

## Noncoal Program Evaluation

### **Background**

The types of minerals mined and how they are mined varies significantly across Pennsylvania. The potential for environmental harm and the risk to public safety varies with the type of mineral and mining method. The mining staff's knowledge and experience of the local geology and mining techniques are important in managing an effective regulatory program.

### **What do we do to manage the noncoal program and why?**

#### A. Permitting

Permit applications are required to ensure the mining activity can be done in an environmentally sound manner and ensure public safety in order to prevent environmental harm or safety hazards. The result is a permit that fulfills the requirements of the statute and the rules and regulations.

The following rules and regulations apply to Noncoal mining:

- Chapter 77 (Noncoal Mining)
- Chapter 102 (Erosion and Sedimentation Control)
- Chapter 105 (Dam Safety and Waterways Management)
- Chapter 92 (NPDES) and 93 (Water Quality Standards)
- Chapter 96 (Water Quality Standards Implementation)
- Chapters 121, 123, 127 and 129 (Air)
- Chapter 209 (Surface Mine Safety) and 211 (Explosives)

The mining program is set up differently than the regional offices are organized, where overlapping programs on a specific facility are permitted and inspected by the specific program and coordinated by the ARD. The mining permit covers multiple programs in one integrated permit application. One exception is the requirement for an air quality permit for processing facilities. These are issued by the region's air quality program. Storage tanks for noncoal mine sites are regulated by the Waste program. Permitting involves the following:

- Technical Staff
- Inspection Staff
- Supervisory Staff
- Compliance Staff
- Clerical Staff
- Blasting Inspector in some cases
- Public
- Other State Agencies
- Federal Agencies (USFW, Army Corps)

The projected permitting workload, based on history, shows a constant level or slight increase, showing that fees should be a reliable source of revenue.

## B. Inspections

The mining program conducts inspections of permitted sites to ensure the mining is being undertaken in an environmentally sound manner and to ensure public safety. The basic approach is the prevention of violations, i.e., being proactive to assist operators with compliance rather than correcting violations after they occur. The focus of inspections includes environmental, public safety, and miner safety. Implementation of the compliance program involves the following:

- Inspector
- Inspector Supervisor
- Clerical
- Blasting inspector in some cases

What is involved in an inspection?

- File review in preparation for inspection
- Check the mining license status (License renewals are managed by BMR, with a lapsed license list sent to DMO for compliance assistance)
- Review permit requirements (permit conditions)
- Review blasting records
- Evaluate NPDES compliance
- Worker safety
- Public safety
- Annual Production reporting
- Incidental Coal reporting requirements. (Initial quarter, then annual as required by Section 86.5)
- Air quality (fugitive dust)
- Evaluate compliance with the rules and regulations
- Water sample and monitoring reports
- Compliance activities
- Compliance assistance (future mining plans, concurrent reclamation, stabilization, other potential issues)

The frequency of inspection for a facility is based initially on management direction (4 per year for large and 2 per year for small). The frequency is adjusted based on potential environmental impact, complexity of the operation, proximity to dense populations, permit revisions, complaints, and compliance action.

## C. Enforcement

Orders are written for violations that result in some environmental impact or that can't be corrected in a short period of time. Civil Penalties are assessed for violations resulting in an order.

## Bond Forfeiture

Bonds are forfeited when violations go uncorrected for an extended period of time. The efficiency of the bond forfeiture program has been significantly impacted by the retirement of a license reviewer. The staff who would normally do bond forfeitures have to review license applications.

### D. Licensing

The efficiency in the program has been degraded by the reduction in personnel and the hiring freeze. An e-Licensing project is underway and will help improve efficiency sometime in 2011. However, this improvement will not be sufficient to offset the loss of the staff position.

The licensing program generates more money than it costs to administer it. With the loss of a staff person, reviews are not able to be completed on time and could result in exceeding the money-back guarantee deadlines and therefore a reduction in program revenue.

### E. Program Management

There is a substantial workload to improve the regulatory and policy implementation of the Noncoal Program. This includes developing guidance to ensure consistency across the state, managing the fiscal requirements of the program and developing updated regulations. A comprehensive update of the noncoal mining regulations has been identified as a priority. This work has not been done due to the lack of staff available to do the work.

### **Are we doing an efficient job operating the program?**

In order to evaluate the noncoal program various tools were used.

Staff effort versus the workload was graphed. This graph is included as Figure 1.

The work effort, reported in CATS was broken down by category, administrative compliance, and permitting. This data is presented in Table 1.

The typical application review time frames were compiled and assessed. This data is included in Tables 2 and 3.

Inspection frequency actual versus required (4 and 2) was reviewed. The graphs of inspection frequency are included as figures 2 and 3.

The actual inspection frequency is managed with priorities determined considering potential environmental impact and public safety. There is a wide variety of minerals and

type of mining widely varies across the state. Figure 4 is a pie chart showing the percentage of permits by mineral.

Priority is given to responding to the citizens through resolution of citizen complaints in a timely manner. When a water supply loss is reported, the department contacts the complainant within 24 hours. For other complaints, the department contacts the complainant within 48 hours and investigates the complaint during the next routine inspection unless necessary to investigate sooner (for example dust complaints). Complaints constitute a significant workload. Certain investigations in the noncoal program, specifically sinkhole investigations in the karst areas of southeast PA, can take a significant amount of staff time to resolve.

### **Efficiency Efforts**

In order to be efficient, the staff is utilized across a variety of activities to make best use of time (e.g. coal, bond forfeiture reclamation projects, TMDLs, watershed projects).

Compliance staff is using technology to improve efficiency of determining compliance with permit. For example, GPS is used to track affected area and incorporate into GIS to compare to the mapping and aerial photography.

Recently the bluestone test pit permit waiver was eliminated. This has improved efficiency by eliminating the follow-up on these activities to obtain compliance.

In 2004, BMR discontinued the publication of annual noncoal production report because it was not required by the statute.

The use of consolidated inspection districts leads to efficient inspector workload management. This reduces travel time and expenses. The work areas are continually evaluated and adjusted. GIS mapping of inspection districts using data from the workload analysis and eFACTS are used by the Compliance Managers as needed to assist in this task.

The mining program has eliminated state-wide staff meetings to reduce costs.

In 2005, efficiency was improved by redistricting of 8 counties from the Pottsville DMO to Cambria (6) and Moshannon (2) districts.

At the end of each calendar and fiscal year the workload analysis is updated to evaluate the efficiency of its current staffing levels. Any time there is a vacant position, the need for a replacement is evaluated using this data. Positions are then moved to where the need is to address workload imbalance.

### **What things if changed could be more efficient?**

Can we do more with the resources (personnel) we have?

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With more General Permits (for bluestone, sand and gravel, topsoil) permit review times can be reduced. However, an investment of time is needed to develop more GPs. Work was started on a GP for bluestone, but it could not be completed due to staffing and other issues taking priority (e.g. ash).

The 3 Information Technology projects scheduled for 09-10 and 10-11 have been postponed due to lack of state matching funds. These projects were focused on improving efficiency.

The Mining Program is currently working with the Bureau of Information Technology to evaluate potential electronic permitting programs and mobile platform technologies used in neighboring states for potential adoption by the department.

The hiring freeze and elimination of a position are compromising timely bond forfeiture completion.

### **Can we do the activity less expensively?**

Electronic submittal of applications, water monitoring and inspections would save staff time. Electronic permitting should reduce the consulting cost for a permit, benefiting the mine operators.

### **Can we do the activity in less time resulting in lower staff costs?**

Aerial inspections could be conducted to cover larger areas and conduct many inspections in a short period of time. Also, the use of aerial photography prior to conducting a field review can better refine areas would help. The access to photo resources is limited. (e.g. Google Earth would provide the most recent public available aerial photography). Efficiencies could be gained by reducing administrative policies that consume staff time with minimal cost savings. (e.g. Inspectors are denied use of postage equipment in regional office, vehicle maintenance, eliminate need for justification for mandatory safety equipment like steel toe shoes, policy to obtain 1,000 miles per month to justify vehicle, fact sheet expiration)

The program could use web-based meeting capability with web cameras for staff meetings and training, to minimize travel costs and staff time.

One additional staff person is needed in BMR dedicated to the noncoal program.

Quality of large noncoal applications:

Applications with a significant number of deficiencies consume more staff time during the review process than applications with minimal deficiencies. Some applications are deficient due to ambiguous regulations, some due to lack of experienced consultants, some are due to poor quality control by applicant. Applications that are deficient before

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acceptance could be returned as administratively incomplete and the applicant would need to resubmit. Application fee would be nonrefundable. The application would need to be resubmitted with new fee.

Applications that are determined to be deficient during the technical review could be denied (check statute and regulatory authority). Application fee would be nonrefundable. The application would need to be resubmitted with new fee.

If application is of good quality (minimal number of corrections) the Department could provide the operator a credit towards the next year administrative fee.

### Civil Penalties

Penalty Assessments need to be increased. We need to do a better job assessing and collecting penalty assessments. The current amounts are not a true deterrent. Therefore bad actors are more likely to continue to cause violations which increase compliance work load which affects efficiency. There is a need to educate staff to document violations well and take appropriate action. The civil penalty program is not as efficient because formal civil penalties are required to be reviewed by regional legal counsel before sending them out to the operator. This takes a month to complete. Efficiency can be improved by a standard assessment document that is fill-in-the-blank. Penalties could also be assessed for NOV's. Improvements to the Noncoal Civil Penalty Program will be initiated promptly.

### Document Management

The eLibrary and document management (updating forms and creating new ones) needs to be more user-friendly to find forms, policies, and TGD's. Time is wasted looking for documents or directing others to documents

### **What can we stop doing that we are now doing?**

#### Clean fill

The mining program is planning to discontinue clean fill approval for new sites. Existing sites will continue, but authorization will be revoked if a violation occurs. The mining clean fill program is not required by statute, nor is it necessary by regulation. The consequence is that if needed, an operator can still manage clean fill through BWM clean fill policy at places other than permitted mine sites. This program suspension will reduce the technical review, inspection, monitoring and litigation time.

### **We are not currently meeting inspection frequency, what is the consequence of that?**

Violations that could result in environmental harm and risk to public safety are not identified in a timely manner and could be allowed to exist for a very long time (a year or more).

For those sites where inspections are missed, the inspector loses situational awareness of the site, resulting in diminished rapport with operator. Also the pit configuration could have changed significantly during the time period between inspections.

We are less proactive and therefore the compliance assistance to avoid violations is less effective. The result is in higher potential for violations and environmental harm.

Less frequent inspections also create a competitive advantage for the less responsible operators.

### **Borrow Pits for Oil and Gas activities**

Additional workload has developed with the increased gas exploration and development activity. Some of the borrow sites require a mining permit, others are eligible for a permit waiver, and some exceed the permit tonnage limits. These situations require the mining staff to investigate and take compliance action and additional permitting work. The additional workload includes investigating complaints and making determinations relating to a permit waiver.

### **Ideas evaluated but concluded had no efficiency improvement:**

The regulations authorize transferring the small noncoal responsibilities to county conservation districts by agreement. This could reduce inspection areas where the county is willing to take on new work. The regulations only allow transferring the small noncoals and does not allow the large noncoal work to be transferred. Therefore, there would be minimal efficiency gained.

It would be possible to transfer NPDES program to WQ, separate from the Noncoal permit. While it would reduce the workload of the mining program it would transfer the workload to the WQ program.

Figure 1-CATS Time recorded and Workload Hours for 2008

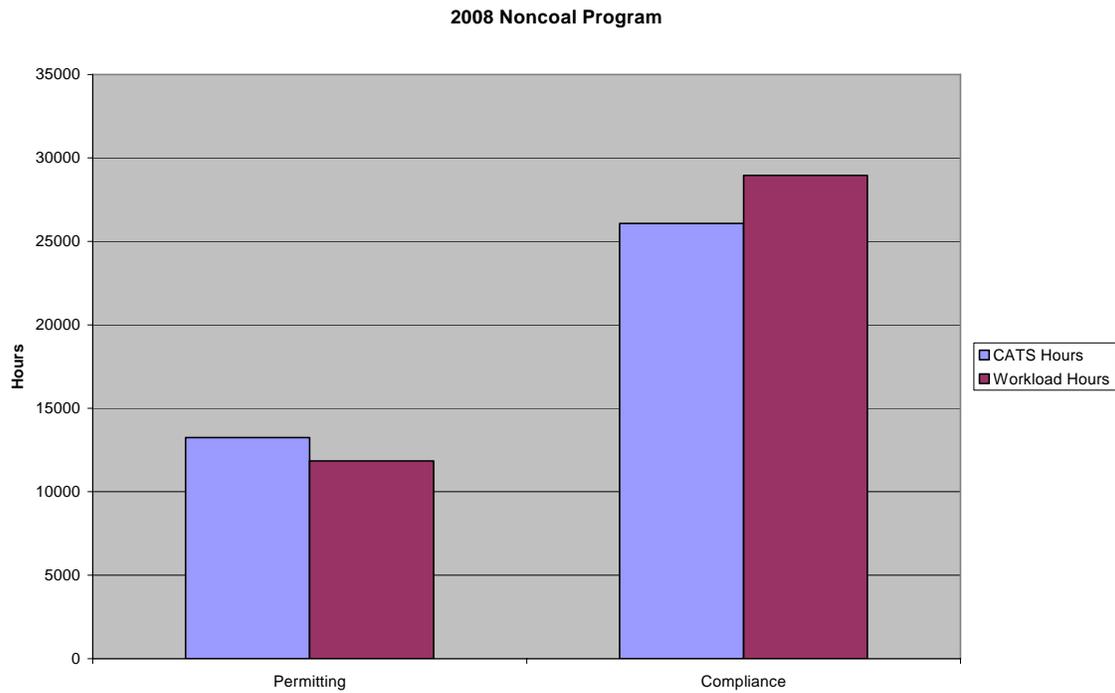


Table 1 CATS Hours and Costs-FY 2008-2009

Hours	Permitting	Compliance	Administrative	Total
Small	3,511	9,179	5,741	18,432
Large	9,740	16,893	15,594	42,227
Combined	13,251	26,072	21,335	60,660
Cost				
Small	\$94,518	\$202,361	\$134,675	\$431,555
Large	\$307,642	\$423,803	\$413,207	\$1,144,653
Combined	\$402,160	\$626,164	\$547,882	\$1,576,208

Hours	% Permitting	% Compliance	% Administrative	Total
Small	19.05	49.8	31.15	100
Large	23.07	40.01	36.93	100
Combined	21.85	42.98	35.17	100
Cost				
Small	21.9	46.89	31.21	100
Large	26.88	37.02	36.1	100
Combined	25.51	39.73	34.76	100

Table 2 Application Review Times (On the Clock) for applications disposed in 2008

On Clock Days Auth Type	Appl Type	Count	On Clock Ave	On Clock Max	On Clock Min	On Clock Median
Bluestone SMP	Minor	9	23.4	138	2	7
Bluestone SMP	New	87	24.3	176	1	8
Bluestone SMP	Transfer	7	152	418	1	17
Blast Plan	Amendment	33	29.9	127	1	26
Blast Plan	New	27	38.3	276	2	10
Bonding Increment	Amendment	18	6.2	57	1	1
Bonding Increment	New	24	36.5	158	1	24
Completion Report	New	46	21.9	151	0	8.5
Exploration	New	80	35.5	525	0	4.5
GP, Short-Term	New	4	5.2	9	2	5
Pre-Application	New	5	34	47	4	43
Large SMP	Major	29	123.9	2097	3	54
Large SMP	Minor	72	32.9	143	3	24
Large SMP	New	28	156.6	1705	9	108
Large SMP	Renewal	95	47.7	99	2	51
Large SMP	Transfer	14	41.6	193	3	21.5
Small SMP	Minor	20	13.5	50	2	8.5
Small SMP	New	113	41.9	294	0	25
Small SMP	Transfer	11	26.5	120	1	8

Table 3 Application Review Times (Total Days) for applications disposed in 2008

Total Days Auth Type	Appl Type	Count	Total Ave	Total Max	Total Min	Total Median
Bluestone SMP	Minor	9	192	528	91	139
Bluestone SMP	New	87	161	993	6	107
Bluestone SMP	Transfer	7	373	629	148	421
Blast Plan	Amendment	33	47	166	2	35
Blast Plan	New	27	148	617	2	23
Bonding Increment	Amendment	18	102	1011	14	68.5
Bonding Increment	New	24	106	309	20	81.5
Completion Report	New	46	74	417	2	46.5
Exploration	New	80	39.3	527	1	6
GP, Short-Term	New	4	27	39	12	28.5
Pre-Application	New	5	35	48	4	44
Large SMP	Major	29	393	6111	57	171
Large SMP	Minor	72	62.7	285	4	37.5
Large SMP	New	28	360	1743	10	309
Large SMP	Renewal	95	75.6	922	9	53
Large SMP	Transfer	14	226	441	4	205
Small SMP	Minor	20	81.6	293	7	22.5
Small SMP	New	113	213	960	8	150
Small SMP	Transfer	11	164.8	494	17	74

Figure 2-Small noncoal Inspection Frequency Calendar Year 2008

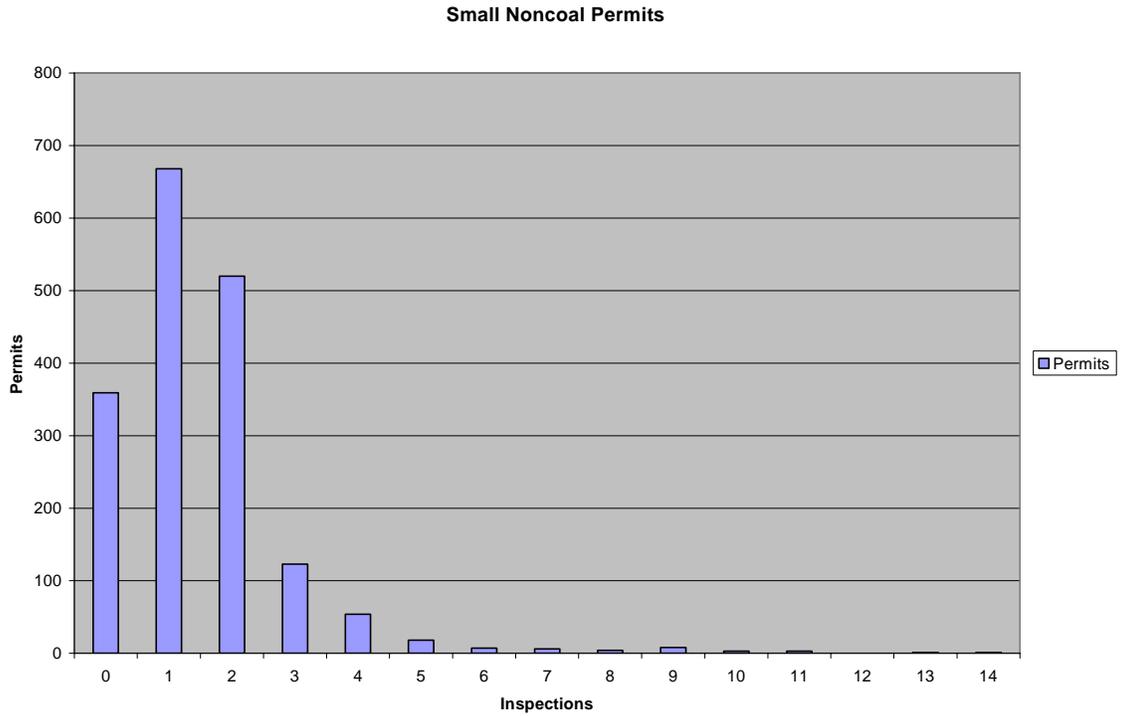


Figure 3-Large Noncoal Inspection Frequency Calendar Year 2008

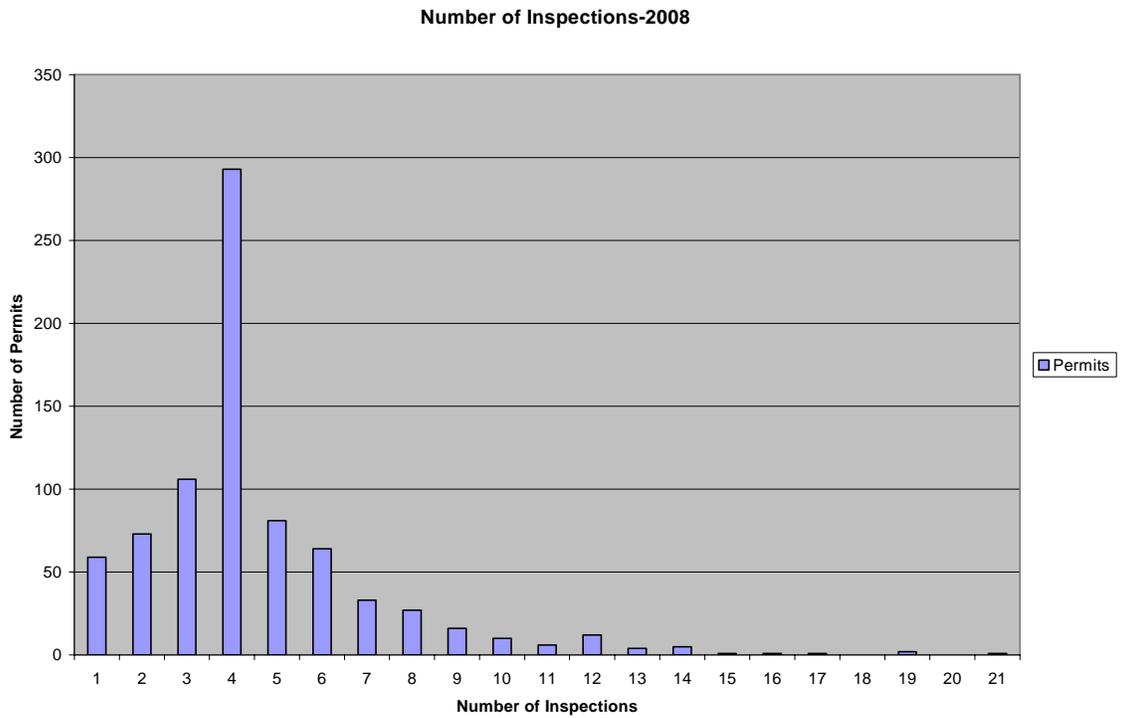
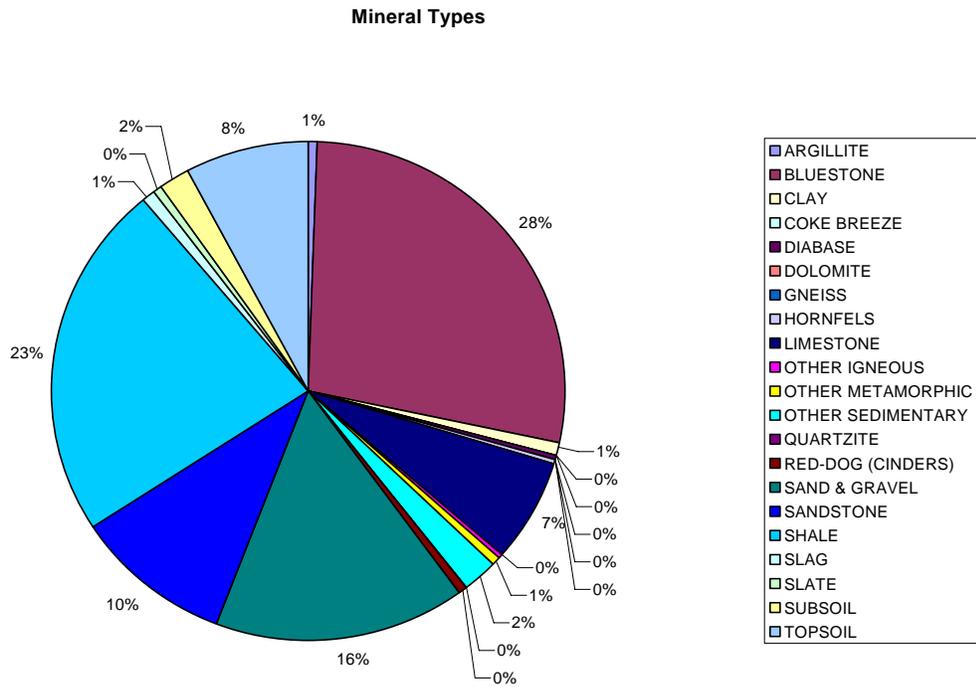


Figure 4



Mineral	% of the Total Permits
Bluestone	28%
Other Sedimentary	23%
Sand and Gravel	16%
Sandstone	10%
Topsoil	8%
Limestone	7%