

Office of Surface Mining

Twenty-Third Annual Evaluation Summary Report

for the

Regulatory and Abandoned Mine Land Reclamation Programs

Administered by the Commonwealth

of

Kentucky

for

Evaluation Year 2005

(July 1, 2004, to June 30, 2005)

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I. Introduction

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining (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 approved Kentucky regulatory program and the effectiveness of the program in meeting the applicable purposes of SMCRA as specified in Section 102. This 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 Evaluation Year (EY) are available for review and copying at the OSM Lexington Field Office (LFO).

The format for this report is established by OSM Directive REG-8. REG-8 enables OSM and states to take innovative, results-oriented evaluation approaches tailored to individual State programs and stakeholder interests and needs. During the EY, OSM and the states develop state-specific oversight plans or performance agreements to identify specific program areas and evaluation methodologies directed toward end-results measurement.

The oversight process provides two national measurements of end results: (1) the number and degree of off-site impacts resulting from mining and (2) the number of acres meeting all reclamation requirements as documented by different phases of bond release. The revised process allows OSM to focus oversight on those aspects of the State program that both OSM and the State determine to be most important.

The following list of acronyms is used in this report:

A&E	Administration and Enforcement
ACSI	Appalachian Clean Streams Initiative
AMD	Acid Mine Drainage
AML	Abandoned Mine Land
AMLIS	Abandoned Mine Land Inventory System
AMLR	Abandoned Mine Land Reclamation
BMP	Best Management Practices
CO	Cessation Order
COE	U.S. Army Corps of Engineers
CY	Calendar Year
DAML	Division of Abandoned Mine Lands

DMS	Document Management System
DNR	Department for Natural Resources
DSMRE	Department for Surface Mining Reclamation and Enforcement
eCRI	Electronic Citizens Request for Inspection
EIS	Environmental Impact Statement
eMIR	Electronic Mine Inspection Report
EPPC	Environmental and Public Protection Cabinet
EY	Evaluation Year
FBMS	Financial and Business Management System
FCR	Fine Coal Refuse
FOD	Field Office Director
FY	Fiscal Year
GIS	Geographic Information System
KAR	Kentucky Administrative Regulation
LFO	Lexington Field Office
LTT	Long-Term Treatment
MSHA	Mine Safety and Health Administration
NC	Notice of Non-Compliance
NRC	National Research Council
OMSL	Office of Mine Safety and Licensing
OSM	Office of Surface Mining
PHC	Probable Hydrologic Consequences
RA	Regulatory Authority
RAM	Reclamation Advisory Memorandum
RD	Regional Director
SMCRA	Surface Mining Control and Reclamation Act of 1977
SMIS	Surface Mining Information System
SOAP	Small Operator Assistance Program
TDN	Ten-Day Notice
UK	University of Kentucky
USFWS	U.S. Fish and Wildlife Service

II. Overview of the Kentucky Coal Mining Industry

Kentucky is the third largest coal-producing State in the nation, with an annual production averaging over 160 million short tons during the 1990's. Kentucky was the nation's leading coal producer until 1988, holding that position for over a decade until the production from Wyoming and West Virginia exceeded that in Kentucky. Kentucky's coal production has steadily decreased from the late 1990's through the end of this EY. (See Table 1.)

Nearly every type of coal mining and reclamation practice is found due to the differing coal bearing regions within the State and the availability of coal. Kentucky's coal reserve base, the fifth largest in the nation, consists entirely of bituminous coal. Two major coal provinces in Kentucky are separated by a large geologic uplift called the "Cincinnati Arch." The Eastern Kentucky Coalfield is part of the Appalachian Coal Province where underground, contour, and mountaintop mining occurs. The Western Kentucky Coalfield is part of the Interior Coal Province (Illinois Coal Basin) where area and underground mining occurs. The Jackson Purchase Lignite Coalfield underlies the eight most western counties in Kentucky. This potential resource has not been assessed, and no current lignite mining is occurring.

Since 1979, coal produced from underground mines has steadily increased over coal produced from surface mines. Underground mines account for approximately two-thirds of the acreage permitted in the State. The high percentage of acreage is due to the State requirement that the shadow area overlying the underground works must be permitted. However, most underground mines actually disturbed very little surface acreage. Of the total disturbed acreage from coal mining in Kentucky (245,093 acres), only 27,298 acres (or approximately ten percent) are attributed to underground mines. A review of underground mines in Kentucky indicates the following changes in size during the last four EY's as follows:

Underground Mines Permitted Acreage	EY 2002	EY 2003	*EY 2004	EY 2005
Less than 20 acres	1%	1%	1%	1%
20-99 acres	6%	5%	5%	4%
100 acres or more	93%	94%	94%	95%
Underground Mine Surface Disturbance Acreage	EY 2002	EY 2003	*EY 2004	EY 2005
Less than 20 acres	70%	69%	69%	70%
20-99 acres	24%	24%	24%	24%
100 acres or more	6%	7%	7%	6%

Surface mines and associated facilities (haul roads and preparation plants, etc.) account for approximately one-quarter of the acreage permitted in the State. A review of the permitted acreage for surface mines and associated facilities indicates a minimum change in size.

Permitted Acreage	EY 2002	EY 2003	*EY 2004	EY 2005
Less than 20 acres	13%	13%	14%	14%
20-99 acres	23%	22%	23%	23%
100 acres or more	64%	65%	63%	63%

The number of surface mines that are greater than 100 acres has increased significantly over the last 12 evaluation periods in Kentucky. OSM's tenth annual report stated that 42 percent of the surface mines were larger than 100 acres. The fifteenth annual report reported that 55 percent of the surface mines were larger than 100 acres. As of June 30, 2005, the data shows that nearly two thirds of the surface mines are larger than 100 acres. The following table further categorizes the number of surface mines by size.

Permitted Acreage	Number of Surface Mines		Percent of Total Surface Mines	
	*EY 2004	EY 2005	*EY 2004	EY 2005
100-250	234	230	20	20
250-500	223	213	19	18
500-1,000	181	180	15	15
>1,000	111	107	9	9

*The EY2004 totals were incorrect in the EY 2004 Annual Report. The correct numbers are reflected in this report.

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

A team of LFO and Department for Natural Resources (DNR) personnel was formed to develop oversight procedures and special studies for EY 2005. The EY 2005 Performance Agreement was finalized and signed by DNR on September 14, 2004.

On August 17, 2004, LFO solicited input into the types of topics and studies to protect the public and the environment from the impacts from coal mining as required by the Office of Surface Mining National Directive REG-8. LFO received one set of comments from the U.S. Fish and Wildlife Service (USFWS). DNR continues to make blasting practices and the prevention of associated off-site impacts top priorities. During this EY, DNR continued placing special emphasis on the prevention of blackwater discharges.

When SMCRA was enacted, it created many avenues for citizens' involvement. Thus, individual citizens have a statutory role in practically every phase of the surface mining program, from permit issuance to bond release. Since SMCRA was enacted in 1977, coalfield citizens have used those rights to help shape virtually all of the policies and programs that govern surface coal mining and reclamation in America.

On June 16, 2005, OSM published in the Federal Register a Notice of Intent that it plans to prepare an Environmental Impact Statement (EIS) to analyze the effects of possibly revising regulations pertaining to stream buffer zones and excess spoil generation and disposal. On January 7, 2004, proposed changes to regulations regarding excess spoil disposal, the stream buffer zone, and corresponding changes to the stream diversion regulations were published in the Federal Register. OSM subsequently determined that an EIS would be an appropriate mechanism to fully assess alternative approaches to the proposed actions and their potential impacts. The Notice of Intent provides for a 60-day public comment period. Public hearings have been requested by the public.

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

By Executive Orders dated December 23, 2003, and July 9, 2004, the Governor eliminated the Natural Resources and Environmental Protection Cabinet and created the Environmental and Public Protection Cabinet (EPPC). The Executive Orders also

eliminated the Department for Surface Mining Reclamation and Enforcement (DSMRE) and transferred the three Divisions within DSMRE into DNR. Also under the reorganization, the Department of Mines and Minerals was re-designated the Office of Mine Safety and Licensing (OMSL) and placed in DNR. During the 2005 Kentucky General Assembly, legislation was promulgated that ratified the reorganization.

DNR is the Regulatory Authority (RA) responsible for the regulation of coal mining of Federal and non-Federal lands in Kentucky. DNR is headed by Commissioner Susan C. Bush. The three Division Directors are as follows: Division of Mine Permits, Paul Ehret; Division of Mine Reclamation and Enforcement, Paul Rothman; and the Division of Abandoned Mine Lands (DAML), Steve Hohmann. The Division of Mine Reclamation and Enforcement has five regional offices located in Madisonville, Middlesboro, Prestonsburg, Pikeville, and London.

The Fiscal Year (FY) 2005 Administration and Enforcement (A&E) Grant was in the amount of \$11,286,762 (Federal funds) and supports 334.10 positions. Of this total, \$1,026,605 is for Federal lands. OSM funds 83 positions in DAML with a grant of \$15,963,345 for FY 2005. The Small Operator Assistance Program (SOAP) was awarded grant funds of \$733,844 for FY 2005.

There are three major coal associations in Kentucky. They are the Kentucky Coal Association, the Western Kentucky Coal Association, and the Coal Operators and Associates, Inc.

Kentucky has two citizen organizations that are very active in coal mining issues. They are Kentuckians for the Commonwealth, Teri Blanton, Chairperson; and the Kentucky Resources Council, Inc., Thomas FitzGerald, Director. In addition, the Kentucky River Keeper, Inc., and the Kentucky Waterways Alliance, Inc., are presently active with the issues regarding the U.S. Army Corps of Engineer's (COE) Nationwide Permit #21 under Section 404 of the Clean Water Act. The Heartwood citizen's group has also been active on issues concerning mining operations on U.S. Forest Service property.

DNR is maintaining an effective regulatory program for permitting, inspection, and enforcement of surface coal mining and reclamation operations.

LFO received an above average number of AML complaints during the EY. OSM investigated 194 AML emergency complaints during the EY.

The major accomplishments/innovations for the EY are as follows:

A. Regulatory

1. Blackwater

In April 2005, the Secretary of EPPC published the "Report of the Blackwater Task Force." This report was the cumulative findings of a task force of representatives from the mining industry, environmental groups, and academia appointed by the Secretary of EPPC in January 2004. The goal of the task force was to identify ways to minimize the number and severity of blackwater spills in Kentucky. The group recommended several best management practices (BMP) aimed at minimizing, reducing, or eliminating the occurrence of blackwater spills. Among the recommendations were:

- Design and maintenance criteria for high pressure pipelines used to transport coal slurry from the preparation plant to the slurry impoundment.
- Procedures and training for blackwater spill reporting.
- Identification of alternative method to contain a blackwater spill in order to prevent an unpermitted discharge during maintenance of preparation plant facilities.
- Supervision of the maintenance of sediment pond clean-out.
- Maintenance of all operating facilities and revegetation of disturbed areas to control run-off.
- Careful analysis and clear identification of the type and location of underground workings associated with coal waste impoundments.
- Consideration of alternatives to traditional coal waste disposal methods, such as dry coal processing and underground injection.
- Requirement to develop emergency action/warning plans for all high and moderate risk impoundments, including worst-case failure scenarios and alternative management approaches.

The task force also recommended that DNR require existing and new facilities to incorporate these BMP's, as applicable, into the facility's permitting plan within six months of the publication of the task force report. DNR should then include a review of the facility's compliance with the BMP plans as part of its normal and routine inspection process. Compliance

with the BMP's should be considered in determining the good faith and negligence of the operator and permittee in the event a blackwater spill occurs. DNR is in the process of incorporating the task force recommendations into the permit review and inspection process.

2. Long-Term Treatment (LTT) of Acid Mine Drainage (AMD)

DNR maintains an inventory of known LTT permits with related coal bed and watershed information. The LTT policy revised the terminology of the original AMD policy requiring an expanded inventory of sites, including treatment of effluent for any chemical parameter. The inventory is routinely updated and is made available to the Division of Mine Permits' review staff and the Division of Mine Reclamation and Enforcement's inspection staff. LFO, working jointly with DNR, has developed and maintains a basic Geographic Information System (GIS) map of the inventory. An AMD-producing site may be removed from the active list if AMD production ceases after reclamation is completed. A site can only be removed from the active list if the water pH/iron/manganese levels meet applicable effluent limits before treatment for 12 consecutive months. Such sites are still maintained on an historic AML list. During this EY, three sites were removed from the active list. Inspections conducted by LFO confirmed that each site was meeting effluent limits. In addition, LFO conducted field inspections on 20 permits still on the active list. These inspections confirmed that each site was meeting effluent limits.

3. Threatened and Endangered Species-Indiana Bat

Representatives from the USFWS, the Kentucky Fish and Wildlife Resources, DNR, and OSM recommended that the "Guidelines for the Development of Protection and Enhancement Plans for the Indiana Bat" dated November 1, 2000, be reviewed and revised as necessary. The reasons for revising the guidelines are as follows:

- OSM sponsored "The Indiana Bat and Coal Mining: A Technical Interactive Forum" on November 16-18, 2004. The forum provided technological and informational advancements that would improve the guidelines.
- Because of lack of agreement with the USFWS, applicants are exposed to duplicative and contradictory procedures for protection of the Indiana Bat.

New guidelines would be beneficial to all parties and help ensure continued compliance with the Endangered Species Act. A working group is meeting regularly and is working on revising the Kentucky Indiana Bat guidelines.

4. OSM National Initiatives-Wildlife

On June 23, 2005, the Assistant Secretary for Land and Minerals Management, Rebecca Watson, was the featured speaker at the Wildlife Summit Conference in Louisville, Kentucky. This meeting was a professional symposium that brought together industry and government policy officials with community leaders and conservationists to explore ways to increase the amount of fish and wildlife habitat established when coal mines are reclaimed. OSM hosted the Summit with more than 200 people attending. A Steering Committee comprised of OSM, State and Federal agencies, and wildlife groups, including the Rocky Mountain Elk Foundation, worked together to host the Summit.

5. Reforestation

DNR is working jointly with OSM and the University of Kentucky (UK) to provide outreach and technology transfer regarding reforestation enhancement on surface mines. Both DNR and OSM are actively involved in the Appalachian Regional Reforestation Initiative. This initiative will transfer research findings and new technology as it develops to industry, landowners, other government agencies, and other interested parties for implementation on minesites.

The implementation of DNR's Reclamation Advisory Memorandum (RAM) #124 ("Reforestation Initiative" issued March 10, 1997) is a key element of the reforestation initiative in Kentucky. During EY 2005, DNR and OSM began a joint special study to review implementation of RAM #124. The study includes an evaluation of DNR and OSM field personnel attitudes and impressions concerning the methods and techniques of RAM #124. During the process of this special study, the need for a general update of RAM #124 will be evaluated. Finally, this special study will install mechanisms for the tabulation of data concerning new permits issued since January 2004 that involves the planting of woody species as part of the post-mining land use. The study is ongoing and expected to be completed in EY 2006. DNR and OSM are also encouraging reforestation efforts on AML reclamation projects.

OSM has also awarded funding to UK for an applied science project to develop a field procedure for evaluating the compaction of reclaimed surface mined land using portable equipment that can be used under any field condition. Successful development of a field procedure will enable permittees and the regulatory agencies to determine if the reclaimed land is capable of supporting suitable tree growth without implementation of additional compaction reducing techniques.

6. Kentucky Mine Mapping Initiative

Kentucky continues to make significant progress on its mine mapping initiative. There are over 19,000 final maps that have been scanned. Of these, over 9,900 have been geo-referenced and are available for viewing or downloading at Kentucky's mine map web site. The rest are not yet geo-referenced, but they are available for viewing or downloading. The scanned and geo-referenced maps include almost all mines that have operated since 1984, thus including most of the mines that have operated under Kentucky's approved permanent regulatory program.

All final maps are expected to be scanned and geo-referenced sometime during the spring of 2006. DNR is optimistic that the grant previously obtained from the Mine Safety and Health Administration (MSHA) will prove sufficient to complete this task. Kentucky plans to scan and geo-reference all maps currently maintained by OMSL. Grant funds will be needed to proceed to this stage.

Kentucky's DNR continue to supply scanned copies of annual deep mine maps and surface mining reclamation plan maps to the three agencies that now perform most of the work on the initiative. The OMSL is responsible for scanning most of the geo-referencing and construction of geographic information system polygons. The Governor's Office of Technology maintains the web site.

The success of this initiative can be shown by the fact that State mine regulatory agencies in Alabama, West Virginia, and Virginia have all been looking at the Kentucky initiative with apparent plans to use parts of Kentucky's system in their own mapping initiatives. The success of the system is also evidenced by the fact that the web site gets approximately 400,000 internet queries every month. The Kentucky Mine Mapping Initiative web site is <http://minemaps.ky.gov/team.htm>.

7. Slurry

DNR and MSHA engineers met during the EY to discuss impoundment issues. This is an ongoing activity. DNR and OSM also attended the annual MSHA impoundment seminar.

Following the October 11, 2000, slurry impoundment breakthrough at Martin County Coal Corporation, OSM and DNR began a joint review of all MSHA-class impoundments in Kentucky. At that time, there were 118 impoundments in Kentucky. Presently, there are 119 (91 coal slurry and 28 freshwater ponds) MSHA-class impoundments in Kentucky (97 in eastern Kentucky and 22 in western Kentucky). The initial field review (referred to as Phase I reviews) of all these impoundments was completed in EY 2002.

These Phase I reviews identified 47 impoundments with underground mining within 100 feet of the approved pool levels and 14 impoundments with underground mining within 100 to 200 feet of the approved pool. OSM and DNR agreed that these "high priority" impoundments should undergo a more intense review. These reviews (referred to as Phase II reviews), were conducted jointly by DNR and OSM. The team included an engineer from both OSM and DNR and the DNR permit reviewer familiar with the permitting documents. The joint reviews focused on determining current conditions at the impoundment and identifying any deficiencies in the design and/or construction that may need additional action by DNR. The Phase II reviews of 47 impoundments with underground mining within 100 feet of the approved pool were started in EY 2003 and completed in EY 2004. The Phase II reviews of the 14 impoundments with underground mining within 100 to 200 feet of the approved pool were started and completed in 2004. Additional information concerning these reviews is provided in Section VII.

The Phase II reviews also found that 49 impoundments were considered either inactive or abandoned. Several of these had been inactive since the 1980's and 1990's. DNR issued enforcement action against some of these sites, requiring the impoundment to be reclaimed. In certain instances, the company submitted an abandonment plan, and in other cases, the company filed for administrative review of the enforcement action. DNR continues to review the sites and the ongoing administrative review activities to determine future courses of action. Also, as a part of what is referred to as Phase III, OSM continued its detailed technical review of selected slurry impoundments. The reviews are being conducted by the OSM

Regional Impoundment Technical Team. Two impoundments were reviewed during EY 2003 and two reviewed in EY 2004. The details of those reviews were reported in the EY 2003 and EY 2004 Annual Reports. During EY 2005, the team reviewed two more Kentucky impoundments. Additional information concerning the EY 2005 reviews is provided in Section VII.

8. Underground Mine Inspections

DNR's Division of Mine Reclamation and Enforcement implemented a form for the inspection of underground mine requirements, such as outcrop barriers and subsidence control plans. The form should facilitate the consistent inspection of the annual map submittals and Phase I and III bond releases. The form will also help new inspectors become familiar with the underground mines they inspect.

9. Blasting Meeting and Training

DNR blasting inspectors have attended seminars and training throughout the year. Further, DNR and LFO held a management meeting in July 2005 to discuss flyrock inspections and enforcement actions. They also held a training session presented by outside consultants. The training covered flyrock prevention and blasting vibration damage.

10. The Approved State Program

During the EY, OSM published four final rules in the Federal Register on the approved Kentucky program. The final rules approved two program amendments, removed two required amendments found in 30 CFR 917.16, and removed a suspension notice for one program amendment.

A summary of the approved program amendments is as follows:

- On August 11, 2004, OSM approved, with certain exceptions, an amendment to the Kentucky regulatory program. Kentucky proposed revisions to the Kentucky Administrative Regulations (KAR) pertaining to water replacement, subsidence, bonding, definitions, hydrology, and permits. Kentucky revised its program to be consistent with the corresponding Federal regulations.
- On December 20, 2004, OSM approved an amendment to the Kentucky regulatory program. Kentucky revised its statutes regarding easements of necessity and submitted

those statutes to OSM on its own initiative. The statutes were amended in House Bill 537 promulgated by the 2004 Kentucky General Assembly.

The summary of the removal of two required amendments is as follows:

- On August 11, 2004, OSM removed a required amendment relating to defining the term "prompt" involving water replacement. We found that Kentucky's amended regulations are no less effective than the Federal regulations and therefore, authorized the removal of the required amendment found at 30 CFR 917.16(m).
- On May 3, 2005, OSM removed a required amendment that Kentucky submit examples of common husbandry practices that support their vegetation regulations. We found that Kentucky had submitted the administrative record information necessary to demonstrate that its proposed practices are normal husbandry practices within Kentucky. We removed the required amendment found at 30 CFR 917.16(i).

A summary of the program amendment disapproved/suspension/and removal of suspension by OSM is as follows:

- On May 13, 2004, OSM disapproved the transfer of \$3,840,000 from the Kentucky Bond Pool Fund to the General Fund Surplus Account. The use of the Bond Pool Fund to provide new financial guarantees was suspended until the \$3,840,000 was transferred back to the Bond Pool Fund or a plan for replacing these funds was submitted to and approved by OSM. Executive Order 2004-753 signed by Governor Fletcher on July 12, 2004, transferred \$3,840,000 from the General Fund Surplus Account to the Kentucky Bond Pool Fund. On March 8, 2005, OSM published a final rule that formally concurred with the Governor's transfer of funds. This action satisfactorily resolves OSM's concern and terminates our suspension of the use of the Bond Pool Fund. Therefore, this issue has been resolved.

11. Geographic Information System

DNR's Information Support Branch has developed a GIS database that can be accessed via the Internet. The database can be accessed from the DNR homepage at www.surfacemining.ky.gov. While DNR has had images of all permit boundaries available since

their GIS system was developed, they did not have these boundaries in a coverage that could be viewed and analyzed as a GIS coverage. Current plans are to begin digitizing these permit boundaries. When complete, this coverage will enable DNR and others to use this data to analyze extents of mining and will improve efficiency of field investigations.

12. Technology Advancements

DNR continues its efforts on the electronic permitting initiative. Recent activity has been directed toward bringing the regional offices on-line with electronic workflows, reports, and data entry.

During this EY, significant accomplishments in this process include:

- Brought the London Regional Office workflow on-line. This includes inspection, enforcement, extensions beyond 90 days, and preliminary walks. This concluded the workflow implementation for DNR's regional offices.
- Brought Coal Exploration Notification on-line for all regional offices.
- Brought DNR's Division of Mine Permit's Critical Resources Review Section into workflow through the Coal Exploration Notice portion of DNR's London Regional Office workflow.
- Implemented eNotification to regional offices and to the Division of Mine Reclamation and Enforcement's assessments and records of permit issuance. They no longer need to print and fax copies of permit faces.
 - Provided training to two DNR staff on OSM's Financial and Business Management System (FBMS). A portion of FBMS is an electronic grants initiative.
- Developed the performance bond processing workflow from the Division of Mine Permits to the Division of Mine Reclamation and Enforcement. This work flow tracks and documents the bonding process from:
 - Permit issuance.
 - Surface Mining Information System (SMIS) input.
 - Filing and verifying bonding instruments in the Document Management System.
 - Filing of the original bonding instruments in the fire safe. This has minimized delays in processing bonding documents, made these documents more accessible to more users, and provided a major link between the DNR's two Divisions.
- Developed Forms e-SME-87B and C (Surface Mining Enforcement Forms - 87B and C are bond calculation sheets used when

evaluating bond release applications.). Although these forms are in test, once implemented, it should make bond release calculations significantly easier and provide much desired consistency in the bond release calculations.

- Developed a workflow loop for DNR's regional offices to process e-versions of the SME-00 ((preliminary application). It is in use in Middlesboro, which is the only office to receive an e-version of the Preliminary Application.
- Further enhanced the electronic Mine Inspection Report (eMIR). Major upgrades include:
 - Automatic download to the inspector, comments, violations, and remedial measures for inspection and enforcement documents. This further improved form completion.
 - Automated creation of a Photo Documentation Sheet. This greatly eased getting photos from the camera in the field to the Document Management System (DMS).
 - Automatic creation of Inspector's Violation Statements. This change automatically enforces business process rules as to when to create the Inspection Violation Statements. Additionally, the eMIR automatically names and completes key information in the Inspection Violation Statements, which improves data entry and ensures that these key documents are processed into the DMS.
 - Developed and tested the electronic Citizens Request for Inspection (eCRI) form. This eCRI form automates the assignment of tracking numbers as well as automatically uploads to SMIS.
 - Purchased and put into service upgraded equipment (printers, scanners, and plotters), which will further improve all existing processes and make possible expansion of applications into other areas of DNR business processes.
 - Made a major commitment to continue training State employees on the DMS system. In preparation of retirement of technology personnel, new personnel are being trained to operate, update, and improve the DMS environment.
 - Made improvements to SMIS to track SOAP and Kentucky Bond Pool activities.

13. Minorities in Mining Roundtable

During the EY, the Minorities in Mining Roundtable was created to assist UK in locating, recruiting, and graduating minority students in degree programs that are beneficial to the coal industry and to the agencies that regulate coal mining for the future. The Roundtable members include representatives from OSM, DNR, MSHA, business, and industry. The academic fields targeted include geology, hydrology, civil engineering, electrical engineering, mining engineering, agronomy, forestry, and agricultural engineering. Young minorities in these fields will

be considered for the forecasted turnover anticipated by OSM and DNR, in addition to other opportunities that are available.

To date, the Roundtable has met four times and has been focusing on the short-term goals. The short-term goals include marketing the message of careers in mining to young minorities, specifically the 300 incoming freshman at UK for the Fall 2005 semester. This will be accomplished through a brochure and recruitment through various methods (i.e., Advisory Conferences, Student Organizations, and in cohort). Current discussions on long-term goals include applying for and utilizing a National Science Foundation Grant to aid in the provision of networks to support the professional development and scholarship of minorities in mining related fields. This grant will aid in the outreach to the under-represented minority populations to inform potential students about opportunities in the mining industry in the Appalachian Region.

B. Abandoned Mine Land Reclamation (AMLR)

The Kentucky AMLR program is successful in achieving lasting and effective reclamation of mined lands. This results in the elimination of hazards to the public and restoration of beneficial land uses. Construction grants continue to include high priority projects. Kentucky also continues to consider high priority project selection criteria for AML emergency complaints referred to them by OSM. During the EY, Kentucky completed 28 high priority AML projects and submitted 43 new projects for authorization to proceed. Ten of the projects will provide safe domestic water supplies for 769 residences at an estimated cost of \$8.1 million.

DAML manages their program in a cost effective and efficient manner. All projects comply with applicable laws and regulations, are well designed and constructed using the best technology available, are completed with minimal disturbance to the environment, and are well monitored to ensure projects meet contract specifications, project objectives, and program goals.

The management of DAML continues to implement significant improvements in its program. DAML's continued support of the procedures implemented in EY 1996 and EY 1997 improved the internal control and support for change orders, as recommended in a previous audit of the State AMLR program.

1. AML Inventory System (AMLIS)

Kentucky fully supports the direct access to the AMLIS that allows DAML to electronically input AML problem data. DAML has

been directly updating the AMLIS since the fall of 1995. DAML submitted a letter dated July 6, 2004, certifying that they have a system that ensures the accuracy of data they input into the AMLIS. DAML continues to use this system. To verify this, OSM conducted a random sample quality review of the data DAML input during EY 2005. We found the data accurately reflected the physical source documentation in the DAML office files using AMLIS guidelines.

2. Bond Forfeiture Reclamation

DAML also administers the reclamation of Title V permits in bond forfeitures using forfeited reclamation bonds. DAML continues to improve its effort in reclaiming forfeited permits. During EY 2005, DAML issued five new group contracts containing 18 permits with a total of 83.1 acres. In addition, DAML continued reclamation activities on nine group contracts containing 16 permits with 123.5 acres from the previous EY. DAML completed reclamation on nine group contracts containing 23 permits with 129.5 acres and six small purchase contracts consisting of 10 acres. At the end of EY 2005, five group contracts containing 11 permits with 77.6 acres were ongoing.

3. AML Emergency Program

During this EY, OSM investigated 194 emergency complaints reported from abandoned mines. OSM referred 114 complaints to the State when the site conditions did not meet Federal emergency criteria during the preliminary investigation. OSM evaluated 80 complaints for declaration as Federal emergency projects. Forty-seven of these complaints were declared Federal emergency projects. Four complaints are still under OSM review as of the writing of this report. The remaining 29 did not meet Federal emergency criteria and were referred to the State for consideration under its non-emergency AML program.

4. Appalachian Clean Streams Initiative (ACSI)

The ACSI was developed to encourage the cleanup of streams in Appalachia polluted by AMD. Kentucky continues to support this initiative.

There were no new ACSI projects during the EY. The two projects discussed in previous reports were completed during the EY. The eastern Kentucky project, Spewing Camp Branch, was completed in October 2004, and the western Kentucky project, Hecla Tipple and Slurry in Hopkins County, was completed in January 2005.

The Rough and Tough Landslide Project is an ongoing effort using ACSI funding in eastern Kentucky. It is scheduled for completion in August 2005.

The Rough and Tough Landslide project was initiated on April 5, 2004. Funding of this project includes \$228,000 of State bond forfeiture and settlement funds, along with ACSI and State AML grant funds. The project totals 33.1 acres at four areas in west central Floyd County. Construction involves excavating to rock, disposal and capping of toxic and highly acidic spoil/coal refuse, and demolition and removal of hazardous facilities. Portions of the mixed spoil/coal refuse material have burned as evidenced by the presence of "red dog." The project is designed to control the flow of surface and ground waters and to treat AMD discharges.

The project includes the removal of a partially buried, old steel storage tank. The tank is visible from a public road and the contents are easily accessible via an unlocked hatch and a ladder leading to the bottom. The tank contains approximately 600 gallons of sludge, 300 gallons of light oils, and 2,600 gallons of contaminated water. Test results of the materials in the tank revealed a hazardous level of lead. The tank will be removed using appropriate methods, pending approval and consultation with the Kentucky Division of Waste Management.

Overall, the Kentucky program is effectively administered. DNR maintains a strong commitment to protect the environment and citizens of the coalfields while regulating and encouraging a viable coal industry. OSM expects to maintain an excellent working relationship with DNR and looks forward to a continued joint commitment to improve the Kentucky AML program.

C. Outstanding Issues

1. Disposal of Underground Development Waste

It was discovered during a random oversight inspection that specific design requirements were not being required for permits involving disposal of underground development waste.

The issue was determined to be programmatic. In a letter dated December 16, 1993, DNR advised LFO of its willingness to adopt changes to the regulation. The planned changes would be similar to those promulgated by Virginia. Kentucky projected that draft regulations would be available around April 1, 1994. During the past EY, DNR noted that it might develop policy guidelines with respect to existing regulations relative to the disposal of underground mine waste in backfill areas in lieu of promulgating new regulations. However, no official correspondence has been received.

2. Bankruptcies

Bankruptcies continued to exert their influence on the coal industry in Kentucky and surrounding coal states during the EY. Bankruptcies in the coal industry in Kentucky continued to require considerable attention of both DNR and OSM during the EY. During the EY, Kentucky and four other State RAs, in conjunction with OSM, successfully negotiated a Permitting and Reclamation Agreement that ensured the cleanup of about 425 coal mine sites in five states despite the bankruptcy of Horizon Natural Resources Company (Horizon). Horizon is reportedly the largest coal bankruptcy in United States history. On September 17, 2004, the United States Bankruptcy Court (Court) for the Eastern District of Kentucky signed the order approving Horizon's Plan of Reorganization, Asset Sale, and the Permitting and Reclamation Agreement. The reorganization plan and asset sale provided for a new owner for each of the Horizon permits by distributing them into one of three entities. The Permitting and Reclamation Agreement provides for the final reclamation on every permit.

At the end of the last EY, Lodestar Energy Corporation's (Lodestar) bankruptcy proceedings were being settled. In June 2004, Kentucky and two other states reached a global settlement agreement with the responsible parties that included Court involvement that provided \$12.5 million in funds to Kentucky, Utah, and West Virginia. Kentucky's share was just over \$8 million to reclaim 19 orphan permits in the State. In August 2004, Kentucky entered into a Memorandum of Understanding with a third party company to manage the reclamation on those 19 Lodestar permits. Reclamation of these sites is scheduled to be completed by the end of October 2006.

3. Surety and Bonding

SMCRA requires that reclamation performance bonds be posted by operators prior to undertaking a surface coal mining operation. These performance bonds must be adequate to allow completion of reclamation by the State RA, should the mining company default. SMCRA allows mining companies to self-bond, obtain bonds from insurance carriers, or pay fees to alternative bonding systems, such as State bond pools.

Bond availability and increased costs to obtain bonds are major issues for the coal mining interests in Kentucky. The tightening of criteria for issuance of surety bonds to mining companies and the perceived reduction in the number of insurance companies willing to write reclamation bond coverage to mining companies are two of the causes.

4. Fill Construction Practices

Following several meetings to build consensus with the coal industry and environmental community, DNR developed RAM #135, issued September 10, 2002. The purpose of the RAM was to implement revised standards for the design and construction of durable rock fills. On December 11, 2002, DNR issued Directive Number 36 to revise and clarify existing inspection and enforcement policies on excess disposal fills. A study was initiated in EY 2005 to evaluate the fills constructed under the new policy.

During EY 2004, OSM initiated a regional effort with the goal of consistent application of steep slope valleyfill requirements. The purpose of the regional initiative is to improve the quality and consistency of OSM's oversight inspection process while addressing the issues related to valleyfills in a manner that provides proper deference to State primacy. Three areas were emphasized: 1) construction of under drains, 2) certifications, and 3) contemporaneous reclamation. An inspector exchange was conducted followed by a regional meeting. During this EY, a small working group evaluated OSM inspections in each State. As a result, they recommended that OSM emphasize the following five areas in the narrative of OSM's inspection reports for the upcoming EY. These areas are as follows:

- Is the under drain being formed, and if so, is it working?
- Is surface water always diverted away from the face of the fill?
- Is the back-stacking of fill above the coal pavement occurring?

- Are there adequate fill certifications and photos?
- What is the reclamation status of the fill?

This effort will assist in meeting the Government Performance Results Act goal of minimizing off-site impacts.

5. Unauthorized Fills

The COE continues working with DNR and OSM to identify mining operations with unauthorized fills. No placement of fill material into waters of the U.S. can occur without prior authorization from the COE.

On January 27, 2005, a coalition of environmental and citizen groups filed suit in Lexington, Kentucky, against the COE. The coalition is comprised of the Kentucky River Keeper, Inc., Kentuckians for the Commonwealth, Inc., and the Kentucky Waterways Alliance, Inc. The suit requests that the COE stop issuing permits for valleyfills under Nationwide Permit 21. Nationwide Permit 21 was promulgated under Section 404 of the Clean Water Act for certain activities of coal mines that place fill in streams. The lawsuit identified 54 permits issued to 33 coal companies that they want stopped from discharging mine rock into valleyfills in Kentucky. The lawsuit is similar to one in West Virginia, but in a different District Court. As of the end of the EY, briefs have been submitted to the court, but the case has not been heard.

6. Flyrock Events

Fourteen flyrock events were identified during the EY compared to eight events the previous EY. Refer to the Off-Site Impacts Section of this report for the damage caused by the flyrock. DNR investigates flyrock events and takes enforcement and permitting actions to minimize the potential for reoccurrences. Out of the 14 events, rock from four events impacted residences. LFO and DNR continue discussions about minimizing the number of flyrock events.

V. Success in Achieving the Purposes of SMCRA as Measured by the Number of Observed Off-Site Impacts and the Number of Acres Meeting the Performance Standards at the Time of Bond Release

A. Off-Site Impacts

Kentucky's program for protecting the environment and public from off-site impacts was evaluated by collecting and analyzing known off-site damage resulting from the 1,934 surface and

underground coal mine permits in Kentucky. DNR supplied LFO with Inspection Violation Statements for Notices of Non-Compliance (NC) and Cessation Orders (CO) that contained off-site impacts. In addition, DNR sends a monthly summary report of all NCs and COs with identified off-site impacts. The Inspection Violation Statements included all violations with off-site damage written from July 1, 2004, through June 30, 2005. LFO conducted the following:

- Developed an off-site damage database.
- Screened the Inspection Violation Statements for off-site impacts.
- Verified and input the collected off-site impact.
- Analyzed the data.

During the EY, DNR issued 598 NCs. These NCs cited 1,099 performance standards. The most frequently cited violation type was (1) general permit provisions and (2) sedimentation control. A breakdown by performance standards based on the 50 State category types is presented below:

Percentage of Total Performance Standards Cited in EY 2005						
General Provision and/or Other	Sedi-ment	Backfilling & Grading, & Contemporaneous Reclamation	Water Quality	Effluent Limits	Access Road	Remain- ing 43 Cate- gories
28.5	12.0	10.0	9.8	8.2	4.8	26.7

Fifty-eight COs were issued by DNR (45 Failure-to-Abate COs and 13 Imminent Harm COs).

For this EY, Kentucky issued 523 NCs and 21 COs that contained off-site impacts. The 544 enforcement actions resulted in 747 performance standard violations. OSM determined that there were 792 measurable off-site impacts for the performance standard violations. The determination of off-site impacts was based on DNR's documentation and the OSM reviewer's interpretation of the enforcement language using any inspection reports associated with the enforcement action. The review of

the Inspection Violation Statement prepared for the penalty assessment was the primary resource document.

The 544 enforcement actions with off-site impacts involved 258 permits. This is approximately 13 percent of the permits in Kentucky. The remaining 87 percent of the permits were free of off-site impacts. There were 1,676 permits that were free of off-site impacts during the EY.

Those NCs identified with off-site impacts were analyzed for the following criteria:

- type of incident
- resource affected
- degree of impact

Of the 747 performance standard violations with 792 measurable off-site impacts, approximately 36.6 percent was hydrology. The next major type of off-site impact was encroachment into prohibited areas (35.2 percent). The third type of off-site impact was public roadway and other (21.0 percent). The remaining two types of impacts represented 7.2 percent.

From the data collected, the total impacts assessed from coal mining operations for the EY included 101.0 miles of streams, 650.8 acres of land, 29 wells, and 14 homes. The findings for off-site impacts indicate that approximately 68.4 percent of the measured incidents involved land and 31.6 percent involved water. Also, 88.4 percent of the incidents were minor, 9.1 percent were major, and 3.5 percent were moderate impact. The majority of impacts were minor. However, as indicated, the largest impacts occurred within a few permits.

Flyrock, which includes rock thrown through the air and rock that is forced off the blast site and rolls down the hill, is a major off-site concern in Kentucky. During the last EY, eight flyrock incidences occurred. During this EY, 14 flyrock incidences occurred. Out of the 14 flyrock cases, three of the minesites had two events each during the EY. Four resulted in property damage to residences. One resulted in property damage to a coal truck while the driver was outside the truck covering his load with a tarp. One was within 200 feet of a residential home, but no physical damage occurred. One resulted in damage to a county road and landed in a river. Three were within 200 feet and 1,000 feet of a residence. Six resulted in an off-permit disturbance with residences residing greater than 1,000 feet.

When a flyrock incident occurs at a minesite, blasting is immediately ceased in the area pending investigation by OSM and DNR (including OMSL). The company is then required to develop a remedial blasting plan stating changes that will be made at the minesite to prevent future flyrock.

A notable off-site impact occurred on April 18, 2005, when a blowout occurred at a large bond-released underground mine. The mine's outcrop barrier failed and released a large amount of water. The water blocked traffic on Kentucky Highway 80 between Hazard and Prestonsburg. Traffic had to be detoured for three days until the mine discharge decreased to manageable levels and road repairs were completed. About 17 miles of stream were temporarily affected by sediment from the discharge. The mine was previously permitted by Consol of Kentucky, Inc. (Consol). On May 18, 2005, DNR notified Consol that DNR was reestablishing jurisdiction over the permit and requested replacement of the performance bond. DNR based the reestablishment of jurisdiction on Consol's failure to overlap one area with an adjacent permit and Consol's failure to report unreclaimed surface disturbances.

LFO evaluated permanent program bond forfeiture permits for off-site impacts. The bond forfeiture permits included for this EY were those permits where the bond was collected and waiting for DAML to complete the reclamation. DNR removes the permit from the inspectable units list once the bond is collected. The data was collected from the DAML Bond Forfeiture Status Listing's second quarter 2005 report. In addition to this information, a review of the active AMD list supplied by DNR was used to determine if any of the bond forfeited sites were discharging AMD. From the information in AML's Bond Forfeiture Status Listing, data was collected on the acreage forfeited. Also, the mine status at the time of forfeiture was collected from the State's SMIS system. This data was analyzed to determine impacts to land and water. To determine if the impact was minor, moderate, or major, we made the following assumptions:

- Minor. The permit was backfilled and graded with a mine status of a Phase 1 or 2 bond release ("P1" or "P2" status) and/or the forfeited acreage is less than two acres.
- Moderate. The permit was not backfilled and the forfeited acreage was from one to ten acres.

- Major. The permit was not backfilled and the forfeited acreage was greater than ten acres.

LFO found that 79 permanent program permits had been forfeited and were awaiting reclamation. Five of these permits were forfeited in the EY. Of these five, one of the permits had off-site impacts identified in the yearly inspectable unit violation list. A total of 3,737.67 acres was awaiting reclamation on the 79 permits. Four permits were identified as AMD permits on Kentucky's active AMD list. Table 4 was completed using this information.

B. Bond Release

The goal of reclamation is to reclaim land mined by a surface coal mining operation to a stable condition, vegetated, non-polluting, and of equal or greater value than the pre-mining condition. To achieve the goals of reclamation, a system of phased bond releases has been implemented in Kentucky. To satisfy Phase I requirements in Kentucky, the reclaimed area must be backfilled, regraded, topsoiled, seeded, mulched, drainage-controlled, and a planting report submitted. Phase II requires the reclaimed areas have established revegetation in accordance with the approved reclamation plan and meet the standards for revegetation success, except for productivity standards. Also, the reclaimed area must not contribute suspended solids to stream flow or runoff outside the permit area. Phase III requires that the reclaimed area must successfully meet all surface coal mining and reclamation standards in accordance with the approved reclamation plan, that the reclaimed land must be capable of supporting the approved post-mining land use requirements, and that the applicable liability period must have expired.

In Table 5, Annual State Mining and Reclamation Results, Kentucky reported that it granted bond releases on 12,717 acres for Phase I reclamation, 5,964 acres for Phase II reclamation, and 13,862 acres for Phase III reclamation. OSM's review of these minesites through 74 joint inspections on Phase I and Phase III bond releases found that the State is meeting the requirements of its bond release program on permanent program permits.

VI. OSM Assistance

During FY 2005 (October 1, 2004 - September 30, 2005), Funds Granted to Kentucky by OSM, Table 9, identified Federal funds

awarded and shows that the AML program received \$15,963,345, which is 100 percent of the total program cost. SOAP, which is also 100 percent Federally-funded, received \$733,844. The A&E grant, which funds the regulatory program, was for \$11,286,762. The regulatory program is 50 percent Federally-funded, except for the \$1,026,605 that Kentucky received to administer the Federal Lands Program. The Federal Lands program is 100 percent Federally-funded and is included in the A&E grant.

OSM is committed to providing adequate funding and technical assistance to the Kentucky program. Technical training courses are available to DNR upon request. Regional and LFO technical staff are also available to provide support to the Kentucky program.

VII. General Oversight Topic Reviews

During EY 2005, LFO completed 383 oversight-related inspections. Of this total, 228 were random sample inspections, and 26 were Phase III bond release inspections conducted jointly with DNR personnel. Twenty-seven field inspections resulted from special studies outlined in the EY 2005 Performance Agreement. The remaining 102 inspections were other oversight or State assistance inspections completed by LFO.

LFO issued 28 Ten-Day Notices (TDN) during the EY. These 28 TDN's contained 47 alleged violations. Twenty-six of these TDN's were the result of citizen complaints. The other two were the result of complete oversight inspections. At the end of the EY, seven TDN's were pending a decision on the appropriateness of DNR's response. Two of the pending TDN's were from a previous EY. During the EY, 30 TDN's were satisfactorily resolved, with a determination made that DNR had either taken appropriate action or shown good cause for not taking action. Seven of these resolved TDN's were from the previous EY.

During the EY, five citizens requested that the Appalachian Regional Office (ARO) Regional Director (RD) informally review the Field Office Director's (FOD) decision on their citizen complaint. The RD agreed with the FOD's decision in four of the five cases. In one case, the RD disagreed with the FOD's determination and ordered a Federal inspection. This case involved a citizen's allegation that a coal company mined through a public road without the required authorizations. DNR maintained that they had granted the company a waiver to mine

through the road. The FOD accepted the DNR response as showing good cause for not taking action. The citizen disagreed and requested informal review by the RD. The RD found that the permit, the public notice, or the county resolution authorizing closing of the road did not expressly acknowledge the intent to mine through the road. DNR and the citizen accompanied OSM during the Federal inspection. The site visit found the company had relocated the public road from its original location without DNR approval. DNR issued a NC for this relocation. The company will submit a permit revision showing the present location of the road. This revision will address the issue of public notice, permission from the county, design and construction of the road, and impacts on affected landowners. Federal enforcement action was not necessary, since the actions taken by DNR will cause the violation to be corrected. Additionally, the information obtained during the permitting process will allow DNR to make the required written findings that the interest of the public and affected landowners will be protected.

LFO conducted 65 oversight inspections on State AMLR projects in accordance with the EY 2005 Performance Agreement as follows:

- 2 pre-authorization inspections
- 2 pre-construction inspections
- 24 active construction inspections
- 17 final construction inspections
- 19 post-construction inspections
- 1 citizen complaint inspection concerning a State AML project

OSM identified five concerns during inspections of four projects. All of the concerns were satisfactorily resolved with the State. All were site-specific and construction-oriented in nature, with no programmatic concerns identified.

Nine special oversight studies were initiated this EY, but were not completed due to the complex nature of the studies and/or the workload of the staff involved. The studies include:

- Reforestation - Technology Transfer Initiatives (Regional Team)
- Fill Stability follow-up study
- Underground Mining - Follow-up to outcrop barrier study
- Preparation Plant - Sedimentology study
- RAM #124 Implementation

- Contemporaneous Reclamation/Supplemental Bonding
- Administrative Review - Cumulative Hydrologic Impact Assessment Procedures
- Fill Inventory - Review of Permits issued by DNR in CY 2005
- AML-AMLIS System Input

The following oversight studies were completed during the EY.

A. Workload and Staffing Analysis of MSHA-Class Impoundments

Following the coal slurry impoundment breakthrough in Martin County, Kentucky, in October 2000, Congress funded a study by the National Research Council (NRC). The NRC was tasked "to examine ways to reduce the potential for similar accidents in the future." The NRC report, released in October 2001, contained 28 recommendations aimed at helping to prevent future breakthroughs. This EY report only addresses one of the recommendations contained in the NRC report involving the issue of sufficient staffing. The NRC report recommended "...that the review process for both new and existing permits be overhauled to include...sufficient staff for engineering and other reviews in the agencies that participate in the joint process so that the time required to complete the review can be reduced significantly." To address this issue, LFO and DNR agreed in the EY 2004 Performance Agreement to complete an analysis of the State's current workload and projected staffing needs for the review of MSHA-class impoundment plans and permits.

OSM's analysis finds the DNR permit review staff is experienced, competent, and fully capable of conducting a thorough and independent analysis on fine coal refuse (FCR) disposal impoundment plans and permitting actions.

OSM's analysis also finds that DNR is currently under-staffed to handle the present and expected future workload relating to FCR impoundments in Kentucky. This finding is based on an analysis of the current staffing levels contrasted with the existing and projected workload associated with FCR impoundments.

Consideration was given to the technical sophistication associated with these impoundments and the resulting impacts on the time and qualifications needed for comprehensive review. The complexity of the permit reviews on FCR impoundments often leads to difficulties in meeting the regulatory requirements for review timeliness.

OSM's analysis also finds problems with recruitment and retention of qualified engineers due to low pay and the employee classification system. To address this problem, the Kentucky Personnel Cabinet upgraded the positions of Environmental Engineer Assistant II, Environmental Engineer Assistant III, and Environmental Engineer Consultant. The Personnel Cabinet upgrades occurred in January 2005.

B. Phase I Bond Release Inspections

This study included 48 Phase I bond-released minesites that were inspected as part of OSM's random oversight inspection program. OSM inspections on these minesites were to determine if all applicable bond release standards were met at the time the Phase I bond release was granted by Kentucky. OSM found that Kentucky is meeting its requirements for Phase I bond release on permanent program permits.

C. Phase III Bond Release Inspections

This study reviewed 26 Phase III bond release applications. OSM inspections on these Phase III bond release applications were conducted jointly with the Kentucky inspector and the bond release specialist. OSM found that Kentucky is meeting its requirements for Phase III bond releases on permanent program permits.

D. Fill Inventory

OSM conducted 221 file reviews on permitting actions issued by the State in eastern Kentucky for Calendar Year (CY) 2004. The file review collected pertinent fill and watershed information on 221 proposed or existing excess spoil fills. See Appendix E for the review findings.

E. Random Sample

LFO's oversight format provides for a general assessment through random oversight inspections. In addition, it focuses on specific program areas jointly selected for special emphasis in oversight studies. During this EY, LFO conducted 228 random comprehensive inspections for a general assessment of Kentucky's program. The random samples were selected from the list of active and Phase I bond released permits on both surface and underground coal mining operations in Kentucky.

The purpose of these inspections was to evaluate the degree of industry compliance with the approved State program.

OSM found that 189 of the 228 (83 percent) minesites in Kentucky were in full compliance with all performance standard categories. On the other 38 sites, 103 violations were observed. The performance standards most often in NC were hydrologic balance, backfilling and grading, and permit administration. OSM inspectors evaluated the seriousness of violations on random complete inspections. The data for the 103 violations shows that 52 percent of all the violations did not have an off-site impact, and 48 percent extend outside the permit area. In addition, 16 percent of the violations were minor, 66 percent had a moderate degree of impact, and 18 percent had a major degree of impact. For all 103 violations identified during complete inspections, the State took appropriate action.

F. Slurry Impoundments - Phase II

During EY 2005, the OSM and DNR review team completed the Phase II review of 14 "high priority" impoundments. These impoundments were identified in Phase I as having underground mining within 100 to 200 feet of the approved pool. The review team updated information gathered during the Phase I inspections and monitored the progress of DNR-required permitting actions. DNR has required several of the permittees to submit breakthrough prevention plans and conduct drilling in the impoundment area to locate underground mine workings. The team found that permitting actions have been completed on some sites and continue on others. DNR conducts a thorough and independent analysis of these impoundment permitting actions. MSHA and DNR continue to exchange relevant information on impoundments within their jurisdiction.

G. Slurry Impoundments - Phase III

Under its Oversight Guidance Document, the Appalachian Region is reviewing the States' actions concerning the prevention of impoundment breakthroughs into underground mines. Under this review, OSM examines the States' procedures to evaluate breakthrough potential and their implementation of the procedures. At selected permits, the review includes a technical examination of breakthrough potential and an assessment of the States' actions to prevent breakthrough. As reported in the last two annual reports, OSM previously

reviewed four permits in the study. During the current EY, OSM completed two more reviews in Kentucky.

The Long Fork Impoundment (Long Fork Coal Company) and the Four Mile Impoundment (Consol of Kentucky, Inc.) were selected this EY because of their high breakthrough potential rating. The rating is based on the close proximity of underground mines beneath and adjacent to the impoundment. OSM found that DNR thoroughly evaluated breakthrough potential and required the necessary breakthrough prevention measures.

The review of these last two impoundments concludes the region's Phase III review of breakthrough potential in Kentucky. The review did not find any programmatic issues related to DNR's review of breakthrough prevention plans. The review found that DNR assigns breakthrough prevention plans to experienced engineers. The engineers independently review the plans and ensure that the preventative measures are based on prudent engineering designs. The plans undergo peer and management review within the Division of Mine Permits to ensure that the plans are complete and technically acceptable.

H. Civil Penalty Assessment

LFO found that civil penalty assessments are conducted in accordance with the approved regulatory program. DNR's policies and procedures result in an effective assessment process. Civil penalty assessments are timely and reflective of the impacts on the public and the environment. DNR's civil penalty assessment dollar amounts have not been adjusted for inflation.

LFO recommends that DNR continue the emphasis placed on timely, consistent, and accurate civil penalty assessments. LFO also recommends that DNR consider adjusting civil penalty dollar amounts for inflation. This action would maintain the deterrent effect of civil monetary penalties and promote compliance with SMCRA.

I. Inspection Frequency

DNR reported Kentucky's inspection frequency at the end of the EY. The inspection frequency was based on 405 KAR 12:010, Section 3(5). This provision requires the State to conduct one complete and two partial inspections per calendar quarter for all minesites, except Phase I or Phase II bond release sites. Those sites in the bond release process or in temporary

cessation require the State to conduct one complete inspection per quarter. DNR reported the following number of inspections.

Coal Mines and Facilities	Number of Complete Inspections	Number of Partial Inspections
Active	7,289	14,016
Inactive	283	139
Abandoned	49	58
TOTAL	7,621	14,213

Inspectable Unit Information

- Total Number of Permits Requiring Inspections 1,934
- Total Number of Permits Meeting Frequency 1,862
- Percentage of Permits Meeting Frequency 96.3

From the information provided, Kentucky's inspectors conducted 21,834 inspections and met inspection frequency on 96.3 percent of the inspectable units.

In EY 2004, OSM reported that DNR inspectors met frequency on 98.6 percent of the inspectable units. In EY 2005, DNR inspectors met frequency on 96.3 percent of the inspectable units. The reason for the decrease in inspection frequency is due to the unusually high personnel turnover rate.

Copies of individual topic reviews may be requested in writing to the following address:

Office of Surface Mining
 Lexington Field Office
 2675 Regency Road
 Lexington, Kentucky 40504

