

***OFFICE OF SURFACE MINING***

**2005 Annual Summary Report**

**for the**

**Regulatory Program**

**Administered by the Mid-Continent  
Region**

**for**

**Missouri**

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Alton Field Division  
Office of Surface Mining

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Cover page is a photo of reclaimed land at Continental Coal, Inc., Mary Jane #1 Mine.

## **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. The Act also provides authority for OSM to implement a Federal regulatory program in the States without approved regulatory programs. OSM implemented a substitution of Federal Enforcement of the Missouri Regulatory Program on August 22, 2003, as a result of the State Legislature's decision not to appropriate sufficient funds to operate the Title V Portion of the state's mining program.

### **Background on the "Substitution of Federal Enforcement" of the Missouri Title V Program.**

On June 19, 2003, the Missouri Land Reclamation Program (MLRP) informed OSM that the Missouri Legislature had made severe budget and staffing cuts in the mining program. Subsequently, the MLRP presented information that indicated Missouri would only staff and fund the current bond forfeiture reclamation activities of the Missouri regulatory program and that the permitting, inspection and enforcement, and bond release activities would cease to exist on July 18, 2003. On August 4, 2003, the Director notified the Governor of Missouri of pending 30 CFR Part 733 actions, including immediate substitution of Federal enforcement for inspection, enforcement, permitting, and bonding activities.

Because the Missouri Legislature appropriated funds only for the bond forfeiture reclamation activities of the coal mining program, we informed Missouri of the possible ramifications of funding and staffing reductions on both the regulatory and abandoned mine land reclamation (AML) programs. On August 23, 2003, OSM awarded a reduced Regulatory Grant for \$84,633.00 to Missouri for fiscal year (FY) 2003. The grant period was September 30, 2003, to June 30, 2004, and was limited to bond forfeiture activities. OSM did not award Missouri's FY 2003 AML Grant, which would have been in the amount \$1,671,837.00

The performance period for the non-emergency administrative, emergency administrative, and emergency project cost categories of Missouri's FY 2002 AML Grant was extended until June 30, 2004. The extension included additional funding of \$50,000.00 for the emergency project cost category. Through July 1, 2004, additional emergency funds were awarded to the MLRP in the amount of \$180,000.00

On May 25, 2004, OSM notified the MLRP that OSM would agree to the Federal substitution plan proposed by the Missouri Land Reclamation Commission (MLRC) for one more year, and would continue to substitute Federal Inspection and Enforcement for all but the forfeiture program for the period July 1, 2004, through June 30, 2005. On June 24, 2004, OSM awarded the FY 2004 Regulatory Grant to the MLRP in the amount of \$84,633.00, which was the same level of funding as the previous year. OSM continued to fund the Missouri AML Emergency Program, but did not provide any other AML funding. In January 2005, OSM redistributed the

FY 2003 and FY 2004 monies earmarked for the Missouri AML Program to the other FY 2005 AML State recipients. Section VI. B. describes the most recent actions.

This report contains summary information regarding the Missouri Federal Program and the effectiveness of the Federal Program in meeting the applicable purposes of SMCRA as specified in section 102. The report covers the period of July 1, 2004, to June 30, 2005. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at OSM's Mid-Continent Regional Office (MCR) at 501 Belle Street, Alton, Illinois, 62002.

The following acronyms are used in this report:

AMD	Acid Mine Drainage
AML	Abandoned Mine Land
EY	Evaluation Year
FY	Fiscal Year
GIS	Geographic Information System
MCR	Mid-Continent Region
MLRP	Missouri Land Reclamation Program
MLRC	Missouri Land Reclamation Commission
NRDAR	National Resource Damage Assessment and Restoration
PSD	Program Support Division
OSM	Office of Surface Mining
SMCRA	Surface Mining Control and Reclamation Act of 1977
USGS	United States Geological Survey

## **II. OVERVIEW OF THE MISSOURI COAL MINING INDUSTRY**

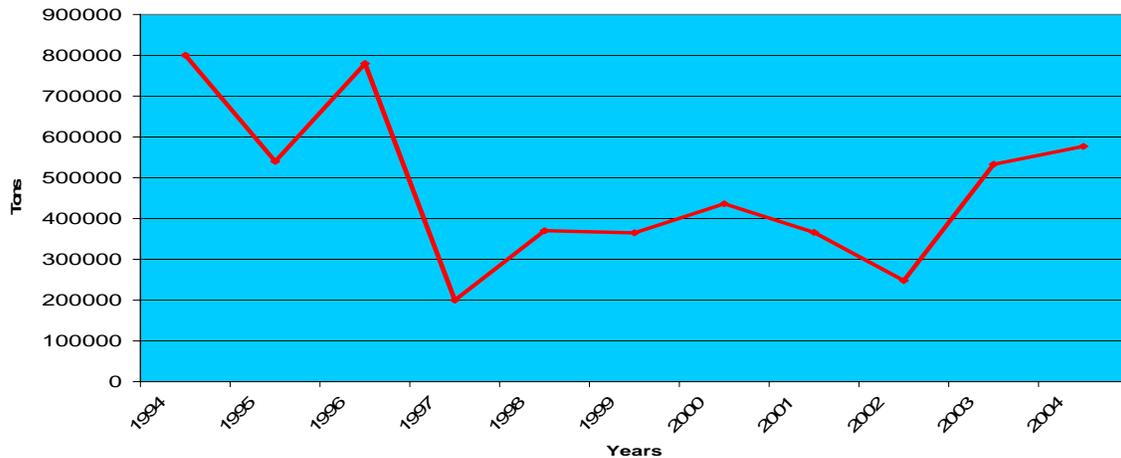
Missouri's coal ranges from lignite to high volatile A bituminous. The demonstrated coal reserve base is estimated to be six billion tons, or 1.26 percent of the coal reserves in the United States. The coal-bearing areas cover about 23,000 square miles, or 33 percent of the State. Twelve of the 20 coal seams have been actively mined. The coal has a high heat value, averaging 22 million British Thermal Units per short ton. The sulfur content of 95 percent of Missouri's reserves is relatively high, greater than 2.5 pounds of sulfur per million BTU and averaging four percent by weight. Economics generally limit production to coal seams greater than 28 inches thick. Coal production is currently confined to the southwest portion of the State.

Coal deposits were first mined in Missouri in the late 1840's, giving the state the distinction of being the first state west of the Mississippi River to produce coal for commercial use. Most of the early coal mines in Missouri were underground. Surface mining began in the mid-1930, and has accounted for virtually all the coal produced in the State since the 1960's. Approximately 67,000 acres were affected by coal mining in 48 Missouri counties before enactment of the SMCRA.

Missouri's coal production has declined since reaching peak production of nearly seven million tons in 1984. A sharp decline to 627,774 tons occurred in 1993, down from the 1992 production

level of 2,908,012 tons, after the State's largest operator ceased production in early 1993. Annual production has fluctuated over the last decade, but production has stabilized the last few years with currently active mines producing 533,444 tons in calendar year 2003 and 577,307 tons in calendar year 2004. Missouri supplies coal to the Midwestern market for blending with western coal. The current primary use of the coal is for power generation.

**Missouri Coal Production 1994 - 2004**



### **III. OVERVIEW OF PUBLIC PARTICIPATION IN THE PROGRAM**

The MLRP and OSM consider the bi-monthly MLRC public meetings to be the principal forum for participation from industry, landowners, citizen groups, and other interested parties.

In July 2004, the OSM Director conducted a press conference at the United States Geological Survey (USGS) building in Columbia, Missouri to discuss re-authorization of the AML program.

### **IV. OSM TECHNICAL ASSISTANCE**

OSM provides technical assistance and technology support to state AML and regulatory programs at the individual state level on project specific efforts, and at the national level in the form of national meeting, forums and national initiatives. The MCR provides direct technical assistance in project and problem investigation, design and analysis, permitting assistance, developing technical guidelines and training and support. The MCR works with the national Technical Innovation and Professional Services Program to deliver state-of-the-art computer hardware, software, training and systems support for the state AML and regulatory programs. MCR also works on the development of regional and national forums, meetings and initiatives to ensure that interests and needs of individual states are considered and included in these events. During 2004, MCR initiated a regional Technology Transfer Team on which each state has a representative. Missouri was contacted but did not participate because of lack of funding.

During evaluation year (EY) 2005, OSM provided Missouri with the following assistance:

**A. Title IV Assistance**

**Jasper County, Missouri, Mineshafts Geographic Information System (GIS)** – Missouri asked the MCR’s Program Support Division (PSD) to assist with creating a GIS layer of abandoned mine shafts in Jasper County, Missouri. PSD identified the information needed to complete the GIS database and asked the MLRP to provide information concerning mine shafts that are closed by the State. When all necessary information is compiled into a database file, PSD staff will construct a GIS project file using a GIS software.

**Old Bevier Wetland Evaluation** – PSD staff assisted the Missouri AML Program by designing a passive treatment system for an underground acid mine drainage (AMD) discharge at the Old Bevier AML Project site. Missouri completed construction at the site in August 2001 and requested PSD to implement a monitoring program to determine project success and to help decide if the technology had application at other AMD discharge sites. In January 2004, Missouri requested assistance with stabilizing site water levels and with developing a simple monitoring tool so that project control can be turned over to the landowner for future management.



PSD staff visited the site in June 2004, and conducted a round of water sampling and some maintenance work around the wetland. PSD and MLRP have continued to monitor the site. Technical papers concerning this project are being prepared for presentation at conferences to aid OSM’s technology transfer efforts.

**Sugar Creek USGS Study** – PSD is assisting Missouri and the USGS in a study of the AMD sources in the Sugar Creek Watershed in Randolph County, Missouri. PSD will utilize water analysis data generated by the USGS to develop reclamation alternatives and costs for each AMD source in the Sugar Creek drainage. These reports will be used by state regulators in preparation of Total Maximum Daily Load estimates and to support state and Federal efforts in AMD remediation. The final round of water sample collection and field analyses was conducted for this project during August, 2004. USGS personnel are summarizing data that will be provided to OSM.

**Tri-State Mining Natural Resource Damage Assessment and Restoration (NRDAR) Partnership Assistance** – PSD staff members are providing ongoing technical assistance to a multi-state and multi-agency partnership involved in a NRDAR for the Kansas, Missouri, and Oklahoma Superfund mining sites under the Comprehensive Environmental Response Liability and Compensation Act. On April 11, 2005, MCR staff attended the first Tri-State District Forum. This regional technology transfer event covered technical, administrative, and economic issues related to the multi-agency effort to assist the States of Kansas, Missouri, and Oklahoma, as well as 10 tribes, to reduce the environmental and human health hazards associated with 100 years of lead-zinc mining.

## **B. Title V Assistance**

**Tiger Mine Surety Reclamation** – On October 12, 2004, PSD received a request from the MLRP to evaluate a proposal from the surety company at the Tiger Mine in Bates County, Missouri, to cease required annual testing of stream and ground water for solutes leached from buried coal combustion by-products. The OSM report was completed on March 31, 2005.

## **V. SUCCESS IN ACHIEVING THE PURPOSES OF SMCRA**

To further the concept of reporting end results under Title V of SMCRA, OSM collects information for a national perspective in terms of the number and extent of observed off-site impacts, the number and percentage of inspectable units free of off-site impacts, and the number of acres that have been mined and reclaimed and which meet the bond release requirements and have been released for the various phases of reclamation. This information for EY 2005 is presented below.

### **A. Off-site Impacts**

One of the intents of SMCRA is to prevent adverse affects to the public and environmental resources adjacent to a permitted surface coal mining operation. During the EY, OSM had responsibilities for identifying off-site impacts on active sites through its mandated federal inspections, and identifying off-site impacts through oversight activities on surety and bond forfeiture sites administered by the State. The goal is for each inspectable unit to have no off-site impacts.

An off-site impact is defined as anything resulting from a surface coal mining or reclamation activity or operation that causes a negative effect on resources (people, land, water, structures). The applicable State program must regulate or control the mining or reclamation activity or result of the activity causing an off-site impact. In addition, the impact on the resource must be substantiated as being related to a mining and reclamation activity and must be outside the area authorized by the permit for conducting mining and reclamation activities.

Because the Missouri State Legislature provided only partial funding for the State's Title V program the last two years, OSM retained responsibility for enforcing the State program on 14 active mine sites during EY 2005, while the MLRP retained inspection responsibilities on six surety reclamation units, fifteen bond forfeiture units, and three units where the bond was declared forfeited but had not been collected. OSM did not identify any off-site impacts at the 14 active sites during the mandated monthly inspections the agency conducted in EY 2005.

In addition to the mandated inspections at active sites, OSM conducted 11 oversight inspections at bond forfeiture and surety reclamation sites, and checked for off-site

impacts during each inspection. State inspection and enforcement files were also reviewed to identify the existence of off-site impacts. Thirteen off-site impacts were identified at eight of Missouri's 38 inspectable units (Table 4). For the 23 inspectable units considered to be active, a group including active units, surety reclamation units, and the three units where bond was forfeited but not collected, a total of four off-site impacts existed at three of the six surety reclamation sites. Twenty, or nearly 87 percent, of the active inspectable units were free of off-site impacts. Nine off-site impacts were identified at five of the 15 inspectable units where bond had been forfeited and collected. Ten, or about 67 percent, of the forfeited sites were free of off-site impacts. In total, 30, or about 79 percent, of Missouri's inspectable units were found to be free of off-site impacts. The table below summarizes this information.

Mine Site Type	# Units	# Units w/o Offsite Impacts	# Units with Offsite Impacts	% Units w/o Offsite Impacts	# Offsite Impacts
Non-forfeited	14	14	0	100	0
Surety Reclamation	6	3	3	50	4
Bond Forfeited	15	10	5	67	9
Bond Forfeited but not collected	3	3	0	100	0
<b>Totals:</b>	38	30	8	79	13

The types of impacts recorded included one land stability impact, one encroachment impact, and 11 hydrology impacts. Land and water resources were the resources most often affected by the off-site impacts. A majority of the off-site impacts were classified as moderate. Two impacts, both on bond forfeiture sites, were considered to have major effects on land resources. Nine of the impacts were identified prior to EY 2005. One of these previously identified off-site impacts was eliminated before the end of the evaluation period. In total, one less off-site impact existed at the end of EY 2005 than existed at the start of the review period.

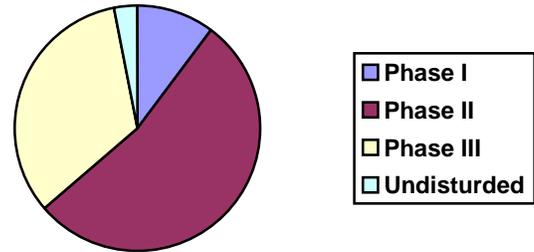
The objective of this measurement is that the MLRP and OSM direct efforts to decrease the occurrence of off-site impacts. Both the State and OSM are working to achieve this objective, and it is addressed in OSM's Performance Agreement with the State. Timely forfeiture and surety reclamation will eliminate many of the off-site impacts and prevent new impacts from occurring.

## **B. Reclamation Success - Bond Releases**

Along with conducting enforcement of the approved State Program at active mine sites, OSM also processed bond release requests and performed bond release inspections. OSM developed a power-point presentation for each of the 18 bond liability release applications it processed in EY 2005. Each presentation was then forwarded to the State for presentation to the MLRC at one of the regularly scheduled Commission meetings. Because all of the bonds were payable to the State and not OSM, only the MLRC had the authority to release monetary liability on the land being released.

Totals by bond Phase for the acreage released in EY 2005 were: Phase I = 462.2 acres, Phase II = 2,409.0 acres, Phase III = 1,507.5 acres, and Complete/Undisturbed = 142.1 acres (Table 5). Five active inspectable units were completely released from bond and removed from the Inspectable Units list during EY 2005. In addition, the State released 81.0 acres of Phase III bond and 18.0 acres of Complete/Undisturbed at a surety reclamation site (Tables 5 and 7). OSM did not issue any new permits in EY 2005, but 80.0 additional acres were placed under bond at a previously permitted mine. All of these actions resulted in a net decrease of 1668.6 bonded acres in EY 2005. The State also released liability on 605.0 acres at bond forfeiture sites, resulting in removal of three permits from the Inspectable Units list.

**OSM Bond Releases EY 2005**



The following table identifies the bond release requests that were processed by OSM and the bond amount released during EY 2005.

**OSM BOND RELEASES COMPLETED WITH LIABILITY RELEASE APPROVED**

Mine Name	Permit No.	Acres Released			Complete Undisturb	Dollars Released	Date Released by MLRC
		Phase I	Phase II	Phase III			
Nemo	1984-16			7.0		\$3,500	09/23/04
Nemo	1983-12			32.0		\$16,000	09/23/04
Nemo	1984-11		4.0	126.5		\$63,250	09/23/04
Nemo	1986-12		9.0	108.0		\$54,000	09/23/04
Nemo	1986-07		9.0	74.0		\$37,000	09/23/04
Nemo	1982-17			2.5		\$1,250	09/23/04
Nemo	1982-29			6.5		\$3,250	09/23/04
Nemo	1983-17		27.5	354.5		\$177,250	11/17/04
Nemo	1982-01		265.5	635.0		\$251,250	11/17/04
Nemo	1988-01		45.0	45.0		\$22,500	01/27/05
Nemo	1982-01	5.4	41.4		0.6	\$12,300	01/27/05
Nemo	1984-08	51.9	51.9		20.1	\$154,050	01/27/05
Panther Creek	1999-01	282.0			22.5	\$643,250	01/27/05
Prairie Hill	1985-06	38.6	904.5		63.4	\$235,700	03/24/05
Prairie Hill	1985-10	10.8	110.0		27.8	\$91,100	05/26/05
Nemo	1983-17	28.5	28.5	29.0	4.0	\$81,500	05/26/05
Nemo	1982-26	40.0	87.5	87.5	3.0	\$131,250	05/26/05
Prairie Hill	1986-01	5.0	825.2		0.7	\$11,750	05/26/05
<b>Totals:</b>		462.2	2409.0	1507.5	142.1	\$1,990,150	

### **C. Inspections**

OSM was responsible for conducting mandated inspections at 22 inspectable units at the beginning of EY 2005. During the evaluation year, bond was forfeited at three units and five units achieved total bond release, reducing the number of units under OSM's responsibility to 14 at the end of the year. OSM achieved the mandated number of monthly inspections by conducting a total of 66 complete and 139 partial inspections at the active units during EY 2005. OSM also performed 11 oversight inspections at bond forfeiture and surety reclamation mine sites. (See Table 10)

### **D. Permitting Activities in Missouri**

During the period July 1, 2004, to June 30, 2005, OSM reviewed and approved 41 permit revisions for Missouri mines, including 18 revision requests received in EY 2004 and 23 requests received in EY 2005. Two of the 25 revision requests received in EY 2005 were still under review at the end of the evaluation year. The majority of the revisions concerned either changes in revegetation plans or changes of post-mining land uses. Water diversion and rock channel designs also accounted for a significant number of revisions

One new permit application was received in EY 2005. Review of the application was nearing completion at the end of EY 2005, and permit issuance was anticipated to occur early in EY 2006.

The PSD also reviewed and/or processed a number of other items. Included among these were blaster certifications, as-built designs, bonding instruments, revegetation productivity data, and annual reclamation status reports.

## **VI. OUTSTANDING ITEMS**

### **A. Transfer of dedicated funds to the Missouri General Fund**

In January 2004, OSM sent a letter to the Governor of Missouri expressing our concern about the solvency of two coal mine reclamation funds established under the Missouri regulatory program and recent State legislation that transferred funds from those accounts. One of the funds contains moneys for Missouri's alternative bonding system and the other fund contains program fees and monies collected from bond forfeiture. The approved Missouri program specifies that interest earned by both funds is to be considered part of the funds; however, State legislation enacted in June 2003, transferred two years of interest earnings, amounting to \$256,522, from the two funds. Missouri was informed that the transfer of funds was not in accordance with the SMCRA and its implementing regulations. OSM requested that the Governor take the measures necessary to replace the monies transferred from the coal mine reclamation funds.

In April 2005, OSM sent a letter to the new Governor-elect reiterating that transfer of funds from the two coal mine reclamation funds was not in accordance with the SMCRA, and asking that the interest owed to these funds be repaid. The Governor responded in a letter dated May 27, 2005, stating the use of interest from the bond pool funds occurred under a previous administration. This issue was discussed with OSM's solicitor and an agreement was reached that it is very unlikely the Missouri Legislature will return the interest. Therefore, OSM will not pursue return of the interest to the funds.

## **B. Future of the MLRP**

On May 26, 2005, the MCR Regional Director and Alton Field Division Chief met with the Deputy Division Director for the Missouri Department of Natural Resources, Air and Land Protection Division, in Jefferson City Missouri. The focus of the meeting was the steps and procedures necessary for the MLRP to take to have the substitution of OSM's Federal Program lifted and full primacy restored in Missouri. Funding of the program was an important topic, and procedural, programmatic and staffing issues were discussed as well. On May 27, 2005, the Governor notified OSM that Missouri intends to fully fund the Coal Mine Regulatory Program.

As a result of this and other meetings, OSM awarded a cooperative agreement to the Missouri Department of Natural Resources on June 28, 2005. This agreement, covering the six month period from July 1, 2005, to December 31, 2005, facilitates start-up activities for the Missouri Coal Mine Regulatory Program, including staff hiring and training and other actions necessary to resume full regulatory program authority.

OSM also awarded Missouri an FY 2005 AML Grant on June 28, 2005. This grant was funded initially for the period July 1, 2005, to June 30, 2006, to facilitate start-up activities for the Missouri AML Program. The initial grant covered AML administration, emergency administration, and emergency projects. OSM will award Missouri's FY 2005 AML construction grant if Missouri completes all the steps necessary to resume full SMCRA regulatory authority and OSM approves the resumption.

The Missouri Land Reclamation Commission sent a letter to Missouri coal operators and consultants noting the essence of the cooperative agreement. The Commission noted that the coal program will be a new program with a much smaller and different staff than had previously been in place. The letter also noted some of the working relationships that will be taking place during the transition period.

## **APPENDIX A: TABULAR SUMMARY OF CORE DATA TO CHARACTERIZE THE FEDERAL TEMPORARY OPERATION OF THE MISSOURI PROGRAM**

These tables present data pertinent to mining operations and Federal regulatory activities within Missouri. Unless otherwise specified, the reporting period for the data contained in all tables is the same as the evaluation year. Additional data used by the Alton Field Division in its evaluation of performance is available for review in the evaluation files maintained by the Mid-Continent Regional OSM Office in Alton, Illinois.