

# Knoxville Field Office

Inspection

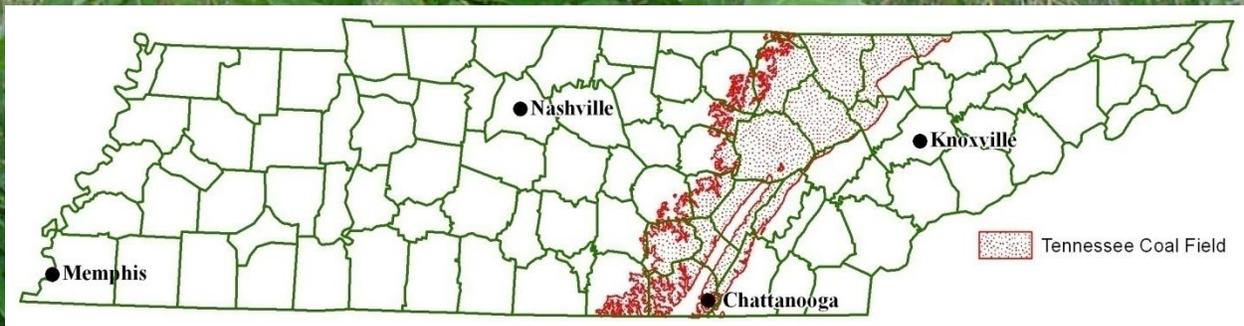


Technical

A collage of technical documents and graphics. At the top left is the logo for the U.S. Department of the Interior, Office of Surface Mining. To its right is the title "Procedures for the Cumulative Hydrologic Impact Assessment" in red. Below the title is the text "U. S. Office of Surface Mining Reclamation and Enforcement Knoxville Field Office - Technical Group". The collage includes a map of a watershed area with colored overlays, a hydrograph showing flow over time, a triangular diagram, a pie chart, and a photograph of a person in a field.



Earl Bandy, Field Office Director



Fiscal Year 2010

*October, 2010*

***OFFICE OF SURFACE MINING  
RECLAMATION AND ENFORCEMENT***

**Annual Evaluation Summary Report**

**for the**

**Regulatory Program**

**Administered by the Knoxville Field Office**

**for the**

**States of Tennessee & Georgia**

**Fiscal Year 2010**

**(October 1, 2009 to September 30, 2010)**

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## I. INTRODUCTION

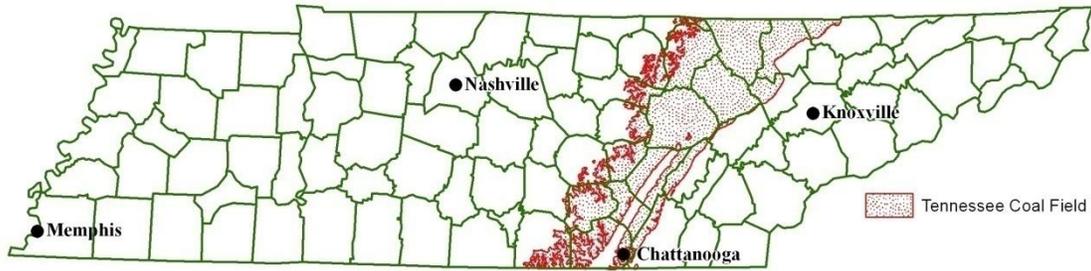
The Surface Mining Control and Reclamation Act of 1977 (SMCRA) created the Office of Surface Mining Reclamation and Enforcement (OSM) in the Department of the Interior. SMCRA provides authority to OSM to oversee the implementation of and provide Federal funding for State regulatory programs that have been approved by OSM as meeting the minimum standards specified by SMCRA. The Act also provides authority for OSM to implement a Federal regulatory program in the States without approved regulatory programs. In Tennessee, OSM implemented the Federal regulatory program in October 1984 when the State repealed its surface mining law. OSM also has regulatory authority responsibilities for surface coal mining activities in the State of Georgia since they have never adopted an approved State program under SMCRA. This report contains summary information regarding the Tennessee and Georgia Federal Program and the effectiveness of the Federal Program in meeting the applicable purposes of SMCRA as specified in Section 102. This report covers the period of October 1, 2009, to September 30, 2010. Detailed background information and comprehensive reports for the program elements evaluated during the period are available for review and copying at the Knoxville, Tennessee OSM Office. You can also view this report on the OSM website at <http://www.osmre.gov/Reports/EvalInfo/2010/2010.shtm>

The following list of acronyms is used in this report:

AMD	Acid Mine Drainage
AML	Abandoned Mine Land
ARRI	Appalachian Regional Reforestation Initiative
COE	Corp of Engineers
EPA	Environmental Protection Agency
FRA	Forestry Reclamation Approach
KFO	Knoxville Field Office
MEIR	Minesite Evaluation Inspection Report
NMA	National Mining Association
NRCS	Natural Resources Conservation Service
NTTP	National Technical Training Program
OSM	Office of Surface Mining Reclamation and Enforcement
SMCRA	Surface Mining Control and Reclamation Act of 1977
TDEC	Tennessee Department of Environment and Conservation
TIPS	Technical Innovation and Professional Services
USFWS	U.S. Fish & Wildlife Service

## II. OVERVIEW OF THE TENNESSEE COAL MINING INDUSTRY

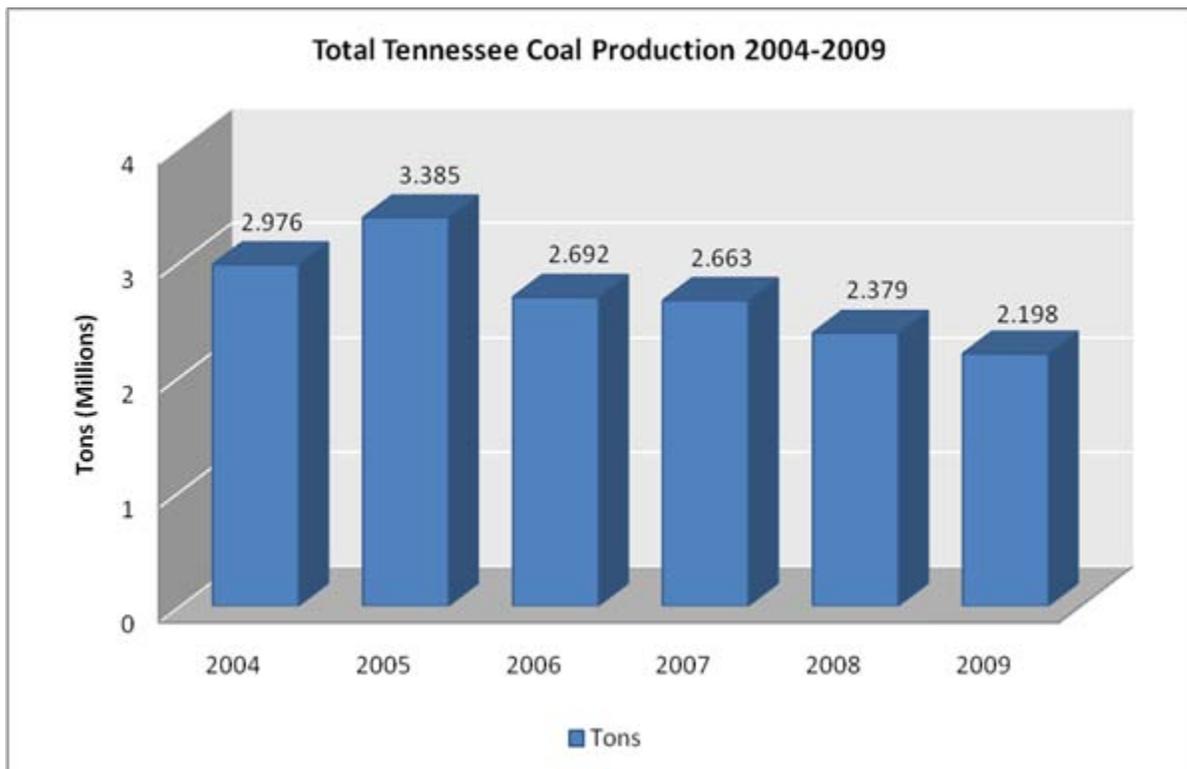
Tennessee's coal resources are in 22 counties located in the Appalachian Region of the Eastern United States extending from the Kentucky border to the Alabama border in the east central portion of Tennessee. Mining in the northern counties is primarily in the steep slope areas of the Cumberland Mountain range. Mining in the southern counties is generally confined to area-type operations due to the relatively flat terrain associated with the Cumberland Plateau.

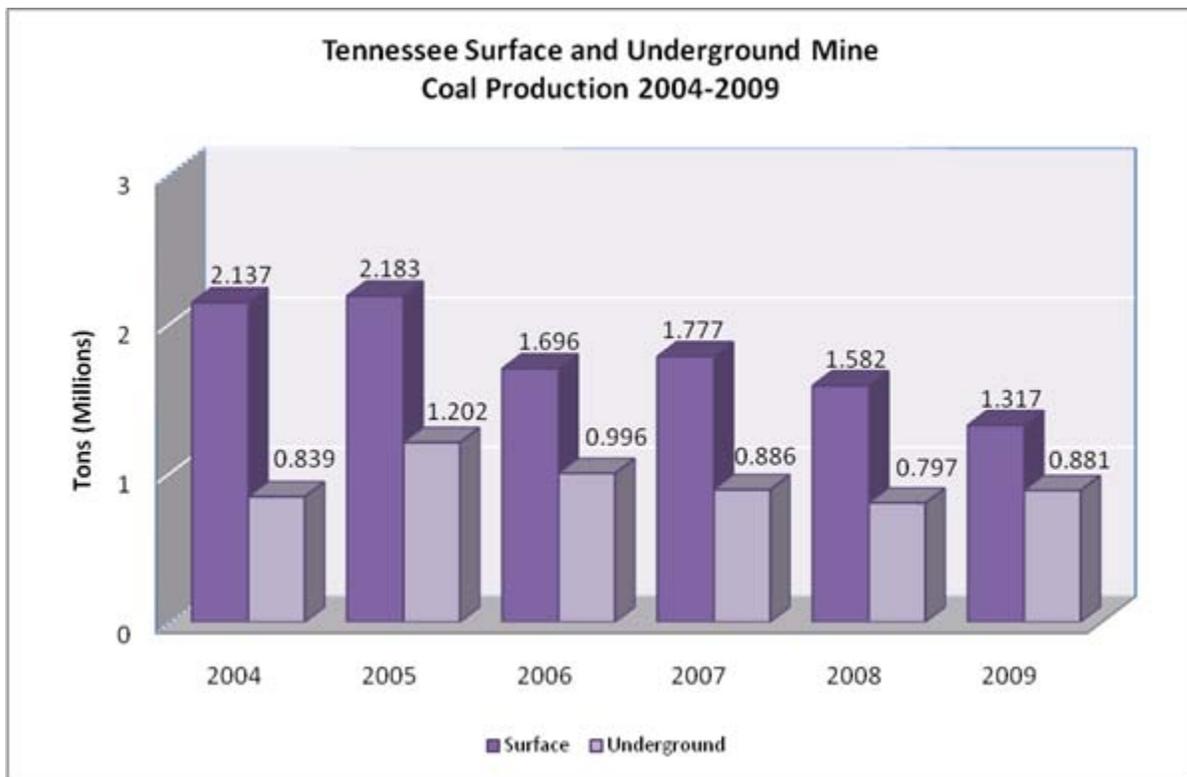


Tennessee’s recoverable coal reserves of .5 billion short tons (\*source) exist in bituminous coal beds from less than 28 inches to 42 inches in thickness at depths of up to 1,000 feet. Tennessee coal is used primarily for the generation of electric power.

\*Energy Information Administration publication “Production and Depletion of Appalachian and Illinois Basin Coal Resources”, page 11, Table 4.

Tennessee ranked twenty second in production of coal among the 26 coal-producing states in fiscal year 2009. Coal production declined from a high of 11,260,000 tons in 1972 to 2.2 million tons reported during calendar year 2009. Currently, there are a total of 15 active coal-producing mines that have permitted 6,526 acres. This includes 164 acres permitted for external haulroad construction, 155 acres permitted for water treatment structures and 7 acres permitted for critical earth fills. Underground mines have permitted 112 acres, excluding shadow areas, (shadow area is the footprint of the underground disturbance transposed to the surface area above) at 4 active mines, and surface operations have permitted 6,414 acres at 11 active mines as of September 30, 2010.





Currently, there are six abandoned surface mine sites located in Dade and Walker Counties of Northern Georgia which total 141 disturbed acres. There has been no coal production or permitting activity in Georgia for several years.

### **III. OVERVIEW OF THE PUBLIC PARTICIPATION OPPORTUNITIES IN THE TENNESSEE FEDERAL PROGRAM**

The Tennessee Federal Program provides numerous public participation opportunities in its program activities. Efforts are made to encourage participation and to inform the public of the avenues to participate in the regulatory program.

- **Public/Citizen Participation in the Regulatory Process**

Citizens, environmental groups, and industry representatives have access to all regulatory program files including permitting, inspection and enforcement, and bonding program files. Managers and staff have open-door policies for any segment of the public to discuss issues that may arise.

During the permitting process, the KFO is available to meet informally with individual citizens or organizations that have expressed concerns or have an interest in pending permit applications, permit renewals, or revisions to existing permits. The purpose of these meetings is to answer questions relative to the concerns and to provide information and/or explanations with respect to the permitting actions at issue. As a part of this

informal public participation process, the KFO maintains a contact list of individuals and organizations that have expressed an interest in being notified of permitting actions being considered by KFO. In FY 2010, KFO met with individual citizens or representatives of environmental groups on at least eight different occasions, and discussed numerous individual issues during telephone conversations and inquiries.

Formal public participation opportunities are also afforded on all applications for new permits, significant revisions, and renewals reviewed in KFO. In FY 2010, public conferences and associated input were requested on one new application and two renewal applications were processed by KFO. One of the renewal application conference requests was subsequently withdrawn. A total of three public conferences were conducted in FY 2010. Two of the conferences held during FY 2010 were actually requested in FY 2009. The public conference request on the new permit application is anticipated to occur during the next fiscal year.

- **Citizen's Request for Inspection**

The regulations provide citizen's the opportunity to request a Federal inspection when the citizen provides a written or oral report giving OSM reason to believe an unauthorized condition, practice or violation exists which creates an imminent danger to the health or safety of the public or is causing or could reasonably be expected to cause a significant, imminent environmental harm to land, air or water resources. The KFO is required to investigate these reports and respond to the citizen regarding the OSM investigative findings and actions within ten days of concluding the investigation. The citizen providing the information may also request informal review of KFO's decisions.

During FY10 the KFO received nine citizen's complaints (six oral, two e-mails and one written). Five of these complaints alleged adverse impacts to water, three alleged inadequate reclamation had been performed and one alleged dangerous impacts to a public road. Eight of these complaints were determined to be either unfounded or conditions which are not currently under SMCRA jurisdiction such as elevated selenium levels. Upon investigation the KFO determined the complaint alleging dangerous impacts to a public road was valid. Consequently, a Notice of Violation was issued citing the operator for failure to prevent or control damage to the public highway, and failure to maintain the coal yard in accordance with the terms and conditions of the approved permit. These two violations were subsequently abated and terminated by KFO.

The KFO has provided responses to all complaints received during FY 2010 in accordance with the required timeframes. No requests for informal review of KFO action or inaction were received.

- **Agency Participation in the Regulatory Process**

Just as with participation of the public in the SMCRA regulatory process, KFO solicits input from numerous local, State, and Federal agencies that may have an interest in a proposed permitting action. KFO maintains a mailing/contact list including eleven different State or Federal agencies that receive notification of proposed permitting actions. Local or county-specific mailing/contact lists are also maintained for each of the

twenty historical coal producing counties in Tennessee. Each of these county-specific lists generally include from eight to ten local agencies or officials that are also notified of proposed permitting actions. In addition to providing written notification to these agencies, KFO continues to participate in periodic meetings with agencies such as the Tennessee Department of Environment and Conservation, U. S. Fish and Wildlife Service, and the National Park Service to discuss issues related to coal mining in Tennessee. In FY 2010, at least thirteen inter-agency meetings occurred in response to individual proposed permitting actions or concerns, issues, and clarification of existing policies. The agencies participating in these meetings were Tennessee Department of Environment and Conservation, Knoxville Regional Office; U.S. Fish and Wildlife Service, Cookeville Field Office; Office of Surface Mining, Knoxville Field Office; The Corps of Engineers, Nashville District and The Environmental Protection Agency, Region 4. In addition to these inter-agency meetings, numerous phone conversations with other agencies were held that further facilitated their participation in the SMCRA regulatory process.

- **Industry Meetings**

Pre-Permit Application Meetings with the Industry - KFO continues to meet with individual coal companies or their consultant(s) prior to submittal of a permit application. The purpose of these meetings is to discuss potential issues that might arise during the permitting process and to seek resolution of concerns/problems that address regulatory requirements. KFO instituted a pre-application process whereby the applicant meets with OSM, COE, EPA, USFWS, and TDEC while the application is being developed. The purpose of this meeting is to ensure all agencies with regulatory responsibilities review the proposed application and request information before the application is finalized for submittal. Because of the success of this initiative, this activity has become routine in the normal permitting process.

Stakeholder Meetings with the Industry - In implementing the regulatory program in Tennessee, KFO holds stakeholder meetings to discuss programmatic issues affecting the coal industry in Tennessee. These meetings are designed to solicit input from the industry for consideration by KFO. KFO conducted two such meetings during the past year. A joint meeting with the Tennessee Department of Environment and Conservation was held to discuss with industry stakeholders both State and SMCRA regulatory requirements related to water quality. KFO conducted a second meeting with industry that was an “open forum” type meeting where issues of concern to both the regulatory agency and the regulated industry could be discussed.

- **Outreach Efforts with Customers and Stakeholders**

KFO continues to improve its relationships with its customers and stakeholders by providing increased opportunities for participation in the regulatory functions of the Field Office and by meeting with State and Federal agencies, citizens, landowners, and industry to discuss concerns and to foster better working relationships. The results have produced enhancements in compliance with respect to operators anticipating and addressing potential problems before they develop into violations. There have also been enhancements in communications with operators and landowners, based on industry

feedback since the outreach efforts began. This feedback has consisted of improved oral communications as well as input into development of field office policies and procedures such as the recent development of guidance documents for the protection and enhancement of Federally-listed species such as the Indiana bat and the blackside dace.

#### **IV. MAJOR ACCOMPLISHMENTS/ISSUES/INNOVATIONS IN THE TENNESSEE FEDERAL PROGRAM**

- **Inspection Frequency**

##### Active Sites

KFO is responsible for conducting complete and partial inspections of surface coal mining and reclamation operations in Tennessee and Georgia in accordance with 30 C.F.R. 842.11(c). This requirement (inspection mandate) includes an average of at least one partial inspection per month of each active surface coal mining and reclamation operation; and, an average of at least one complete inspection per calendar quarter of each active surface coal mining and reclamation operation. With respect to inactive surface coal mining and reclamation operations OSM must conduct an average of at least one complete inspection per calendar quarter and such partial inspections as are necessary to ensure effective enforcement of the regulatory program and the SMCRA.

During FY 2010 the KFO successfully conducted the required inspection mandate in accordance with 30 C.F.R. 842.11 of all active surface coal mining and reclamation operations in Tennessee and Georgia, with the exception of two partial inspections which were not completed due to inspector illness.

##### Abandoned Sites

Abandoned sites in Tennessee and Georgia are required to be inspected by KFO on a site specific inspection frequency in accordance with the criteria and determination established in 30 C. F. R. 842.11 (e) and (f) (the abandoned rule). These sites have had some reclamation, but it is insufficient to satisfy regulatory requirements for complete reclamation. The vast majority of these sites have inspection frequencies of one complete inspection per calendar year. Due to a shortage of field inspectors, the KFO has found it necessary to prioritize its workload to ensure sites with the greatest potential for adverse impacts (active sites) receive adequate inspections. The majority of the abandoned sites have existed greater than 20 years and have healed to a large extent with naturally occurring vegetation and become stabilized. Due to this workload and resulting prioritization, the KFO was unable to inspect the majority of abandoned sites during FY 2010. Eight complete inspections and one partial inspection were conducted of the 168 abandoned sites during FY 2010.

##### Bond Forfeited Sites

Bond forfeited (or otherwise abandoned) sites in Tennessee and Georgia are required to be inspected by KFO on a site specific inspection frequency in accordance with the criteria and determination established in 30 C. F. R. 842.11 (e) and (f) (the abandoned rule). The vast majority of these sites have established inspection frequencies of one complete inspection per calendar year.

During FY 2010 the KFO conducted evaluations of thirty three permanent program bond forfeited sites to determine if natural vegetative processes had stabilized these disturbances to meet the intent of SMCRA and to allow removal of the sites from the inspectable units list (IUL). Thirteen of these sites were subsequently removed from the IUL because the disturbances were adequately stabilized to meet the intent of SMCRA. The remaining 20 sites were found to have deficiencies which prevented removal from the IUL. Evaluations of these sites also included recommendations for corrective work to move the sites towards complete reclamation and removal from the IUL.



Gary Bridges Logging and Coal, permit 83-C-023 was evaluated during 2010 but retained on the inspection units list due to inadequate reclamation (highwalls remain).

- **Civil Penalty Offset of Unobligated Forfeited Bonds**

During this year the Knoxville Field Office conducted a review of all forfeited bonds with an unobligated balance in the forfeiture account. Contract reclamation had been completed on these sites, and a small balance of unspent funds remained in the account for each site. In order to close the account, the funds must first be dispersed in one of several ways: spend the money by contracting for additional work on the site, return the money to the entity from which it was collected, or use the funds to offset civil penalties owed by the permittee on the particular site.

The sites were inspected and nine were found completely reclaimed without need for further on-site work. These sites had substantial unpaid civil penalties outstanding as the permittees are out of business and without assets.

We worked with the Office of the Field Solicitor, OSM's Division of Financial Management and the Applicant Violator System Office to develop a process for offsetting civil penalties with the unspent forfeited funds. That process is ongoing.

Once the offset process is complete, the funds will be transferred to the civil penalty account. Funds in that account can be used to supplement a shortfall in funds on other sites which require contract reclamation. KFO expects to transfer over \$150,000 using this process.



Outstanding bond funds were used to offset civil penalties owed by Gem Mining, Inc., permit 2455.

- **2010 Approximate Original Contour Study**

During FY 2010, the KFO participated in a study of approximate original contour (AOC) in conjunction with a broader evaluation managed by OSM for all Appalachian Region States. The primary focus of the evaluation was an oversight review of the implementation of each state's program requirements for approximate original contour where active surface coal mining is taking place.

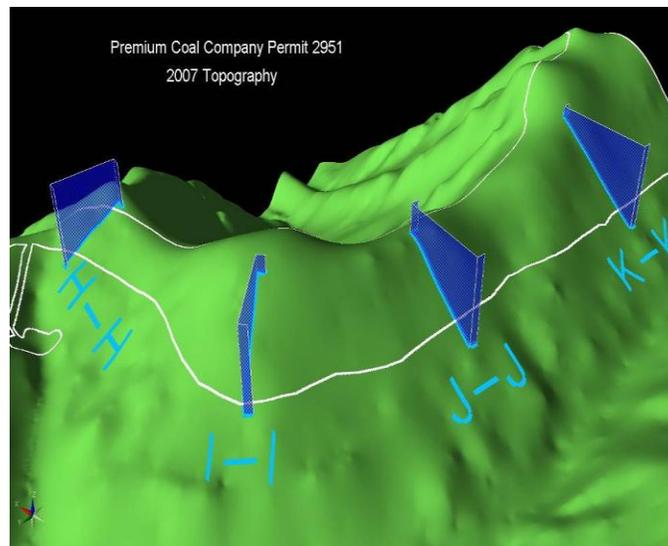
KFO conducted reviews of four different permits to determine if permits in Tennessee were being reviewed and approved in accordance with the governing directive and the guidance documents. While the report is under review as a draft, preliminary findings are that permits issued under the Tennessee Federal program are issued and approved in accordance with the governing documents. A minor problem was identified in that one of the permits did not have slope measurements included on the cross sections and this finding is being targeted for correction. No other problems or issues were identified from the permit reviews.

Two of the sites were selected for field verification to determine if AOC had been accomplished after backfilling and grading efforts had been completed. Permit identified cross section locations were measured in the field to determine if approved slopes and drainage patterns had been successfully restored.



The KFO Tennessee AOC Team conducts field verification measurements at Triple H Coal Company LLC, permit 3205.

Satellite imaging and modeling were also utilized to obtain pre mining and post mining slope configurations. Graphics generated from the imaging were used as another tool in determining success by comparing imaging generated slope configurations with both permit and field identified slopes. A comparison of graphics from the three sources revealed that reclaimed slopes at the two sites are very close to the satellite imagery and the permit identified cross section post mining slopes.



Premium Coal Company, permit 2951 Post-mine topography showing cross section locations

The study concluded the sites are reclaimed to AOC with acceptable slopes and drainage patterns established. Both sites have been successfully restored to approximate original contour in accordance with the OSM directive and office guidelines.

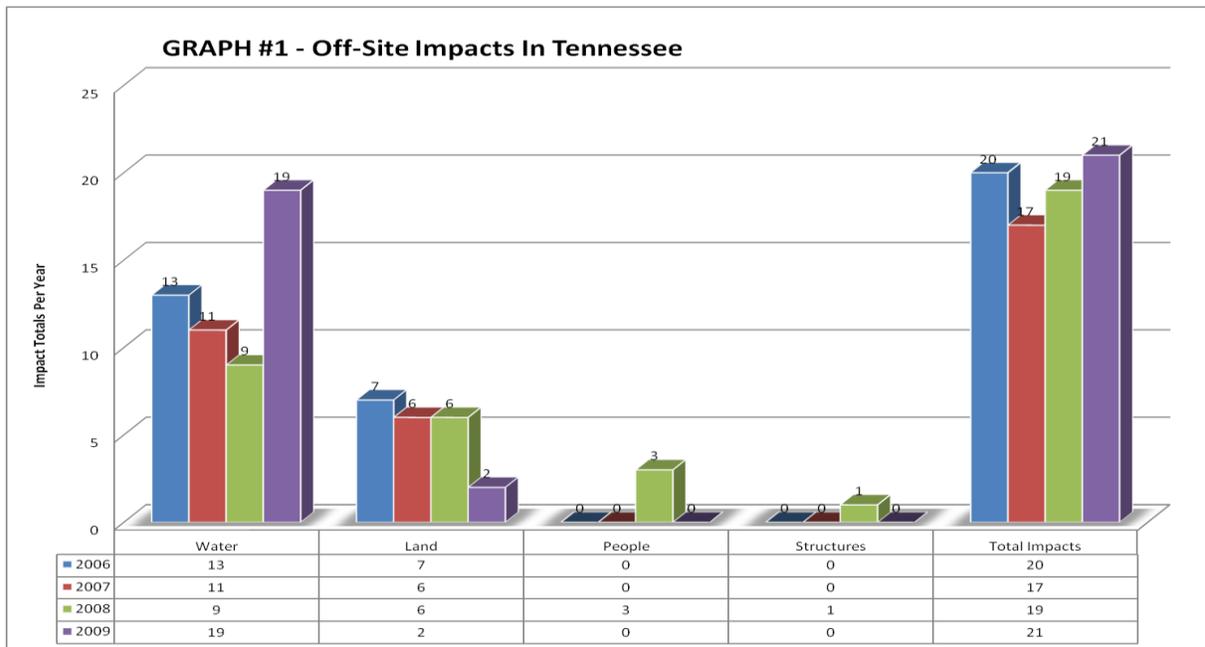
There are currently no outstanding issues or citizen's complaints related to approximate original contour in Tennessee.

- **Off-site Impact Study**

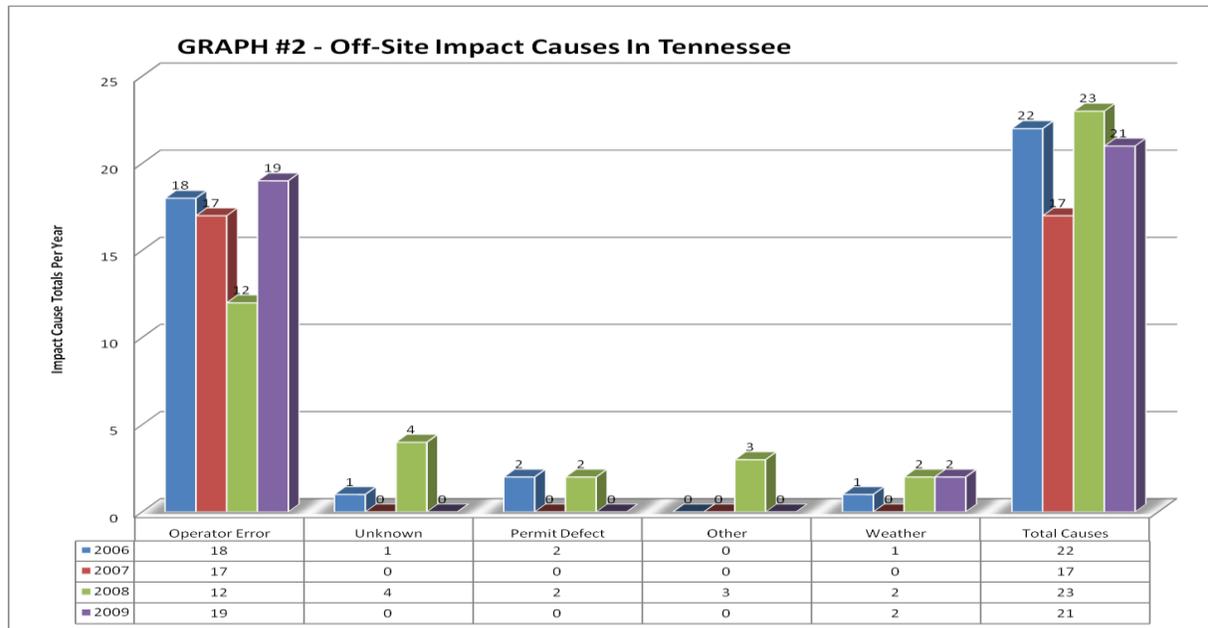
During FY 2009, the KFO initiated a study of off-site impacts in Tennessee. Off-site impact data is routinely collected and reported in conjunction with enforcement actions issued as a result of SMCRA mandated mine site inspections.

In order to evaluate sufficient off-site impact data to determine trends and causes, data from the past three-year period (FY 2006, 2007 and 2008) were used. KFO enforcement files were reviewed and interviews were conducted with reclamation specialists having historical knowledge of field decisions and circumstances prior to impact occurrence. Differences among minor, moderate and major off-site impacts were not examined since all are counted in reporting the performance measurement regardless of impact severity. In FY 2010, the KFO continued this study by evaluating off-site impact data collected during FY 2009. The FY 2009 data was included and considered in the overall study findings.

During this four-year period, a total of seventy-seven off-site impacts to people, land, water and structures were identified. The study revealed the vast majority of impacts during this period occurred to water, followed in order by land, people and structures. Off-site impacts to water most often occurred due to changes in water chemistry during mining or when sediment laden runoff left sites for short distances. Many of the impacts to land resulted from slides, encroachment off permits and from blast fly rock. People and structures were adversely affected when public roads were impacted by mining operations. Adverse impacts to people also resulted from blast vibrations.



The study also found the overwhelming majority of Tennessee off-site impacts during this period were caused by operator error.



Based on the study findings the KFO developed a plan for further reducing occurrences of offsite impacts in Tennessee. The major steps in the plan are as follows:

1. Meet with KFO field inspectors in the Fourth Quarter of FY 2009 to discuss uniform methods and consistency in reporting off-site impacts and strategies for helping operators reduce off-site impacts.
2. Meet with KFO technical staff in the First Quarter of FY 2010 to discuss the observed permit defects that contributed to off-site impacts and consider options to avoid them in the future.
3. Develop an off-site impact study PowerPoint presentation illustrating the study method and findings to be used to inform and educate the coal industry. The presentation is targeted for completion during the First Quarter of FY 2010.

During FY 2010, the KFO completed steps 1, 2 and 3 as discussed above. The study findings revealed the majority of off-site impacts resulted at sites where active coal production had occurred. For this reason, KFO scheduled and presented the Power Point presentation to the companies responsible for the majority of Tennessee coal production during FY 2010.

- **Abandoned Mine Lands in Tennessee**

General Outreach

OSM solicited comments from the public and Federal and State agencies on the FY 2010 State/Federal Performance Agreement and Reclamation Plan. A 30-day comment period was opened and all comments were considered during finalization of the plan and performance agreement. One person asked that we make the public aware of the hazards

associated with abandoned mines. The Land Reclamation Section of Tennessee Department of Environment and Conservation (TDEC) added a link to the “Stay Out, Stay Alive” video on their website to educate the public on the dangers of entering an abandoned mine. OSM and TDEC will continue to provide outreach to industry and citizens concerned about abandoned mine lands.

#### Appalachian Regional Reforestation Initiative (ARRI)

On March 9, 2010, the Appalachian Regional Reforestation Initiative (ARRI) core team selected Panther Branch Stream Restoration Project as winner of the Tennessee 2009 AML Excellence in Reforestation Award. Panther Branch was severely impacted by acid mine drainage and toxic mine refuse from 100 year-old underground mine workings. By using geomorphic stream channel design, 700 feet of Panther Branch was completely restored, including removal of in-stream refuse and construction of a properly sized channel and adequate flood plain. Meanders, pools and riffles were also constructed and riparian vegetation was re-established. A tree seedling mixture of early succession hardwood species for wildlife and soil stability, and commercially valuable crop trees were planted on site using proper tree planting techniques in accordance with the Forest Reclamation Approach.

#### Title IV of SMCRA AML Reclamation

The Tennessee AML program receives federal funding under the 2006 SMCRA amendment dated December 20, 2006. These changes authorized the State of Tennessee to receive minimum program funding for their approved State reclamation program. The Tennessee Department of Environment and Conservation (TDEC), Land Reclamation Section is the State agency responsible for receiving such AML funds and implementation of the approved Tennessee Abandoned Mine Land Reclamation (AMLR) Plan.

In FY 2010, the TDEC reclaimed AML features through construction contracts and joint ventures with land owners in accordance with State and Federal law. TDEC reclaimed safety hazards that provided beneficial land reclamation to the community as well as the landowner. TDEC worked with other government agencies and private organizations to leverage additional funding for pollution abatement from mine drainage. These projects included several waterline extension projects. Although small in comparison to surrounding states, Tennessee has a diverse and effective AML program.

The Land Reclamation Section of TDEC was awarded an AML grant for the period February 1, 2010 to January 31, 2013, in the amount of \$2,571,867 with subaccounts for \$10,000 Non-Emergency Administrative costs; \$1,526,527 in Non-Water Supply Project Costs; \$649,100 in Water Supply Project Costs; and \$386,240 in AMD Set-Aside Costs.

TDEC set-aside the approved 30 percent or \$386,240 in AMD funds on July 12, 2010. The set-aside funding will be used to leverage matching funds from other agencies whenever possible in order to address AMD problems emanating from the Tennessee coalfields. The funds are maintained in a separate interest-bearing Tennessee Surface Mine Reclamation Fund account established under TN Code 59-8-326 which is dedicated to receive AMD set-aside funds in accordance with 30 CFR 402(g)(6) and are used solely for AMD reclamation.

TDEC submitted an amendment request for their 2010 Consolidated Grant for the creation of a new grant budget/cost category for Water Supply Project Costs and the transfer of funds from the Non-Water Supply Project Costs category into this new budget category. These funds will be used to address the health and safety problems caused by the effects of abandoned mines on the quality and quantity of drinking water in these areas of the Tennessee coalfields.

Title IV Reclamation Proposed Projects for FY 2011 - During FY 2011, the Land Reclamation Section of TDEC will be seeking Authorizations to Proceed for the following three projects:

- Westbourne Lane Waterline extension – Campbell County, TN – TDEC proposes to contribute \$171,000.00 of abandoned mine land funding from the 2010 AML grant which will be combined with monies from local sources to provide a safe, potable, and reliable water supply to 16 households. Currently the households in this rural area are using groundwater wells and springs for their water source. Many of the wells and springs receive contaminants from surface and subsurface water and many have experienced degraded water quality and quantity since the late 1960's from extensive underground and surface coal mining activities). Subsurface water in the Westbourne community is generally high in iron and manganese and citizens complain of a sulfuric odor. The residents of the community relate health problems and economic burdens to this poor water quality and quantity. The area lies in the upper reaches of the Clear Fork River watershed and has been subject to pre-law surface and subsurface coal mining.
- New Hwy 111 – Van Buren County, TN - The New Highway 111 reclamation project is 72.9 acres of abandoned surface mines on two sites. TDEC has estimated the total project cost to be \$725,000.00 and will use monies from the 2009 grant. The mined area has over 5 acres of water-filled pits with low pH. Twenty million gallons of water in the pits will be treated and eliminated. The sites have 6600 feet of highwall associated with the pits, some of which are within 500 feet of New Highway 111.
- Farmer Hill 3 – Grundy County, TN - The Farmer Hill 3 reclamation project is 95.9 acres of abandoned surface mines. An estimated \$950,000 will be utilized from the 2009 AML grant. There are over 8 acres of water-filled pits containing over nine million gallons of water on the site. Fifteen hundred feet of highwall is located adjacent to the pits and both the highwalls and the pits will be eliminated in this project.

### GIS and AML

KFO is currently working with TDEC on a GIS project to acquire a complete inventory of AML hazards in Tennessee. This effort will entail scanning, geo-referencing, and digitizing the AML inventory from quadrangle maps on loan from TDEC. Once this project is complete (projected completion date of February 2011) the KFO and TDEC will have a complete inventory of all AML hazards available in a geographical information system (GIS). This project will assist in more effective implementation of Title IV and Title V of SMCRA through improved efficiencies in determining AML site status and eligibility. This project will especially be useful in the field. TDEC is now receiving support from OSM's Technical Innovation Professional Services (TIPS) and will receive GIS training so that they will be able to use the data for field and office support.

- **Acid Mine Drainage Mitigation Projects**

The Federal Program in Tennessee participates as facilitator with local watershed efforts to mitigate the effects of acid mine drainage (AMD) being discharged into watersheds from abandoned coal mines. The field office has six designated watersheds which are North Chickamauga Creek, Bear Creek, Big Laurel Creek, Coal Creek, Thompson/Big Creek and Clear Fork.

During the year, the field office staff performed the following activities in the watersheds:

North Chickamauga Creek - The North Chickamauga Creek Conservancy is the partnership leader in the watershed. We participated in water quality monitoring of all acid mine drainage discharges from abandoned surface and underground mines in the watershed.

We initiated a special study with ninth graders from the Hamilton County Charter High School. The class wants to prepare a study this year for implementation and field study follow-up during the next four years.

The watershed group also sponsored an OSM/VISTA that started near the end of FY 2010.



High School students are taught water sampling techniques in the North Chickamauga Creek Watershed.

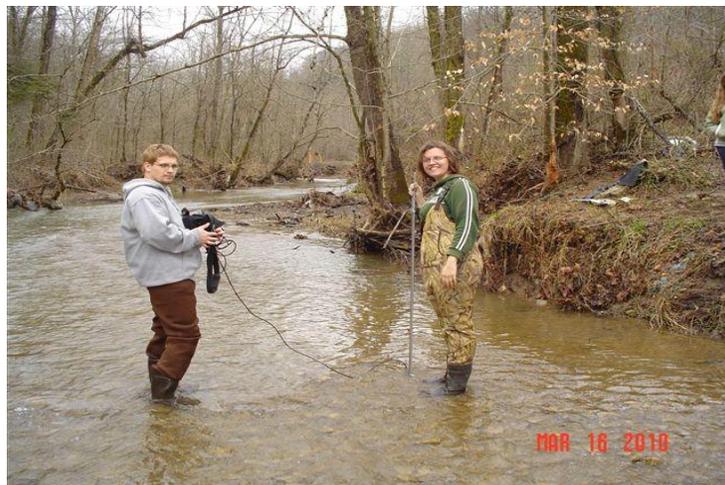


Water Quality Test Equipment is demonstrated to the students. This is a discharge from an underground mine near the North Chickamauga Creek.

Clear Fork – The Woodlands Community Land Trust is the partnership leader in the watershed.

The Field Office staff provided quarterly water monitoring assistance to the Tennessee Department of Environment and Conservation (TDEC) staff and members of the watershed group. The data collected will assist the partnership in the development of a watershed improvement plan.

The watershed group continued to sponsor an OSM/VISTA during FY 2010.



In the above picture, college environmental studies students assist State water quality specialist, OSM/VISTA, and OSM staff with water quality monitoring in Clear Fork streams in Claiborne County, Tennessee.

- **Trust Funds**

Trust funds or annuities are intended to guarantee treatment of the long-term post-mining pollutorial discharges associated with sites permitted under the Tennessee Federal Program. The primary purpose of such trusts is to protect the environment; and the health and welfare of the public while providing an economical way through which

the trust or annuity will be invested and managed for the long-term operation of water control and treatment facilities associated with coal mine sites.

During FY 2010, OSM conducted the second annual review of the Gladly Fork long term treatment trust fund, the first treatment trust fund implemented under the Tennessee Federal Program and the first annual review of the Energy Wash Facility treatment trust fund. During this past fiscal year, the third treatment trust fund agreement to be implemented under the Tennessee Federal program was finalized with Lexington Coal Company (LCC). A total of \$1,492,491 was invested to provide long term treatment of pollutional discharges emanating from LCC's Big Brush II in Sequatchie county Tennessee. Additional sites are being evaluated in FY 2011 as technical reviews of the water quality conclude at several sites with potential post-mining water quality concerns.

- **Electronic Permitting**

KFO continues to promote new technology in implementing SMCRA by creating the first federal electronic permitting process. The Electronic Permit Application Control Solution (EPACS) encompasses all of the permitting aspects in KFO. EPACS consists of two major components, the client tool that allows the applicant to electronically prepare and transmit the application and the internal tracking tool that allows management and staff to track and review the application.

During FY 2010, the KFO completed several items to facilitate the release of EPACS. In November of FY 2010, the Tennessee Program was invited to the Interstate Mining Compact Commission (IMCC). The invitation required a panel to discuss electronic permitting with the attendees. The conference was designed for each attendee to gain maximum knowledge through breakout sessions. These sessions allow the attendee the ability to witness EPACS as a demonstration. They also were able to ask intimate questions regarding the electronic permitting processes. In January of FY 2010, the final release version of the installation program was deployed to the consultants in Tennessee. In July of FY2010, we were able to bring online a consulting firm that used another states electronic permitting. We have made great strides in preparing for EPACS in the field. One of the many accomplishments is the securing of the vital hardware for the field. In FY2010, EPACS assisted in ushering mobile computing to the field.

- **Internal Review of Civil Penalty Assessment and Conference Procedures**

During this performance year, the KFO performed an internal review of procedures used to assess civil penalties and those used in assessment conferences. The KFO reviews all Federal enforcement actions issued in the Appalachian Region for assessment of civil penalties and performs civil penalty assessment conferences on the citations when requested by a permittee or other responsible parties. There were 44 notices of violation (NOVs) and 5 cessation orders (COs) reviewed for assessment of penalties by the KFO during the time period, October 1, 2009 to July 21, 2010. Those citations contained 60 violations in the NOVs and 6 violations in the COs. The KFO completed assessment conferences for 21 NOVs and 2 COs containing a total of 34 violations.

The KFO is guided by the civil penalty and conference requirements contained in 30 CFR Part 845. For purposes of this review, the civil penalty assessments and conference procedures performed by KFO were compared to the requirements in the regulations.

The review determined that the KFO complies with the requirements in the following areas:

1. Each violation in a NOV and CO is reviewed to determine whether a civil penalty will be assessed (30 CFR 845.11).
  2. Each violation in a cessation order is assessed a civil penalty (30 CFR 845.12).
  3. Each violation in a NOV is assessed a penalty if the violation is assigned 31 points or more (30 CFR 845.13).
  4. A conference is held within 60 days from the date the conference request is received or the end of the abatement period; whichever is later (30 CFR 845.18).
  5. The conference officer settled the issues, affirmed, raised, reduced, or vacated the penalty within 30 days after the conference was concluded (30 CFR 845.18).
  6. The designated official of the Director provided final approval of results of a conference if the conference officer proposed an increase or reduction of a proposed civil penalty assessment by more than 25% and more than \$500 (30 CFR 845.18).
  7. When the violator fails to request a conference on the proposed penalty within the 30 days allowed, the KFO notifies the Division of Financial Management that the 30 days has expired and that the penalty has progressed to a final order and the penalty shall become due and payable. The KFO provided the final order status in a timely manner.
  8. The review also showed that the KFO prepared and signed all notices of proposed assessment in a timely manner. However, in a number of cases, the notices were not mailed in a timely manner. This was due to staff misunderstanding the requirement, resulting in the documents being held for 30 days before mailing rather than being mailed as soon as they were approved. This has been corrected and the requirement will be monitored in the future.
- **State and Federal Regulatory GIS Data Exchange**

In January, 2010 OSM's Knoxville Field Office (KFO) initiated discussions with the Tennessee Department of Environment and Conservation (TDEC) to exchange selected geospatial data for which the participants are the Authoritative Data Source (ADS). Spatial data created by TDEC, such as water quality assessments (e.g., 303(d) list impacted streams) and stream survey biological monitoring stations with index scores, have value to KFO staff during the comprehensive review and analysis of the potential environmental impacts of proposed coal mining operations prior to permit issuance. Selected KFO coal mining spatial data, such as permit boundaries, coal field boundaries,

Cumulative Impact Areas, watershed trend stations with water quality results, and surface water and groundwater monitoring locations with baseline and quarterly monitoring results are valuable resources to TDEC. These initial data exchanges used file-based Geographic Information System (GIS) datasets downloaded from a TDEC web server and CD media sent by mail from KFO to TDEC.

In June, TDEC began planning for a department-wide server-based enterprise GIS similar to that in operation at KFO. One goal of the TDEC plan is to implement real-time data exchange between GIS servers among its users. KFO plans to participate in the real-time GIS data exchange with TDEC by establishing replicated geo-databases containing reciprocal copies of selected data on each organization's GIS server.



OSM-KFO Reclamation Specialists Joy Keegan and Mychal Dabney conduct a Mobile GIS test by utilizing a laptop.

- **Tennessee Reforestation Initiative**

The Appalachian Regional Reforestation Initiative (ARRI) is a cooperative effort among the States of Kentucky, Maryland, Ohio, Pennsylvania, Virginia and West Virginia; the Office of Surface Mining, including the Tennessee Federal Program, their partners in industry, environmental organizations, academia, local, State and Federal government agencies and local citizenry. The goals of the initiative are to plant more high-value hardwood trees on reclaimed coal mined lands in Appalachia and to increase the survival rates and growth rates of the planted trees by using the Forestry Reclamation Approach (FRA). The FRA is a science-based technology designed to help restore native hardwood forest habitat and enhance natural succession of native forest plants on previously mined land. Additional information about the FRA is available on the ARRI website <http://arri.osmre.gov/>. KFO staff serves as members of the ARRI Core Team and the ARRI Science Team, and continue to provide leadership and active support in promoting and achieving the goals of ARRI.

During 2010, a total of 273,000 trees were planted on reclaimed mine sites in Tennessee and 236,000 of those trees were planted on sites prepared using the FRA. As a result, 86 percent of trees planted on reclaimed mines in Tennessee in 2010 were on sites prepared using the FRA. The Tennessee mining industry has continued to work with KFO to include appropriate provisions in the approved mining permits and to implement the FRA in the field.

This year Lexington Coal Company Tennessee, permit No. 3186, won the ARRI Excellence in Reforestation Regional Award. In the past two years, LCC Tennessee has planted over 231,000 native hardwood tree seedlings on 327 acres that were prepared using the Forestry Reclamation Approach. This permit was sold by the original permittee and mining was not completed, which resulted in special challenges to design a new reclamation plan that accomplished regulatory requirements. Site specific solutions were designed to resolve unusual circumstances including a combination of blasting and dozer ripping to eliminate the remaining highwall and to create a growth medium suitable for productive tree growth. Soil samples were taken throughout the reclamation site and soil amendment rates and tree species were selected based on soil samples. Geomorphic landscape design techniques were used to create natural landforms and restore 4,800 feet of a stream channel which included riparian tree plantings.



LCC Tennessee Permit No. 3186 completed reclamation using the FRA.



White Oak on upland slopes



Tree planting included live stakes on the stream bank, riparian tree planting in the flood plain, and upland hardwoods on the slopes.

The KFO has continued to promote the FRA in the Mid-Continent Region (MCR). KFO staff played a major role in working toward this goal by providing technical assistance to the Alabama Surface Mining Commission and Taft Mining Company to design and install FRA demonstration projects on active mine sites. KFO staff also conducted site visits at the request of the Oklahoma Department of Mining, the OSM Tulsa Field Office and Ferrell-Cooper Mining Company to provide technical assistance and design FRA demonstration projects in Oklahoma. KFO planned and organized an Arbor Day tree planting with representatives from the Tennessee Division of Forestry, the Coal Creek Foundation, the Coal Creek Company and 100 local public school students.



Over 900 native hardwood tree seedlings were planted on a previously reclaimed mine site after the area was ripped to relieve soil compaction.

KFO worked with the University of Tennessee to develop OSM Applied Science Proposals for research on implementing the FRA on steep slope mining areas. Proposals were selected for funding by OSM with KFO staff serving as the OSM Technical Representative for the approved projects.

During 2010, KFO staff made presentations about the FRA at numerous conferences including the DOI Conference on the Environment, the American Society of Mining and Reclamation, the American Chestnut Foundation and the Tennessee Mining Conference.

#### White Oak Reforestation Project

The White Oak Reforestation Project (WORP) is located in Campbell County, Tennessee. The initial phase of this project was to establish a 130-acre Forestry Reclamation Approach (FRA) demonstration area on a mine site reclaimed by Gatliff Coal Company in 2002.

During 2010 the demonstration area was used to show effective reforestation to coal companies and state regulatory authorities from Virginia and Tennessee. Emphasis is placed on explaining the environmental benefits that can be realized through creating highly productive forestland on reclaimed mine sites. These multiple benefits include restoration of clean water and air resources, carbon sequestration, soil conservation, wildlife and endangered species habitat, recreational opportunities, commercial forestry, and other economic opportunities based on forest products.

- **Local Interagency Working Agreement (LIWA)**

The Knoxville Field Office of the Office of Surface Mining Reclamation and Enforcement in collaboration with the Tennessee Department of Environment and Conservation, the Nashville District of the Corps of Engineers, The Cookeville Field Office of the US Fish and Wildlife Service, and Region 4 of the EPA has developed a Local Interagency Working Agreement (LIWA) to improve interagency communication and coordination during the coal mine permitting process in Tennessee under the respective state and federal permitting, enforcement, and compliance reviews required by the Clean Water Act (CWA), the Surface Mining Control and Reclamation Act (SMCRA), and the Endangered Species Act (ESA).

- **Work Breakdown Structure**

The Knoxville Field Office began a cost tracking initiative in 2010 to track costs associated with implementing the Surface Mine and Control Reclamation Act (SMCRA) in Tennessee. This initiative required adding permit numbers to our Activity Based Cost Structure to capture costs with each permitting action. This new structure allows KFO to track hours and costs during the term of the permit for all programmatic activities associated with each permit.

To date, KFO has added more than 1,143 codes to our Work Breakdown Structure (WBS) system. These codes will help KFO track costs at a permit level and will be instrumental in determining the actual cost associated with each permit.

- **Process Improvement Team (PIT Crew)**

During FY 2009, the KFO formed a Process Improvement Team (PIT Crew) comprised of staff with diverse experience and responsibilities. The PIT Crew's purpose was to develop an efficient and effective process for KFO Technical and Inspection staff to work together as an assigned team to design and implement a quality permit from initial conception of proposed mining through final bond release. KFO management gave the PIT Crew the task of creating a team concept for streamlining requests for technical assistance, which would improve coordination between work groups, implement and promote a team environment, empower work groups to set priorities without management involvement and identify and resolve issues during the application review and during the early stages of mining. The PIT crew developed a list of seven permits for a test period to track the progress and successes of the concept.

During FY 2010, the PIT crew completed a written outline of the informal process and conducted a two-day team building workshop for all KFO employees. The PIT crew worked with KFO management to form seven teams for assignment to the selected permits. To date, all feedback received from members of the seven teams has been positive. Although the PIT crew does not currently meet on a scheduled basis, the crew members remain available to provide support when requested. KFO management has expressed an interest in including additional active permits to the team approach. Therefore, during FY 2011 the PIT crew will meet to implement the inclusion of additional permits.

- **Endangered Species**

The Range-wide Indiana Bat Protection and Enhancement Plan (PEP) Guidelines were released for use on September 2, 2009. A diverse group of individuals and organizations worked to develop the guidelines which are to be used as a guide in developing permit specific plans in surface mining permits throughout the range of the Indian bat. The guidelines were developed to provide a higher level of consistency in permitting requirements from state to state and region to region. KFO and the Fish and Wildlife Service (FWS) in the Cookeville Field Office developed the document Coal Mining in Tennessee, Minimum Guidelines for Development of Protection and Enhancement Plans for the Indiana Bat (*Myotis sodalis*) in March 2006. In 2010, FWS and KFO continued to require the use of the 2006 Tennessee guidelines in surface mining applications where concerns for the Indiana bat were identified. FWS and KFO have discussed implementing the 2009 range-wide PEP guidelines in Tennessee and will work toward implementing its use in 2011. In March 2009 the document Coal Mining in Tennessee Minimum Guidelines for the Development of Protection and Enhancement Plans for Blackside Dace (*Phoxinus Cumberlandensis*) was released for use by the industry to use when preparing a mining application where the blackside dace has been historically identified. Most permitting activities in 2010 either took place or were proposed to take place in areas where the blackside dace had been identified. As a result, use of the 2009 Blackside Dace guidelines is often required and is proving to provide valuable water quality, fish, and macro-invertebrate data for many of the streams in the Tennessee coalfields.

- **Youth Initiative**

The KFO employed six (6) interns during 2010 working in the areas of inspection, engineering, geology, GIS, and administration. Some of these interns were part of the Mickey Leland Energy Fellowship Program and AmeriCorps programs that place youth in positions designed to offer mentoring, experience, and the opportunity to work side by side with experts in the field.

The KFO interns resided in the Knoxville area during the summer months. During their internships, they were able to experience the culture and diversity of the area, as well as, the vast outdoor opportunities available.



The interns gathered data, maps, and information to complete their summer project. They investigated the extent of the underground mine workings and water quality issues at a slurry impoundment.

- **Litigation** – No new litigation was initiated during FY 2010.

**Pending:**

***National Mining Association v. Kempthorne, No. 00-0549 (E.D. Tenn.)***

In 2000, the National Mining Association (NMA) challenged KFO's issuance of Field Office Policy Memorandum No. 37, which established procedures for revising permits and increasing reclamation bonds where there is unanticipated acid mine drainage (AMD). NMA argued that the Policy Memorandum's new procedures for recalculating bond amounts to account for long-term treatment of AMD violate both the Administrative Procedure Act and the Surface Mining Control and Reclamation Act of 1977 (SMCRA). On March 2, 2007, OSM published a final rule in the *Federal Register* that provides for the use of trust funds and annuities to fund the treatment of post-mining pollutional discharges from surface coal mining operations and thus satisfy performance bond obligations for treatment of those discharges. Although Field Office Policy Memorandum No. 37, subject of the pending lawsuit, was rescinded on February 29, 2008, the litigation remains pending.

## V. TECHNICAL ASSISTANCE

KFO continues to have a number of its employees, primarily the Technical Group staff, serving on different projects, teams, and assignments that are of common interest to the Appalachian Region and to all of OSM. Several of these technical assistance activities are cooperative efforts with the Program Support Division within ARC. During FY 2010, the Technical Group spent approximately 93 percent of their time on Federal program activities and 7 percent on technical assistance activities. The projects and activities, which involve KFO employees, are as follows:

- National Blasting Work Group
- Instructors for NTTP Training Courses
- Instructors for TIPS Training Courses
- Appalachian Regional Reforestation Initiative
- KFO Reforestation Initiative
- Stream Protection Rule and the associated Environment Impact Statement
- Technical support to OSM's Lexington and Charleston Field Offices for oversight and Federal Lands issues
- Technical support to Bureau of Land Management on Federal Lands issues such as leasing and NEPA requirements
- Technical support for joint OSM / State initiative to apply geospatial technology in implementation of the SMCRA regulatory program.
- New River Mussel Survey
- Technical support to National Park Service and other Federal / State agencies in development of a hydrologic database for the New River watershed
- Dam Safety Team
- Image Team
- Impoundments Team

## **VI. 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**

To further the concept of reporting end results, the findings from performance standard evaluations are being collected for a national perspective in terms of the number and extent of observed off-site impacts and the number of acres that have been mined and reclaimed that meet the bond release requirements for the various phases of reclamation.

- **Off-Site Impacts**

Active Sites - One of the intents of SMCRA is to prevent adverse affects to the public and to the environmental resources adjacent to a permitted surface coal mining operation. While conducting complete and partial inspections during EY 2010 KFO Reclamation Specialists evaluated all active mine sites for off-site impacts. Off-site impacts resulting from SMCRA violations were directly reported via the Minesite Evaluation Inspection Report (MEIR). The MEIR data was transferred to a database with a summary report developed for year-end reporting purposes. In addition to MEIR data collection, citizen complaint files were evaluated and interviews with individual inspectors were conducted to determine if off-site impacts from other sources had occurred.

Fifteen permits were identified as having 21 events that impacted 21 resources (people, land, water and structures). Thirteen off-site impacts to water (9 minor and 4 moderate) occurred due to changes in water chemistry during mining or sediment laden run-off leaving the sites for short distances. Seven impacts to land (4 minor, 1 moderate and two major) resulted from mining disturbances occurring outside the approved permit boundaries. The two major impacts to land resulted from a landslide and an unpermitted surface disturbance into an area where only auger mining was planned. One minor impact to structures occurred when an excessive amount of mine refuse was tracked by coal trucks onto a public road. During FY 2010, 24 types of impacts were found to have occurred including 13 related to hydrology, 10 related to encroachment and 1 related to land stability.

The majority of the violations were considered to be permittee negligence. For this reason, improvements in the regulatory functions or processes are being reviewed.

During FY 2010, the KFO continued an off-site impact study to determine trends and causes of impacts occurring during the previous four years (FY 2006, 2007, 2008 and 2009). This study is discussed in detail in Section IV of this report.



OSM Inspection Group employee, Will DeBord, surveys off-site impacts within a stream buffer zone.

Bond Forfeited Sites - During FY 2010 the KFO inspected all permanent program bond forfeited sites. A complete evaluation of each site was conducted to determine if natural vegetative processes had stabilized these disturbances to meet the intent of SMCRA and to allow removal from the inspection units list (IUL). These inspections also focused on outstanding violation areas, many of which had remained for several years, as necessary to develop updated recommendations for remediation if necessary.

Field evaluations were conducted at 33 sites. Thirteen of these sites were subsequently removed from the IUL because the disturbances were adequately stabilized to meet the intent of SMCRA. The remaining 20 sites were found to have deficiencies which prevented removal from the IUL. Evaluations of these sites included recommendations for corrective work to move the sites towards complete reclamation and removal from the IUL.

These evaluations identified three offsite impacts (1 minor, 2 moderate) which were occurring at bond forfeited sites. All three were adverse impacts occurring to water and resulted from water chemistry alterations related to iron, manganese and pH levels.



Iron seep adjacent to laurel Fork Mining Company Bond Forfeited permit #2578

- **Bond Releases**

During the period October 1, 2009, through September 30, 2010, KFO processed 28 bond release applications. A total of 20 release actions were approved, consisting of 10 Phase I, 5 Phase II, and 5 Phase III releases. These actions resulted in returning all or a portion of the bond on 3,614 acres of reclaimed mine lands (see attached Table 5). During this same period there were 2 bond release applications disapproved, 1 bond release application was returned as incomplete and 5 bond release applications were withdrawn.

- **Abandoned Mine Land Projects in Tennessee – Title IV Reclamation Projects for FY 2010**

During FY 2010, TDEC submitted and OSM issued an Authorization to Proceed (ATP) on three AML construction projects:

Mill Creek Community Waterline Extension Project in Morgan County, TN – ATP issued August 18, 2010. TDEC will utilize approximately \$173,000 from the Water Supply Project Costs subaccount. The project will address the extension of the county waterline to 16 households currently on well water affected by pre-SMCRA coal mining. Subsurface water in the Mill Creek community is generally high in iron, manganese, and sulfates. 100% of the wells sampled in the community exceeded the Secondary Drinking Water Regulation (SDWR) for iron and manganese.

New River Phase 3 Waterline Extension Project in Anderson County, TN – ATP issued September 17, 2010. TDEC, along with Anderson County Water Authority, propose to expand its public water system to provide potable water to 32 residents in the proposed area. This project will utilize an estimated \$305,100 from the 2010 Water Supply subaccount. Presently there is no water service to this section of the New River Community. Water samples were taken which revealed sulfates, iron and manganese present in the wells in the area in concentrations that exceed the allowable limits for

drinking water as regulated by TDEC and caused by pre-law mining. The impurities found in the tested wells create a public health and potential water quality problem for all persons exposed to the involved water supply sources.

Bellview Reclamation Project in Van Buren County, TN – ATP issued September 30, 2010. This project will use an estimated \$440,000 from the Non-Water Supply subaccount of the 2010 AML grant. Reclamation will consist of eliminating dangerous highwalls and acidic water filled pits by re-grading on-site spoil to provide positive drainage and stable slopes. This project will also include the restoration of a 650 foot section of an unnamed tributary to Samples Fork which was decimated by pre-law mining. A total of 38 acres will be disturbed, reclaimed, and re-vegetated.

During FY 2010, TDEC completed the following AML projects:

Silvey Gap Gob Pile Project – Construction was completed as of December 17, 2009, with \$1,625 to be spent in AML non-emergency construction funding for native hardwood tree planting. The total estimated abatement construction cost associated for the AML hazard was \$466,625. The estimated AML construction funding of \$1,625 is less than one percent of the total cost. The reduced construction cost was achieved by allowing coal removal from the existing coal refuse pile incidental to AML hazard abatement construction. The project involved stabilization and re-vegetation of mine lands through removal of the gob pile. A final inspection was conducted August 5, 2010. Native hardwood trees will be planted early spring 2011.



Silvey Gap Gob Pile – AML Enhancement  
July 23, 2009



Silvey Gap Gob Pile – Post Reclamation  
December 17, 2009

Cherry Branch Reclamation Project – Construction involved \$600,000 in AML non-emergency construction funding that was used to eliminate three Priority 2 hazardous water bodies, 3,300 linear feet of Priority 3 highwall, and the restoration of 58 acres of pre-SMCRA mined land. A final inspection was conducted on September 2, 2010.



Cherry Branch Reclamation Project  
December 19, 2008



Cherry Branch – Post Reclamation  
September 2, 2010

Gobey Community Waterline Extension – Construction completed on April 22, 2010. TDEC contributed \$300,000 in AML water supply construction funding combined with \$785,000 from other sources for a total of \$1,085,000. These monies provided potable water to 45 households where water contamination or diminution resulted from pre-SMCRA coal mining.

## **APPENDIX A:**

These tables present data pertinent to mining operations and Federal regulatory activities within Tennessee. The reporting period for the data contained in the tables is October 1, 2009, through September 30, 2010. Additional data used by KFO in its evaluation of performance is available for review in the evaluation files maintained by the KFO.

### **TABULAR SUMMARY OF CORE DATA TO CHARACTERIZE THE PROGRAM**

- Table 1: Coal Production in Tennessee
- Table 2: KFO Inspectable Units in Tennessee
- Table 2: KFO Inspectable Units in Georgia
- Table 3: KFO Permitting Activity in Tennessee
- Table 4: Off-Site Impacts in Tennessee
- Table 4: Off-Site Impacts in Georgia
- Table 5: Annual State Mining and Reclamation Results for Tennessee
- Table 6: KFO Bond Forfeiture Activity
- Table 7: KFO Staffing
- Table 8: Funds Granted to State by OSM
- Table 9: KFO Inspection Activity in Tennessee
- Table 9: KFO Inspection Activity in Georgia
- Table 10: KFO Enforcement Activity in Tennessee
- Table 10: KFO Enforcement Activity in Georgia
- Table 11: Lands Unsuitable Activity

**TABLE 1**

**Coal Produced for Sale, Transfer, or Use**  
 (Millions of Short Tons)

Period	Surface Mines	Underground Mines	Total
Coal production <sup>A</sup> for entire State:			
Calendar Year			
CY 2007	1.777	0.886	2.663
CY 2008	1.582	0.797	2.379
CY 2009	1.317	0.881	2.198

<sup>A</sup>

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

**Provide production information for the latest three full calendar years to include the last full calendar year for which data is available.**

**TABLE 2**

**Inspectable Units**  
 As of September 30, 2010

Coal mines and related facilities	Number and Status of Permits								Nbr. of Insp. Units <sup>A</sup>	Permitted Acreage <sup>B</sup> (100's of acres)				
	Active or temporarily inactive		Inactive Phase II bond release		Abandoned		Totals			Federal Lands		State/Private Lands		All Lands
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	IP	PP	Total
<b>LANDS FOR WHICH THE STATE IS THE REGULATORY AUTHORITY</b>														
Surface mines	2	53	1	5	94	28	97	86	183	0.0	2.0	34.8	247.7	284.5
Underground mines	0	31	0	2	21	18	21	51	72	0.0	1.6	1.4	8.8	11.8
Other facilities	1	31	0	6	2	5	3	42	45	0.0	0.0	0.1	21.9	22.0
<b>Total</b>	<b>3</b>	<b>115</b>	<b>1</b>	<b>13</b>	<b>117</b>	<b>51</b>	<b>121</b>	<b>179</b>	<b>300</b>	<b>0.0</b>	<b>3.6</b>	<b>36.3</b>	<b>278.4</b>	<b>318.3</b>
Total number of permits:										300				
Average number of permits per inspectable unit (excluding exploration sites):										1.00				
Average number of acres per inspectable unit (excluding exploration sites):										106.10				
Number of exploration permits on State and private lands:										1	On Federal lands <sup>C</sup> :		0	
Number of exploration notices on State and private lands:										42	On Federal lands <sup>C</sup> :		0	
<p>IP: Initial regulatory program sites          PP: Permanent regulatory program sites</p> <p><sup>A</sup> Inspectable units include multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.</p> <p><sup>B</sup> When a single inspectable unit contains both Federal lands and State/Private lands, enter the permitted acreage for each land type in the appropriate category.</p> <p><sup>C</sup> Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management.</p>														

TABLE 2															
Inspectable Units As of September 30, 2010															
Coal mines and related facilities	Number and Status of Permits								Nbr. of Insp. Units <sup>A</sup>	Permitted Acreage <sup>B</sup> (100's of acres)					
	Active or temporarily inactive		Inactive Phase II bond release		Abandoned		Totals			Federal Lands		State/Private Lands		All Lands	
	IP	PP	IP	PP	IP	PP	IP	PP		IP	PP	IP	PP	Total	
<b>LANDS FOR WHICH THE STATE IS THE REGULATORY AUTHORITY</b>															
Surface mines	0	0	0	0	4	0	4	0	4	0.0	0.0	1.3	0.0	1.3	
Underground mines	0	0	0	0	2	0	2	0	2	0.0	0.0	0.1	0.0	0.1	
Other facilities	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0.0</b>	<b>0.0</b>	<b>1.4</b>	<b>0.0</b>	<b>1.4</b>	
Total number of permits:											6				
Average number of permits per inspectable unit (excluding exploration sites):											1.00				
Average number of acres per inspectable unit (excluding exploration sites):											23.33				
Number of exploration permits on State and private lands:									0	On Federal lands <sup>C</sup> :		0			
Number of exploration notices on State and private lands:									0	On Federal lands <sup>C</sup> :		0			
<p><b>IP:</b> Initial regulatory program sites  <b>PP:</b> Permanent regulatory program sites</p> <p><sup>A</sup> Inspectable units include multiple permits that have been grouped together as one unit for inspection frequency purposes by some State programs.</p> <p><sup>B</sup> When a single inspectable unit contains both Federal lands and State/Private lands, enter the permitted acreage for each land type in the appropriate category.</p> <p><sup>C</sup> Includes only exploration activities regulated by the State pursuant to a cooperative agreement with OSM or by OSM pursuant to a Federal lands program. Excludes exploration regulated by the Bureau of Land Management.</p>															

**TABLE 3**

**State Permitting Activity**  
 As of September 30, 2010

Type of Application	Surface mines			Underground mines			Other facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres <sup>A</sup>	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
New Permits	1	2	1,330	1	1	94	0	0	0	2	3	1,424
Renewals	0	1		4	5		3	2		7	8	
Transfers, sales, and assignments of permit rights	2	0		4	0		5	0		11	0	
Small operator assistance	0	0		0	0		0	0		0	0	
Exploration permits										0	0	
Exploration notices <sup>B</sup>											18	
Revisions (exclusive of incidental boundary revisions)		75			12			17			104	
Revisions (adding acreage but are not incidental boundary revisions)	0	0	0	0	0	0	0	0	0	0	0	0
Incidental boundary revisions	19	19	52	1	0	0	2	2	4	22	21	56
<b>Totals</b>	<b>22</b>	<b>97</b>	<b>1,382</b>	<b>10</b>	<b>18</b>	<b>94</b>	<b>10</b>	<b>21</b>	<b>4</b>	<b>42</b>	<b>154</b>	<b>1,480</b>

OPTIONAL - Number of midterm permit reviews completed that are not reported as revisions: 12

<sup>A</sup> Includes only the number of acres of proposed surface disturbance.

<sup>B</sup> State approval not required. Involves removal of less than 250 tons of coal and does not affect lands designated unsuitable for mining.

<b>TABLE 4</b>														
<b>OFF-SITE IMPACTS (excluding bond forfeiture sites)</b>														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	1	0	0	0	1	0	0	0	0	0	0	0	0
	Hydrology	13	0	0	0	0	0	0	9	4	0	0	0	0
	Encroachment	10	0	0	0	3	1	2	0	0	0	1	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		24	0	0	0	4	1	2	9	4	0	1	0	0
Total number of inspectable units (excluding bond forfeiture sites):						131								
Inspectable units free of off-site impacts:						116								
Inspectable units with off-site impacts:						15								
<b>OFF-SITE IMPACTS ON BOND FORFEITURE SITES</b>														
RESOURCES AFFECTED			People			Land			Water			Structures		
DEGREE OF IMPACT			Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	3	0	0	0	0	0	0	1	2	0	0	0	0
	Encroachment	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		3	0	0	0	0	0	0	1	2	0	0	0	0
Total number of inspectable units (only bond forfeiture sites):						169								
Inspectable units free of off-site impacts:						166								
Inspectable units with off-site impacts:						3								

<b>TABLE 4</b>													
<b>OFF-SITE IMPACTS (excluding bond forfeiture sites)</b>													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
	Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0
Total number of inspectable units (excluding bond forfeiture sites):		0											
Inspectable units free of off-site impacts:		0											
Inspectable units with off-site impacts:		0											
<b>OFF-SITE IMPACTS ON BOND FORFEITURE SITES</b>													
RESOURCES AFFECTED		People			Land			Water			Structures		
DEGREE OF IMPACT		Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major	Minor	Moderate	Major
TYPE OF IMPACT AND TOTAL NUMBER OF EACH TYPE	Blasting	0	0	0	0	0	0	0	0	0	0	0	0
	Land Stability	0	0	0	0	0	0	0	0	0	0	0	0
	Hydrology	0	0	0	0	0	0	0	0	0	0	0	0
	Encroachment	0	0	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0
Total number of inspectable units (only bond forfeiture sites):		6											
Inspectable units free of off-site impacts:		6											
Inspectable units with off-site impacts:		0											

<b>TABLE 5</b>				
<b>Annual State Mining and Reclamation Results</b>				
Bond release phase	Applicable performance standard	During this Evaluation Year		
		Total acreage released	Acreage also released under Phase I	Acreage also released under Phase II
A	B	C	D	E
Phase I	- Approximate original contour restored - Topsoil or approved alternative replaced	4,814		
Phase II	- Surface stability - Establishment of vegetation	1,289	1,199	
Phase III	- Post-mining land use/productivity restored - Successful permanent vegetation - Groundwater recharge, quality and quantity restored - Surface water quality and quantity restored	1,618	1,199	1,199
<b>Bonded Acreage<sup>A</sup></b>			<b>Acres during this evaluation year</b>	
Total number of new acres bonded during this fiscal year			1,480	
Number of acres bonded during this fiscal year that are considered remining, if available			0	
Number of acres where bond was forfeited during this fiscal year			0	
<b>Bonded Acreage Status</b>		<b>Cumulative Acres</b>		
Total number of acres bonded as of the end of last review period (Sept. 30, 2009) <sup>B</sup>		20,006		
Total number of acres bonded as of the end of this review period (Sept. 30, 2010) <sup>B</sup>		21,486		
Sum of acres bonded that are between Phase I bond release and Phase II bond release as of Sept. 30, 2010 <sup>B</sup>		4,095		
Sum of acres bonded that are between Phase II bond release and Phase III bond release as of Sept. 30, 2010 <sup>B</sup>		1,594		
<b>Disturbed Acreage</b>		<b>Acres</b>		
Number of Acres Disturbed during this fiscal year		594		
Number of Acres Disturbed at the end of the fiscal year (cumulative)		0		
<p><sup>A</sup> Bonded acreage is considered to approximate and represent the number of acres disturbed by surface coal mining and reclamation operations.</p> <p><sup>B</sup> Bonded acres in this category are those that have not received a Phase III or other final bond release (State maintains jurisdiction).</p>				

Brief explanation of columns D & E. The States will enter the total acreage under each of the three phases (column C). The additional columns (D & E & E) will "break-out" the acreage among Phase II and/or Phase III. Bond release under Phase II can be a combination of Phase I and II acreage, and Phase III acreage can be a combination of Phase I, II, and III. See "Instructions for Completion of Specific Tables," Table 5 for example.

**TABLE 6**

**State Bond Forfeiture Activity**  
 (Permanent Program Permits)

Bond Forfeiture Reclamation Activity by SRA	Number of Sites	Dollars	Acres
Sites with bonds forfeited and collected that were unreclaimed as of Sept. 30, 2009 (end of previous fiscal year) <sup>A</sup>	4		140
Sites with bonds forfeited and collected during Fiscal Year 2010 (current fiscal year)	0	\$ 0	0
Sites with bonds forfeited and collected that were re-permitted during Fiscal Year 2010 (current fiscal year)	0		0
Sites with bonds forfeited and collected that were reclaimed during Fiscal Year 2010 (current fiscal year)	1		15
Sites with bonds forfeited and collected that were unreclaimed as of Sept. 30 2010 (end of current fiscal year) <sup>A</sup>	3		125
Sites with bonds forfeited but uncollected as of Sept. 30 2010 (end of current fiscal year)	0		0
<b>Surety/Other Reclamation (In Lieu of Forfeiture)</b>			
Sites being reclaimed by surety/other party as of Sept. 30, 2009 (end of previous fiscal year) <sup>B</sup>	0		0
Sites where surety/other party agreed to do reclamation during Fiscal Year 2010 (current fiscal year)	0		0
Sites being reclaimed by surety/other party that were re-permitted during Fiscal Year 2010 (current fiscal year)	0		0
Sites with reclamation completed by surety/other party during Fiscal Year 2010 (current fiscal year) <sup>C</sup>	0		0
Sites being reclaimed by surety/other party as of Sept. 30, 2010 (current fiscal year) <sup>B</sup>	0		0

<sup>A</sup> Includes data only for those forfeiture sites not fully reclaimed as of this date

<sup>B</sup> Includes all sites where surety or other party has agreed to complete reclamation and site is not fully reclaimed as of this date

<sup>C</sup> This number also is reported in Table 5 as Phase III bond release has been granted on these sites

**TABLE 7**

**State Staffing**  
 (Full-time equivalents at end of evaluation year)

Function	FY 2010
Regulatory Program	
Permit Review	11.00
Inspection	11.00
Other (administrative, fiscal, personnel, etc.)	14.00
Regulatory Program Total	36.00
AML Program Total	1.00
<b>Total</b>	<b>37.00</b>

**TABLE 8**

**Funds Granted To Tennessee  
 BY OSM**

(During the Current Fiscal Year)

(Actual Dollars, Rounded to the Nearest Dollar)

Type of Funding	Federal Funds Awarded During Current Evaluation Year	Federal Funding as a Percentage of Total Program Costs
Regulatory Funding		
Administration and Enforcement Grant	\$ 0	0.00 %
Other Regulatory Funding, if applicable	\$ 0	0.00 %
Subtotal	\$ 0	
Small Operator Assistance Program	\$ 0	100 %
Abandoned Mine Land Reclamation Funding <sup>A</sup>	\$ 2,571,867	100 %
<b>Totals</b>	<b>\$ 2,571,867</b>	

<sup>A</sup> Includes funding for AML Grants, the Clean Streams Initiative and the Watershed Cooperative Agreement Program.

**TABLE 9**

**State Inspection Activity  
 During Current Fiscal Year**

Inspectable Unit Status	Number of Inspections Conducted	
	Complete	Partial
Active <sup>A</sup>	420	887
Inactive <sup>A</sup>	120	22
Abandoned <sup>A</sup>	8	1
<b>Total</b>	<b>548</b>	<b>910</b>
<b>Exploration</b>	<b>68</b>	<b>26</b>

<sup>A</sup> Use terms as defined by the approved State program.

**TABLE 9**

**State Inspection Activity  
During Current Fiscal Year**

Inspectable Unit Status	Number of Inspections Conducted	
	Complete	Partial
Active <sup>A</sup>	0	0
Inactive <sup>A</sup>	0	0
Abandoned <sup>A</sup>	0	0
<b>Total</b>	0	0
<b>Exploration</b>	0	0

<sup>A</sup> Use terms as defined by the approved State program.

**TABLE 10**

**State Enforcement Activity**  
**During Current Evaluation Year**

Type of Enforcement Action	Number of Actions <sup>A</sup>	Number of Violations <sup>A</sup>
Notice of Violation	54	74
Failure-to-Abate Cessation Order	1	1
Imminent Harm Cessation Order	2	2

<sup>A</sup> Do not include those violations that were vacated.

**TABLE 10**

**State Enforcement Activity**

During Current Evaluation Year

Type of Enforcement Action	Number of Actions <sup>A</sup>	Number of Violations <sup>A</sup>
Notice of Violation	0	0
Failure-to-Abate Cessation Order	0	0
Imminent Harm Cessation Order	0	0

<sup>A</sup> Do not include those violations that were vacated.

**TABLE 11**

**Lands Unsuitable Activity**

**During Current Fiscal Year**

	Number	Acreage
Number Petitions Received	0	
Number Petitions Accepted	0	
Number Petitions Rejected	0	
Number Decisions Declaring Lands Unsuitable	0	0
Number Decisions Denying Lands Unsuitable	0	0