Period, which include coal, form the bedrock, but the bedrock in the north lies below glacial sediments. The southwestern part lies beneath glacial outwash, lake sediments, or loess. Coal deposits within the Wabash lowland are very large and include practically all of the reserves of the Indiana Coal Field. Large scale underground mining is possible and large scale surface mining occurs today.

Quality of Indiana Coal

All coal produced in Indiana is ranked a high-volatile bituminous coal, as designated by the American Society for Testing and Materials. Coal is a heterogeneous rock and has considerable variation in chemical and physical properties within a particular seam and also between seams.

Indiana coal has a natural moisture content of about 5-15 percent; heating value of about 10,500 to 12,000 Btu per pound; ash content of about 5 to 20 percent; and sulphur content of about 0.5 to 6 percent.

Indiana Mining History

Bituminous coal was first discovered in Indiana along the Wabash River in 1736. In 1804 coal was first reported in land surveys and its location marked on maps. By 1832 coal was being advertised for sale in many southern Indiana newspapers.

By 1840, coal was being shipped in small quantities by flat boat from locations along the White, Wabash and Ohio Rivers. Indiana was producing almost 9,700 tons of coal per year, primarily from Perry and Warrick counties. Small scale surface mining along outcropping seams was done at first by pick and shovel and later by horse and scraper. The first underground mine shaft in Indiana was developed in 1850 at Newburgh Indiana. By 1852, block coal had been discovered in Clay County and both shaft and slope mines became common. From 1840, when production was almost 9700 tons, to 1897, coal production increased rapidly and by 1918 at the close of World War I, production in Indiana had reached over 30,000,000 tons per year. With the advent of steam powered equipment, surface mining began on a large scale and has steadily increased ever since.

The depth of a coal seam dictates the types of equipment needed to remove the overburden above the coal seam. As technology has advanced from steam powered to diesel and finally electric power, the size of the equipment used and its capabilities have also advanced. Twenty-five years ago, it was unusual to surface mine coal at depths greater than one hundred feet, while today, with equipment capable of removing 200 cubic yards of overburden at a time, coal seams that approach 200 feet in depth are considered mineable.

Methods of Mining In Indiana

In recent years Indiana coal has been produced mainly through surface mining methods. Surface mining has not always played this preeminent role. Underground mining was once the major method of coal extraction in the state. Since 40% of surface reserves have already been exploited, surface mining in Indiana is almost certain to decline within a few

decades. Through the years, it has been predicted that this inevitable declining surface production will be accompanied by a resurgence of underground mining in areas of deeper coals. Indiana has about 34 billion tons of unmined coal, and about 18 billion of it is recoverable by current technology. Of the total recoverable coal, about 16 billion tons is recoverable by underground mining and 2 billion tons is recoverable by surface mining.

Use of Indiana Coal

Most of Indiana's coal is consumed by the electric utility industry. Indiana's utilities burn a combination of Indiana and out-of-state coal. The electric utilities and industries that use out-of-state coal do so for a variety of reasons with the predominant one being the air pollution emission requirements.

III. Overview of the Public Participation Opportunities in the Oversight Process and the State Program

Indianapolis Field Office Public Participation Efforts:

Indiana Society for Mining and Reclamation (ISMR): The Indianapolis Field Office (IFO) Director participates as a member of the Executive Board of this organization. The board is composed of representatives from the State Regulatory Authority, the Indiana Geologic Survey, the Indiana Department of Commerce, citizens, coal industry representatives, power industry representatives, and academia. The purpose of the group is to serve as a focal point for the exchange of information about the coal industry in Indiana. The group sponsors a Technology Transfer session in the coal region during December each year which brings together citizens, the coal industry, the power generation industry, environmental groups, consultants with an interest in coal mining and reclamation, and interested State and Federal Agencies. The sessions address current, historic and anticipated issues related to surface coal mining. The board meets quarterly and sets the agenda for the annual sessions. Approximately 150 people with diverse interests attended the Technology Transfer session in December.

Prime Farmland Team Meetings: The IFO is represented by a staff member on the Indiana Prime Farmland Team. This team is made up of representatives from the Natural Resources Conservation Service, soil and water conservation districts, the Cooperative Extension Service, the Indiana Farm Bureau, the Sierra Club, the Indiana Department of Natural Resources, Division of Reclamation (IDOR) and the IFO representative. This team meets monthly with a primary focus of exploring and addressing prime farmland issues.

Clean Streams Activities: During Evaluation Year 2000 (EY), the Patoka South Fork Watershed Steering Committee, a watershed group formed under the Appalachian Clean Streams Initiative, met periodically to develop and implement projects intended to improve the Patoka South Fork Watershed. The IFO and IDOR have representatives on this committee. This watershed has been severely impacted by past coal mining activities. This effort is discussed in depth later in the report.

Organizational Contacts: The coal industry in Indiana is represented primarily by the Indiana Coal Council. The primary environmental representation is by a consortium of environmental groups known as the Hoosier Environmental Council. The IFO maintains formal and informal contacts with these organizations, their members, and citizens throughout the evaluation year.

Indiana Department of Natural Resources Public Participation Efforts:

The IDOR continues to successfully implement the required public participation provisions of all aspects of its regulatory and Abandoned Mine Lands (AML) programs. In addition to addressing the required provisions of public participation, Indiana has taken a pro-active position regarding outreach and the dissemination of information to all stakeholders. Under its "Operation Excellence" Program, Indiana established a goal "To create a greater public awareness of and appreciation for Division programs through the use of various written, audio, and visual media."

To achieve this goal, the following State efforts were undertaken:

The Indiana Department of Natural Resources maintains a "Division of Reclamation Online Publication Order Form" page on the World Wide Web. On this page, the IDOR indicates the availability of and provides an electronic order form for the following publications:

- Citizens Guide to Indiana's Abandoned Mine Land Program
- Citizen's guide to Coal Mining and Reclamation in Indiana
- Division of Reclamation Annual Report
- Division of Reclamation Strategic Plan
- Citizen's Guide to Blasting
- Division of Reclamation Vision Pamphlet
- Let's Learn about Mining and Reclamation programs geared toward Grades 2 and 3 or Grades 4-6.

Indiana takes an extremely pro-active stand in assuring that all customers are aware and understand all aspects of the program. This is done through surveys, personal contact, public forums and written information.

Indiana administers one of the most intensive and comprehensive public information programs of any of the Primacy States. It targets potential problems and tries to bring the parties together before the potential issue becomes a major concern.

Indiana focuses its outreach and participation programs on education. The Regulatory Authority has held field sessions in both the Regulatory and AML Programs to educate Legislators, educators, school groups and citizens. The Regulatory Authority also frequently provides speakers at local schools, participates in Career Days and Science Fairs and has developed a workshop for teachers in grades kindergarten through eight grade in association with the Interstate Mining Compact Commission.

IV. Major Accomplishments/Issues/Innovations in the Indiana Program

Regulatory Program Maintenance:

Indiana maintained its Regulatory Program to assure that the approved program remains effective in providing protection from the adverse effects of surface coal mining operations. The following significant programmatic action was taken during the evaluation year:

Prior to this evaluation year Indiana initiated a state program amendment providing for the Regulatory Authority to enter into a State-Federal Cooperative Agreement for Federal Lands in Indiana. During EY 1999 the State accomplished the remaining requirement for approval: having the Governor of Indiana sign the agreement. The final rule was published on October 26, 1999.

In the area of Reclamation Success, IDOR released 7,706 acres totally from liability (Phase III) in 1999. The general trend in the 1990's is that more acres have been released each succeeding year. To date almost 27,000 acres have been totally reclaimed and released. Although there are no solid numbers available, there seems to be significant acreage which has been totally reclaimed, but for some reason has not been released from Phase III bond. The reasons that this acreage has not been released range from awaiting the expiration of the liability period to the operator not ready to file for release at this time.

Indiana National Reclamation Awards: Indiana was honored by having award winning sites this year, both in the Title IV AML and a Title V Regulatory Program areas. The award winning sites are shown below:

Title IV Award Winner: Indiana Department of Natural Resources for Reclamation on the Midwestern Mining Reclamation Project

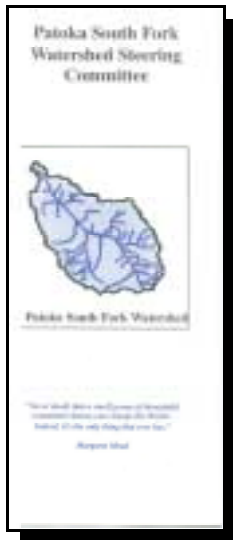
The Indiana Department of Natural Resources' Midwestern Reclamation Project near Authur, Indiana, which reclaimed the 270-acre site by eliminating 4,400 feet of dangerous highwalls, coal refuse and spoil, plus 30 million gallons of acid water from slurry ponds. Coal combustion by-products were used to enhance the quality of water discharged from the site. Continuous monitoring of the water quality shows significant improvement. The large abandoned mine site is a showcase of outstanding reclamation and is now an integral part of the southern Indiana landscape.



Title V Excellence in Surface Mining Award: Black Beauty Coal Company and Vigo Coal Company, Columbia Mine, Oakland City, Indiana

Black Beauty Coal Company and Vigo Coal Company, Columbia Mine, Oakland City, Indiana, for reclamation that created some of the best reforestation and wildlife habitat to be found on reclaimed coal mine lands. The companies consistently replaced soil to depths of 4-5 feet at the site, although only 12 inches were required. Mining and reclamation occurred within 100 feet of an adjacent wetland, without any adverse impact.





Clean Streams Activities: Indiana has been an active participant in the Clean Streams Initiative. The South Fork of the Patoka Watershed Steering Committee has been an extremely active group. It is a citizen based watershed group formed under the Appalachian Clean Streams Initiative and has been involved in several mine drainage projects. The following is a sample of activities which have positively affected the watershed and which have enhanced the communities both environmentally and economically. Much of the area affected by the deterioration of the South Fork of the Patoka River is reliant on three primary industries.

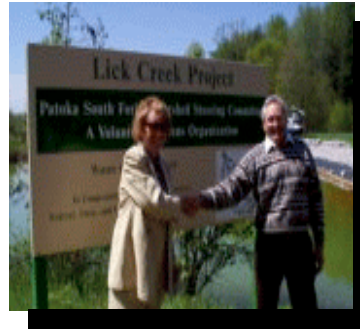
- Minerals extraction, both Coal and Oil and Gas
- Agribusiness
- Tourism, especially in the areas of hunting and fishing

The decline of the Patoka watershed and in particular the South Fork of the Patoka River can be partially attributed to the Acid Mine Drainage (AMD) resulting prior to the regulation of coal mining and regulation, the removal of oil and gas and the saltwater solution that results from it, and from silt and chemical filled water from the area cropping.

The Drainage area of the Patoka River includes 862 square Miles (55,680 acres) in eight Indiana Counties. The South Fork of the Patoka River Watershed is considered to be the most heavily impacted watershed in the State of Indiana. The environmental degradation of the South Fork Tributary from AMD have been well documented by numerous Scientific Studies. The Studies have documented the loss of fish, aquatic insects, and plants due to inflow of water with low pH, heavy metals, suspended sediments, and precipitates that coat the stream's bottom.

Interest in the formation of a locally oriented group to address the watershed problems began at a meeting of the *Indiana Society for Mining and Reclamation*, in 1994. Beginning in February of 1995 and continuing through August of that year, Multi-agency meetings were held to discuss OSM's new initiative under the *Appalachian Clean Streams Initiative*. Resulting from these meetings was "A community effort, locally led and directed, from within the community, identifying and prioritizing needs." Local meetings continued to be conducted during the next few months and in early 1996 officers of the group were elected. The Group has selected and carried out several significant projects. Below is a sampling of the groups Projects which are helping to clean up the Patoka Watershed and to return it to viable and productive uses.

Kathy Karpan, former Director of the Office of Surface Mining, congratulating Dwight Cousert, President of the Patoka South Fork Watershed Steering Committee. The Patoka South Fork group is a volunteer citizen group working together towards a common goal of environmental stewardship and improvement within the 49,000 acre South Fork watershed.



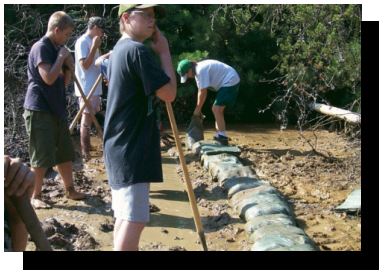
The Aqueous Anoxic Limestone Drain installed within an acid mine lake. This experimental passive treatment system allows for the passage of acid water to pass through limestone under anoxic conditions to improve water quality. Over 4,000 tons of limestone was used, water moves from right to left, and the improved water empties into a high quality 40 acre wetland created by a beaver dam.



Augusta Lake Project

One of the many projects underway by Indiana's Patoka South Fork Watershed Steering Committee is reclamation of the 52 acre acid filled Augusta Lake. In an effort to neutralize the lake, along with over two miles of Mill Creek, before it drains into the Patoka River, Boy Scouts from Troop 151, under the leadership of Chuck Froehle, scout leader, did reclamation work on August 28, 1999. Six scouts, three adult advisors and one scout leader, filled over 130 sandbags, spread over 1,400 pounds of alkaline soda ash briquettes, in creating one of what will be four wetland treatment areas leading into the lake. The following pictures show their efforts

Groundwater Neutralization of AMD at Augusta Lake - The third phase of this project entails direct neutralization of AMD at the source, within the acid bearing spoil banks. To accomplish this, calcium hydroxide is being applied to neutralize acid groundwater flowing into the lake. Within the drainage basin of the lake, strategic locations have been excavated, and calcium hydroxide, donated by Airgas, Inc. is applied.



Boy Scouts from Troop 151 working to fill sandbags to create a dike that will retain water and become a wetland. The dike will be three rows high upon completion.

Scouts spreading 50 pound bags of soda ash briquettes. The briquettes are highly alkaline and will neutralize both the acid mine drainage and accumulated acid soils thereby facilitating the wetland. Note the scouts are wearing goggles and rubber gloves for protection.



Scout Troop 182, from Jasper Indiana, led by Bart Pitstick, volunteered their services on August 26, 2000, to help with the Augusta Lake Remediation Project. They filled over 200 sandbags to re-enforce one of three dikes created last year.



Erik Peterson, Regional Vice President of Airgas Mid-America, of Evansville Indiana, stands next to the company's tanker truck that delivers calcium hydroxide to the Augusta Lake acid mine remediation project

Indiana AML Program Bat Gating Projects:

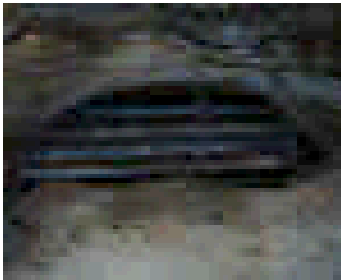
The AML Program undertook multiple bat gating projects in 1999 and 2000. The bat gates were installed to both protect the public from the dangers of open mine shafts and to maintain the habitat that is so critical to the bats that use these mines.

To get these projects started, the Indiana AML Program contacted Bat Conservation International (BCI) for guidance. BCI was very instrumental in helping the State properly design and implement the bat gating projects. The Indiana Karst Conservancy (Karst), a non-profit organization consisting entirely of volunteers dedicated to the protection of Indiana's natural caves, was then contacted. This group had gate building experience at natural caves which could easily be transferred to building gates at abandoned mines. Karst agreed to work with the Indiana AML Program because the abandoned underground mines in Indiana often exhibit many of the same characteristics of natural caves, and therefore, provide habitat for the same species of bats as the natural caves. The Indiana AML Program is using a sealing technique which is cost effective, maintains critical habitat, and has minimal negative environmental impact; because all materials and equipment are generally carried in by hand. No heavy equipment or land clearing of any kind takes place.

The following brief description and photographs for several sites has been provided by the Indiana Department of Natural Resources and demonstrates Indiana's leadership in the identification and remediation activities in the Safety, Cultural Resource and Critical Habitat Areas.

Turkey Run State Park, Parke County, IN, Installed 4/29-30/00

This site consists of one mine entrance that is located within the State Park, along one of the hiking trails. The park installed a series of fences in years past to try to keep hikers out of the mine. However, this was never totally successful, as the fence was constantly vandalized. Also, because of the fence, the mine was not being utilized by bats. The gate at this site will not only keep people out, but will allow the bats to rediscover the mine and utilize it as habitat



Site 553 - Ayrshire, Pike County

Gated culvert installed 7/22/99

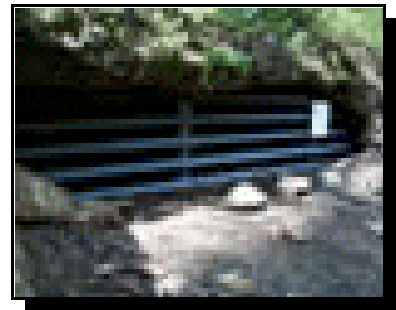
This site consisted of three subsidence events where protection was needed but where typical gates were not feasible. Because of the unique nature of these sites, gated culverts were used. These culverts were installed as part of a much larger project that involved earth moving and re-vegetation and was completed by an Indiana AML Contractor, and not by the IKC.

Site 778 - Ayrshire

Pike County

Gates installed 5/8-9/99

*This site consisted of three mine entrances that needed gating. The Indiana Bat (*myotis sodalis*) was trapped at one of these openings, making it the first and only abandoned underground coal mine in Indiana to date to have documented use by the endangered Indiana bat.*



V. Success in Achieving the Purposes of SMCRA as Determined by Measuring and Reporting End Results

To further the concept of reporting end results, the findings from performance standard and public participation evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts, the number of acres that have been mined and reclaimed and which meet the bond release requirements for the various phases of reclamation, and the effectiveness of customer service provided by the State. Individual topic reports are available in the Indianapolis Office which provide additional details on how the following evaluations and measurements were conducted.



Guided by OSM Directive REG-8, designed to focus oversight on the on-the-ground result success of the State Programs, the DOR and the IFO conducted a joint evaluation during the EY. The purpose of the evaluation was to determine the effectiveness of the State program in protecting the environment and public from off-site impacts resulting from surface mining and reclamation operations.

A. Off-Site Impacts (OSI)

The numbers of off-site impacts reported by the DOR during the evaluation year were few, and generally affected only to a minor degree, land and water resources. The majority of those found were of a hydrologic nature. A total of 24 OSIs were observed on 18 mine sites during 2115 partial and 1008 complete inspections. These findings are similar to those of the previous evaluation years. The IFO conducted independent off-site impact inspections during the evaluation year. During these validation inspections, the IFO observed a minimal number of OSIs. Because of the low number of incidences of off-site impacts and the minor degree of impact they had, the IFO finds that the DOR is continuing to effectively protect the public and environment from off-site impacts resulting from surface mining and reclamation operations. The DOR has been encouraged to improve the accuracy of the OSIs it is reporting to OSM, and to continue its efforts to minimize the number of OSI's that occur.

B. Reclamation Success:

The IFO conducted a program of bond release oversight inspections to verify the basic assumption of this way of reporting reclamation success. The assumption, as outlined by OSM Directive, REG-8, is that acres reported for a particular phase of bond release are equivalent to acres reclaimed to meet the release standards for that phase in the field. The IFO was able to verify that release standards are indeed met in the field before phase bond release is approved in Indiana. Therefore the acres reported for bond release translate to acres of successfully completed reclamation. Because bond release is a function of operator requests, land may be fully reclaimed with no bond release request received from the operator.



Thousands of acres of land affected by surface Coal Mining are successfully reclaimed each year as reported in Table V and the narrative and pictorial descriptions below: The pictures below are representative of typical mine reclamation at a typical Midwestern Area mine

The following elements were evaluated for successful reclamation:

Land Form/Approximate Original Contour and Soil Replacement

The criteria for determining whether reclaimed lands have been reconstructed appropriately is whether it has been returned to its approximate premining contour (AOC), evaluation period, the approximate premining contour and soil replacement was achieved for 4,403 acres, including soil replacement. For the purposes of this evaluation, Phase I bond releases



Typical Soil Replacement to achieve Approximate Original Contour and Soil Replacement

Based upon the IFO analysis of data supplied by the IDOR, between 1983 through September 1999, approximately 65,964 acres of mined land have been restored to the approximate premining contour including soil replacement.

Surface Stability and Establishment of Vegetation



In this photograph, progressive phases of land stabilization can be observed.

For the purposes of this evaluation, surface stability and the establishment of vegetation were measured by the acres of Phase II bond released. For the evaluation period, Indiana was successful in achieving surface stability and in establishing vegetation on 6,110 acres.

Based on the IFO analysis of data supplied by the IDOR, between 1983 and September 1999, approximately 51,864 acres of mined land have had surface stability achieved and vegetation properly established.

Establishment of Post Mining Land Use and Productivity Restoration

Post mining land use attainment and the establishment of a successful and appropriate vegetative cover, including restoration of productivity (where appropriate), were measured by the number of acres that received Phase III bond release. For the evaluation period, 7,706 acres had Phase III bond released and therefore, are considered to have attained the approved post mining land use, and have appropriate successful vegetative cover, including restoration of productivity. This can be compared to 5,500 acres released for the previous evaluation year.



Typical Midwestern crop land restoration. Generally either Soybeans or Corn is grown to establish land use and productivity.

Based upon the IFO analysis of data supplied by the IDOR, between 1983 and September 1999, 28,572 acres have been fully reclaimed and the post mining land use and appropriate vegetative cover achieved, including restoration of productivity where appropriate.

Hydrologic reclamation

The successful restoration of surface and groundwater quality and quantity would be measured by the accounting of acres of Phase III bond release achieved. This is the assumption of the OSM, Directive REG-8. While this likely is a valid measure in Indiana, the State and OSM are working to improve the acquisition, management and interpretation of hydrologic data. Indiana released 7,706 acres for Phase III during the evaluation period and a total of 28,572 acres since 1983.

Contemporaneous Reclamation

The OSM Directive, REG-8 defines contemporaneous reclamation to be the difference in time between when lands are disturbed and when they achieve phased bond release. There has been considerable discussion about whether this is a valid measure of contemporaneous reclamation. This discussion has taken place both within OSM and with the various State Regulatory Authorities. The results discussed below represent the best effort under the guidance of REG-8 at assessing contemporaneous reclamation.

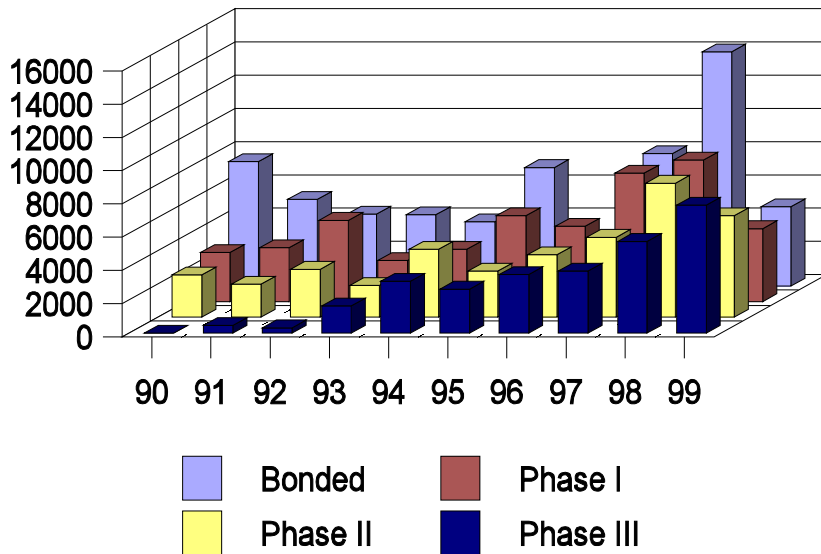
Indiana does not have information available concerning affected acreage by year. The State has reported bonded acres which is a rough approximation of the affected acreage. Indiana has also reported acres of bond released each year, though the figures do not necessarily correspond to the year in which they were affected. The reported data appear in the table and figure following.

From a review of available information, it appears that Indiana is administering its approved program in a manner which assures that reclamation activities remain reasonably contemporaneous with the mining operations.

Bonding and Phased Bond Release Activity During the 1990's

Year	Bonded	Phase I	Phase II	Phase III
1990	7,501	2,966	2,549	0
1991	5,219	3,250	2,006	459
1992	4,335	4,908	2,898	298
1993	4,292	2,481	1,915	1,619
1994	3,833	3,148	4,095	3,112
1995	7,150	5,172	2,778	2,636
1996	2,451	4,548	3,777	3,517
1997	7981	7734	4814	3725
1998	14,107	8549	8080	5500
1999	4780	4403	6110	7706

Indiana Bond and Phased Releases 1990-1999



VI. OSM Assistance

The primary mode of OSM assistance to Indiana is through grant funding. Table 9 indicates the amount of grant funding to Indiana for operation of the regulatory program. OSM provides 50% of the funding necessary for the regulatory program and 100% of funding necessary for the Abandoned Mine Land program in Indiana.

Additionally, assistance is provided in several other ways which include:

Technical training courses are offered by OSM throughout the year which address technical aspects of mining and reclamation. These courses are provided for OSM and State participants as well as industry and others on a space available basis.

OSM provides the Technical Information Processing System including a local work station and software for State use. User training and support is also provided. Indiana uses the system for a variety of tasks related to permit application processing and other technical or engineering evaluations. The technical staff continues to work with the State to develop and implement an electronic permitting program.

Informal discussions occur between OSM and State management and staff that are the product of a good working relationship. Informal assistance is provided regarding field or implementation issues on a continuous basis.

The director of the IFO sits on the board of the Indiana Society for Mining and Reclamation. This is a diverse group which includes membership from OSM, the DOR, Department of Commerce, Citizens, Industry, Academia and Power Industries. The groups focus is to identify topics of interest to all parties and to sponsor a technology transfer session each year. These technology transfer sessions are well advertised and attended by participants from all factions of the public and private sector.

The IFO has participated with Indiana on a prime farmland team which is focused on addressing the technical aspects of prime farmland restoration. Also a prime farmland tour was given this year.

The IFO works closely with the Steering Committee for the Improvement of the South Fork of the Patoka River. This group functions and is partially funded under the Clean Streams Initiative.

VII. General Oversight Topic Reviews

In addition to the offsite impact and land restoration reviews, the IFO conducted oversight activities in the program areas listed below. Copies of oversight documents relating to these topics may be obtained at the IFO office or by requesting specific reports by mail at the following address:

Office of Surface Mining Reclamation and Enforcement
Indianapolis Field Office
575 North Pennsylvania, Room 301
Indianapolis, Indiana 46204

The IFO can also be contacted by E-mail at IFOMAIL@indgw.osmre.gov.

Permit Application Review Findings: This oversight element was included in the EY 2000 Indiana/OSM Performance Agreement because the Director of OSM established “permit findings” as a national review topic to be addressed in EY 2000 or 2001. This mandate came about because of a 1999 court decision (not involving Indiana) which raised concerns about the adequacy of regulatory authority permit review findings in all primacy states, and the documentation supporting those findings. Adequacy of permit findings had not been identified as a problem in Indiana. A State’s permit decision itself was not a subject of evaluation, just the adequacy of the findings upon which the decision was based.

The results of IFO’s oversight evaluation in EY 2000 was that the Indiana Regulatory Authority’s permit application review findings were in accord with the State’s approved program. Further, the documentation supporting those findings, was found to be adequate for sound permit application decision making.

Applicant Violator System Review: During this evaluation year OSM’s Applicant/Violator System (AVS) program personnel conducted a study and determined that there were some problems nationwide with timely AVS data entry on the part of states. Once those problems were brought to the states’ attention they were quickly resolved. The results of that study, however, highlighted the need for additional data entry studies. This study focused on newly issued, renewed, or transferred permits, and bond forfeiture actions. Once again states were called upon for information to resolve the issue. In both instances the Indiana IDOR responded promptly in helping resolve this matter. This cooperativeness is to the IDOR credit.

Complete Inspections: The IFO conducted complete mine site evaluations in accordance with the approved Performance Agreement and Work Plan established between the DOR

and the IFO. Complete inspections were conducted on 24 mines and identified 11 violations at 9 mines which had adverse on-the-ground impacts (37.5% of the sample reviewed during the EY). All violations noted were addressed appropriately by the DOR.

The Violations identified during this evaluation are typical of those that occur during active mining and reclamation operations. The nature and extent of the violations and the fact that the violations have been addressed to require that they be eliminated should result in their not adversely impacting the desired end results. The IFO recommends that the DOR make an effort to reduce the numbers of violations that have adverse on-the-ground impacts, thereby reducing the possibility of their adversely affecting the desired end results.

AMD Sites: Indiana Has identified 3 sites which meet the criteria of the OSM AMD initiative. As part of the Performance Agreement for EY 2001, The State will Gather the required information for submission

30 CFR Part 732: During the evaluation, Indiana was notified of several unresolved 30 CFR 732 issues. Indiana has submitted some proposed rule changes to address these, and has provided a tentative schedule for submission of the remaining. This issue will be monitored during EY 2001.

Groundwater Monitoring: The IDOR and the IFO performance agreement for EY 2000, required that a joint team conduct an evaluation to assure the mine inspectors are adequately reviewing all ground water monitoring data during complete inspections. It was later agreed to change the review to development of guidance and procedures to be used by all inspectors in reviewing ground water monitoring data during complete inspections. This was later described in the approved workplan as the development of a system and procedure to be used by the IDOR to assure the timely collecting, reporting and review of ground water monitoring information necessary for informed decision making and the utilization and maintenance of a ground water database.

The team made six recommendations to IDOR that should improve and enhance the review of groundwater monitoring. Indiana has adopted some of these and has targeted mid-summer of 2001 for implementation.

AML: The IFO conducted a routine oversight review of completed AML reclamation during EY 2000. The purpose of this review was to evaluate the long-term success of completed reclamation that results in a net benefit to society.

The IFO selected a representative sample of reclamation projects which had been completed between September 30, 1990 and October 1, 1995 for review. The IFO made site visits to evaluate the environmental stability of the reclamation, and whether the

project met program goals in a cost-effective way, which was a benefit to society.

The findings of this oversight evaluation activity were that reclamation performed by the Indiana AML Program (1) was overall successfully accomplished; (2) was cost effective; (3) met program goals; and (4) resulted in a net benefit to society. These findings lead to the conclusion that the potential for long-term success of the Indiana AML Program's reclamation efforts is very good.

APPENDIX A:

These tables present data pertinent to mining operations and State and Federal regulatory activities within Indiana. They also summarize funding provided by OSM and Indiana staffing. Unless otherwise specified, the reporting period for the data contained in all tables is the same as the evaluation year . Additional data used by OSM in its evaluation of Indiana's performance is available for review in the evaluation files maintained by the Indianapolis OSM Office.

APPENDIX B

Indiana Department of Natural Resources, Division of Reclamation Comments concerning the Evaluation Report along with the Indianapolis Field Office Disposition of the comments.

Presented below is the Field Office Director's disposition of the State's comments.

Disposition of Comments:

For Indiana comments, editorial changes were made for comments 1-16, and 19. Because comment number 18 is pertinent to the budget process rather than the oversight process, no changes were made regarding this comment. Indiana's comments did not contain a number 17.