

**Preliminary Performance Review**

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**The Office of  
Explosives and Blasting**

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**The Office of Explosives and Blasting is Not Meeting  
All Required Mandates**



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**Aaron Allred**  
*Legislative Auditor*

**John Sylvia**  
*Director*

**Susannah Carpenter, CPA**  
*Research Manager*

**Michael Midkiff**  
*Senior Research Analyst*

**Paul Barnette**  
**Lee Ann Vecellio**  
*Research Analysts*

**Performance Evaluation and Research Division**

***Building 1, Room W-314***

***State Capitol Complex***

***Charleston, West Virginia 25305***

***(304) 347-4890***

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**WEST VIRGINIA LEGISLATURE**  
*Performance Evaluation and Research Division*

Building 1, Room W-314  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0610  
(304) 347-4890  
(304) 347-4939 FAX



John Sylvia  
Director

December 15, 2002

The Honorable Edwin J. Bowman  
State Senate  
129 West Circle Drive  
Weirton, West Virginia 26062

The Honorable Vicki V. Douglas  
House of Delegates  
Building 1, Room E-213  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0470

Dear Chairs:

Pursuant to the West Virginia Sunset Law, we are transmitting a *Preliminary Performance Review of the Office of Explosives and Blasting*, which will be presented to the Joint Committee on Government Operations on Sunday, December 15, 2002. The issue covered herein is "The Office of Explosives and Blasting is Not Meeting All required Mandates."

We transmitted a draft copy of the report to the Office of Explosives and Blasting on December 2, 2002. We held an Exit Conference with the OEB on December 4, 2002. We received the agency response on December 10, 2002.

Sincerely,

A handwritten signature in cursive script that reads "John Sylvia".

John Sylvia

JS/wsc

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*Joint Committee on Government and Finance*

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# Executive Summary

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## Issue 1: The Office of Explosives and Blasting is Not Meeting All Required Mandates

The Office of Explosives and Blasting (OEB) was created by Senate Bill 681 during the 1999 session of the 73rd West Virginia Legislature. In this report, the Legislative Auditor reviewed seven mandates that are outlined for the OEB in Chapter 22, Article 3a of the *Code*. Of the seven mandates reviewed, the Legislative Auditor concludes that the OEB has met and continues to meet three, 1) implementation of the pre-blast survey process; 2) education, training, examination and certification of blasters; and 3) proposal of legislative rules. However, there are four mandates which are not being met to the extent to which the OEB was created:

1. **Regulation of Blasting on Surface Mine Operations** - OEB is charged with regulating blasting on all surface mine operations. However, the majority of tasks regulating blasting operations are currently being performed by the Division of Mining and Reclamation, not the OEB.
2. **Setting of Qualifications for Individuals Performing Pre-Blast Surveys** - The OEB has set the qualifications for individuals conducting pre-blast surveys in its legislative rules. However, the primary requirement of these rules is that the individual performing pre-blast surveys undergo training from the OEB. The OEB has not initiated any training for these individuals.
3. **Maintaining and Operating a System to Receive Complaints** - The OEB has been in the process of developing a system to receive complaints. However, staffing difficulties has delayed the completion of this system.
4. **Establishing a System for the Investigation of Claims** - There is currently a significant backlog in claims alleging damage, which need resolved.

Since the creation of the OEB, there has been large turnover in the office. According to the OEB Chief, this turnover has delayed the OEB in meeting its mandates. The OEB has recently hired six additional employees to address the outstanding mandates. While the addition of six employees is a positive measure, the Legislative Auditor is not convinced that the addition of new staff will resolve the unfulfilled mandates. As a result, it is recommended that the OEB be reviewed again by the Legislative Auditor in one year.





# Review Objective, Scope & Methodology

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This preliminary performance review of the West Virginia Office of Explosives and Blasting is required and authorized by the West Virginia Sunset Law, Chapter 4, Article 10 of the West Virginia *Code*, as amended. The mission of the OEB is to enforce blasting laws and promote the protection of the property and citizens of the state of West Virginia without sacrificing economic development.

The **Objective** of this review was to determine if the extent to which the Office of Explosives and Blasting is meeting legislative mandates. The **Scope** of this evaluation covers the period from the creation of the office to present. The **Methodology** included but was not limited to interviews, conversations and correspondence with the Office of Explosives and Blasting and the Division of Mining and Reclamation. Data received from the Office included: 1) a list of all blasting related claims received by the Office of Explosives and Blasting; 2) the total number of blasters tested and certified; and 3) the total number of blast plans and pre-blast surveys. The review also included a sample of 6 claim records, and 113 pre-blast survey requests; annual reports from FY 1999 to FY 2001; and Legislative Rule, Title 199, Series 1. Every aspect of this review complied with Generally Accepted Government Auditing Standards (GAGAS).



## The Office of Explosives and Blasting is Not Meeting All Required Mandates

The Office of Explosives and Blasting (OEB) was created by Senate Bill 681 during the 1999 session of the 73rd West Virginia Legislature. According to *Code*,

*The Legislature declares that the establishment of an office within the division of environmental protection to enforce blasting laws pursuant to surface mining within the state of West Virginia is in the public interest and will promote the protection of the property and citizens of the state of West Virginia without sacrificing economic development.*

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*Of the seven mandates reviewed, the Legislative Auditor concludes that the OEB has met and continues to meet three. However, there are four mandates which are not being met to the extent to which the OEB was created.*

---

In this report, the Legislative Auditor reviewed seven mandates that are outlined for the OEB in Chapter 22, Article 3a of the *Code*. Of the seven mandates reviewed, the Legislative Auditor concludes that the OEB has met and continues to meet three, 1) implementation of the pre-blast survey process; 2) education, training, examination and certification of blasters; and 3) proposal of legislative rules. However, there are four mandates which are not being met to the extent to which the OEB was created:

1. **Regulation of Blasting on Surface Mine Operations** - OEB is charged with regulating blasting on all surface mine operations. However, the majority of tasks regulating blasting operations are currently being performed by the Division of Mining and Reclamation, not the OEB.
2. **Setting of Qualifications for Individuals Performing Pre-Blast Surveys** - The OEB has set the qualifications for individuals conducting pre-blast surveys in its legislative rules. However, the primary requirement of these rules is that the individual performing pre-blast surveys undergo training from the OEB. The OEB has not initiated any training for these individuals.
3. **Maintaining and Operating a System to Receive Complaints** - The OEB has been in the process of developing a system to receive complaints. However, staffing difficulties has delayed the completion of this system.
4. **Establishing a System for the Investigation of Claims** - There is currently a significant backlog in claims alleging damage, which need resolved.

*Since the creation of the OEB, there has been large turnover in the office. According to the OEB chief, this turnover has delayed the OEB in meeting its mandates.*

Since the creation of the OEB, there has been large turnover in the office. According to the OEB Chief, this turnover has delayed the OEB in meeting its mandates. The OEB has recently hired six additional employees to address the outstanding mandates. While the addition of six employees is a positive measure, the Legislative Auditor is not convinced that the addition of new staff will resolve the unfulfilled mandates. As a result, it is recommended that the OEB be reviewed again by the Legislative Auditor in one year.

## OEB Generally Meeting Mandates

The following mandates of the OEB were reviewed by the Legislative Auditor in this report:

- i Regulating blasting on all surface-mining operations;
- i Implementing and overseeing the pre-blast survey process;
- i Maintaining and operating a system to receive and address questions, concerns and complaints relating to mining operations;
- i Setting the qualifications for individuals and firms performing pre-blast surveys;
- i The education, training, examination and certification of blasters;
- i Proposing rules for legislative approval; and
- i Establishing a system for the filing, administration, and resolution of claims.

The OEB has met and continues to meet many of these mandates. Table 1 below shows the mandates which are currently being met by the OEB as well as performance measures.

| <b>Table 1</b>   |  |
|--|--|
| <b>Mandates and Performance Measures Achieved by the OEB</b>   |  |
| <b>Mandates</b>  | <b>Performance Measure</b>   |
| Implementation of Pre-Blast Survey Process   | The OEB houses and maintains a database of over 17,000 pre-blast surveys. Nearly 9,000 of these were received and reviewed by the OEB; the remaining surveys were received by Mining and Reclamation prior to creation of the OEB. |
| Examination of Blasters  | Since March 2001, the OEB has tested 150 individuals, of which 79 have passed. This is comparable to activity in other states with similar programs.*  |
| Proposing Legislative Rules  | The OEB has legislative rules on file with the Secretary of State's Office (rule 199CSR 1), which address all the items of §22-3A-4.   |
| *Pass/fail rate for applicants is comparable when factors such as number of tests per year and the number of individuals failing and retesting during a year are considered. |  |

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However, there are four mandates which are currently not being met satisfactorily by the OEB. First, *Code* requires the OEB to regulate blasting on all surface mine operations. This function is currently being performed by Mining and Reclamation, not OEB. Second, the OEB has not yet set qualifications for individuals conducting pre-blast surveys. Third, the OEB's system for receiving and tracking complaints is not yet fully functional. Finally, the OEB has a large backlog of claims alleging blasting damage which need to be resolved.

## **The Regulation of Blasting on Surface Mine Operations Has Not Been Transferred to OEB from Mining and Reclamation**

The Division of Mining and Reclamation, not the OEB, is currently regulating blasting activities on surface mine operations. According to Mining and Reclamation,

*Today, 82 inspectors working for DMR, respond to blasting complaints and review all blasting related documentation for compliance with the regulations. If the citizen is claiming damage from blasting, the complaint is forwarded to OEB for further investigation. If the complainant is not claiming damage and the company is in compliance with the regulations, a complaint report is filled out and sent to the complainant by DMR inspectors. All other blasting activities in the field are enforced by DMR inspectors. OEB now reviews and approves pre-blast surveys and conducts testing for blasters certifications.*

This contradicts the requirements of the *Code*, which states in part, *“The duties of the [OEB] shall include...regulating blasting on all surface mining operations.”*

## **The OEB is Not Currently Training Those Performing Pre-Blast Surveys**

According to §22-3A-3(d) of the *Code*, the OEB is charged with, *“Setting the qualifications for individuals and firms performing pre-blast surveys.”* Furthermore, according to 199 CSR 1.3.9a.2,

*The office shall develop a list of individuals who have exhibited ability by past experience to perform pre-blast surveys. Provided, however, attending a training course*

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*administered by the office on pre-blast surveys shall meet the previous experience requirements.*

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*The OEB indicated that it had not yet started training for individuals performing pre-blast surveys, nor do they maintain a list of qualified individuals.*

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However, when asked about the performance of this task, the OEB indicated that it had not yet started training for individuals performing pre-blast surveys, nor do they maintain a list of qualified individuals.

### **OEB's System for Receiving and Tracking Complaints Is Not Yet Fully Functional**

The OEB is currently in the process of developing a complaint tracking system. According to the OEB,

*The benefit to the citizen is government in one room. Any person within DEP could take a complaint or question and submit that inquiry, electronically, to the office responsible for that program. The citizen would no longer be transferred from one office to another and tell the same story over and over. The offices gain a complaint tracking system for determining the status of a complaint, and works on the front-end of the complaint process and automatically feeds information into the existing computer system that tracks conclusions of investigations.*

However, this system is still being tested and is not ready for statewide implementation.

### **OEB has a Backlog of Claims Waiting for Resolution**

The OEB is currently reviewing those claims that involve property damage; all other claims are investigated by Mining and Reclamation. With regards to the claims that involve property damage, the OEB describes the process for claim resolution as follows:

1. If an owner suspects damage has occurred, the office conducts a thorough investigation to determine the merit of the damage claim.
2. The owner then is given the option to file a claim with the coal company's insurance, file a claim with the homeowner's insurance carrier, withdraw the claim, or participate in the OEB claims and arbitration process.

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3. If the owner wishes to file a claim through the OEB, the owner is offered a chance to meet with the coal company to attempt to resolve the issue.
  4. If the meeting proves unsuccessful, the owner may request to proceed with a claim. If the owner proceeds with the claim, it is referred to the claims administrator.
  5. After receiving OEB's determination of merit, the claims administrator assigns an adjuster to the claim. The adjuster investigates the claim and relays the finding to the claims administration for a final determination, if the damage is blasting-related.
  6. The OEB, in conjunction with the American Arbitration Association, will maintain a list of arbitrators, compiled with the assistance of the environmental advocate and coal industry representatives. The parties will choose an arbitrator and a final determination of the claim will be made.

The OEB uses a spreadsheet to track claims. This spreadsheet is currently incomplete; therefore, the Legislative Auditor's Office is unable to determine exactly how long it takes to resolve a claim or to make any estimates regarding how long it will take to resolve all open claims. In addition, a sample of six cases from the spreadsheet revealed several dates that were inaccurate. Moreover, the spreadsheet has inspectors assigned to open claims that are no longer with the OEB. This leads the Legislative Auditor to conclude that the spreadsheet is not completely reliable.

Although portions of the OEB's spreadsheet are deficient, it is the only summarized detail of claims that is currently available to the Legislative Auditor. The spreadsheet, while incomplete, does adequately represent the current status, whether open or closed, of all claims. As of November 2002, the OEB spreadsheet showed 202 claims alleging blasting damage. According to OEB records, 39 (19%) of the 202 claims have not been assigned to an inspector yet. Of the 202 claims, 54 (27%) have been withdrawn, settled, or terminated, without the necessity of the claims administrator. Of the 148 open claims, only 5 have been sent to the claims administrator for a resolution. With respect to these 5 claims, the OEB has stated the following:

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*Of the 148 open claims, only 5 have been sent to the claims administrator for a resolution.*

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*The claims administrator has verbally responded that five claims have been completed. OEB has reviewed, for format and completeness, a draft version of one of the reports and commented to the administrator. Final reports on the five completed investigations are expected soon.*

Table 2 shows the disposition of claims, while table 3 shows the age of open claims.

| <b>Table 2</b>  |                         |                            |
|---|-------------------------|----------------------------|
| <b>Claims Alleging Blasting Damage</b>  |                         |                            |
| <b>Disposition</b>  | <b>Number of Claims</b> | <b>Percentage of Total</b> |
| Open Claims   | 148                     | 73%                        |
| Closed Claims:  |                         |                            |
| Withdrawn   | 43                      | 21%                        |
| Settled   | 2                       | 1%                         |
| Terminated*   | 9                       | 4%                         |
| <b>Total Claims</b>   | <b>202</b>              | <b>100%**</b>              |
| * Claims may be terminated based on lack of jurisdiction, failure by the claimant to respond to contact attempts or failure by the claimant to sign necessary forms for continuing the process. |                         |                            |
| ** Percentages may not add up to 100% due to rounding.  |                         |                            |

| <b>Table 3</b>  |                 |
|---|-----------------|
| <b>Age of Open Claims*</b>  |                 |
| Less than 1 year old  | 77 claims (52%) |
| From 1 to 2 years old   | 58 claims (39%) |
| Older than 2 years**  | 8 claims (5%)   |
| *Based on date received by OEB  |                 |
| **Five open claims contained no date indicating the date the claim was received |                 |

As can be seen in Tables 2 and 3, there is currently a large backlog of open claims. Many of these open claims date beyond one year.

### **OEB Sites Staffing Irregularities as Reason for Delays in Meeting Mandates**

According to the Chief of the OEB, turnover within the OEB and the delegation of other duties to remaining staff has delayed the OEB in meeting



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mandates.

*During calendar year 2000, my staff consisted of four individuals that were temporarily assigned from the Office of Mining and Reclamation (OMR) to assist in the formation of the Office of Explosives and Blasting (OEB).*

Of those four individuals, none are currently with the OEB. One individual passed away in February 2001. One individual left the OEB in August 2001, one resigned after much illness in December 2001, and the fourth (an administrative assistant) passed away in October 2002.

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*Even though the OEB has funding for 15 employees, the average number of employees within the office since its creation has been seven.*

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Furthermore, the OEB hired five inspector specialists in January 2001. The OEB states that funding concerns prevented the hiring of the specialists before January 2001. Of the five specialists hired in January 2001, four are no longer with the OEB. Even though the OEB has funding for 15 employees, the average number of employees within the office since its creation has been seven.

## **Effects of Unmet Mandates**

As noted earlier, Mining and Reclamation is currently performing all regulatory tasks for blasting on surface mining activities. Because the majority of tasks currently performed by the OEB were previously conducted by Mining and Reclamation (blast plan review, pre-blast survey, investigation of claims, etc.), it must be concluded that the intent of creating the OEB was to change the desired outcome of the process. To continue to perform these tasks through Mining and Reclamation violates the very intent of the law and the Legislature.

In addition to the duties that are currently being performed by Mining and Reclamation, the OEB has not met its requirement to train individuals conducting pre-blast surveys. Because the OEB has not initiated the training of these individuals, it could put both the public as well as coal companies at risk. Although the contents of a pre-blast survey are contained in the *Code*, the quality of the pre-blast surveys could suffer if an unqualified individual completed them. For example, a coal company could eventually be liable for a fraudulent claim if the conditions of the structure were not properly documented. Likewise, in a converse situation, if the structure were not properly documented, an individual may have delays or difficulty receiving compensation for damage inflicted by blasting.

With regard to backlogged claims, many individuals are currently waiting for the OEB to address outstanding claims. As was previously stated, less than one-third of all claims have been resolved. Some of these claims have been open since the creation of the OEB in 1999. Citizens with open claims

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could be living in hazardous conditions due to damage sustained in a blasting incident. In addition, the property values of individuals waiting for the resolution of claims could be effected until the damage of the property is corrected.

## **OEB Hires New Employees to Accomplish Mandates**

The OEB has recently hired additional employees to address outstanding mandates. According to the OEB,

*In January 2002, [Employee A], a mining engineer with blasting experience, was hired...to assume direct responsibility for the blaster certification program and the pre-blast survey review program. [This individual] was also directed to evaluate the pre-blast survey program and develop surveyor training based on the results of that evaluation. The evaluation that [this individual] was charged with has been completed and a new pre-blast survey policy and procedure will be implemented this month (December 2002) with a new form to bring consistency to the program. A training program will begin in February 2002 and will be consistent with the new policy and procedure.*

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*To address the claims which have been backlogged, the OEB recently hired six additional inspector specialists.*

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To address the claims which have been backlogged, the OEB recently hired six additional inspector specialists. However, the Legislative Auditor's Office is not convinced that the OEB will be able to retain these employees. In January 2001, the OEB hired five inspector specialists. Of these, two took demotions to return to their positions within Mining and Reclamation, and two took promotions to return to Mining and Reclamation. Also, despite the fact that the OEB has been investigating claims since August 2001, the OEB has never determined exactly how long it takes to investigate a claim. According to the Chief of the OEB,

*I have not had the opportunity to calculate the exact number of days needed to complete an inspection. Until recently, field specialists have been assigned other duties of the office and may inaccurately indicate the true time frame for investigation. Each investigation is different, in that more information may be needed for one investigation than the other may, but as the specialists become more experienced, the investigation time should only improve. Also, many of the backlogged claims investigations have been started, but not completed because that person is no longer with OEB.*

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Without a knowledge of the amount of time necessary to complete a claim investigation, the Legislative Auditor is unable to determine with accuracy to tell whether or not a total of nine (9) inspector specialists will be able to completely review all backlogged claims as well as all incoming claims.

## **Conclusion**

With regard to satisfying established mandates, the OEB has not accomplished four significant areas:

1. Enforcement of blasting procedures on surface mine activities;
2. Training for individuals conducting pre-blast surveys;
3. Maintaining and operating a system to receive complaints;
4. Timely investigation of claims;

Without the fulfillment of these mandates by the OEB, the public is not only at risk, but potentially in many cases, has claims which are not being resolved. Although a lack of staff and staffing irregularities can account for many problems, the Legislative Auditor's Office is not convinced that the addition of staff will resolve the unfulfilled mandates.

## **Recommendations:**

1. *The Legislative Auditor's Office recommends that the OEB be continued and reviewed again by the Legislative Auditor in one year.*
2. *The Legislative Auditor's Office recommends that the OEB standardize the process for tracking claims. This process should require that information on claims be entered into a database in a timely manner.*



# Appendix A: Transmittal Letter to Agency

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## WEST VIRGINIA LEGISLATURE *Performance Evaluation and Research Division*

Building 1, Room W-314  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0610  
(304) 347-4890  
(304) 347-4939 FAX



John Sylvia  
Director

December 2, 2002

Mike Mace, Chief  
Office of Explosives and Blasting  
West Virginia Division of Environmental Protection  
10 McJunkin Road  
Nitro, WV 25143-2506

Dear Mr. Mace:

This is to transmit a draft copy of the Full Performance Evaluation of the Office of Explosives and Blasting. This report is scheduled to be presented at the Sunday, December 15, 2002 interim meeting of the Joint Committee on Government Operations. It is expected that a representative from your agency be present at the meeting to orally respond to the report and answer any questions the committee may have. If you would like to schedule an exit conference to discuss any concerns you may have with the report between December 3, 2002, and December 6, 2002, please notify us. We need your written response by noon on December 10, 2002 in order for it to be included in the final report.

We request that your personnel treat the draft report as confidential and that it not be disclosed to anyone not affiliated with your agency. Thank you for your cooperation.

Sincerely,

Handwritten signature of John Sylvia in cursive script.  
John Sylvia

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*Joint Committee on Government and Finance*

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*The Office of Explosives and Blasting*

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# Appendix B: Agency Response

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Office of Explosives and Blasting  
#10 McJunkin Road  
Nitro, West Virginia 25143  
Telephone Number (304) 759-0595  
Fax Number (304) 759-0587

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## West Virginia Department of Environmental Protection

Bob Wise  
Governor

Michael O. Callaghan  
Cabinet Secretary

December 10, 2002

John Sylvia, Director  
West Virginia Legislature  
Performance Evaluation and Research Division  
Building 1, Room W-314  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305-0610

Dear Mr. Sylvia:

Thank you for the opportunity to respond to the preliminary performance review conducted on the Office of Explosives and Blasting. Our response is enclosed.

Many of our mandates are being accomplished and this office continues to work diligently to address all the directives set forth by the legislature.

I look forward to being present during your presentation to answer any questions that members of the committee may have.

Sincerely,

Mike Mace  
Chief



West Virginia Department  
of Environmental Protection

"Promoting a healthy environment."

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**West Virginia Department of Environmental Protection  
Division of Mining and Reclamation  
Office of Explosives and Blasting**

**Legislative Audit Response**

The Office of Explosives and Blasting (OEB) welcomes the opportunity to respond to the draft copy of the performance evaluation completed by the Performance Evaluation and Research Division of the West Virginia Legislature provided to us on 12/5/02. The OEB response will identify all the mandates and the actions taken to fulfill those requirements. The OEB will explain the data management system used by the office. The OEB will explain the personnel issues associated with the office and the accomplishments of the office despite the adversity. The OEB will also outline the steps necessary for completing the mandates of the legislature and a schedule for full operation of the office.

We have chosen a format that responds individually to the legislative mandates in West Virginia Code §22-3A and 199CSR1.

**Regulate blasting on all surface mine operations.**

The OEB agrees with the legislative auditors in that we are not fully regulating blasting activities on all surface mine operations. However, the following circumstances are noteworthy:

- The mining and reclamation program still has a statutory requirement to inspect blasting procedures and respond to all mining complaints;
- An OEB presence on surface mine operations has been established, admittedly, it has been in connection with damage claims investigations, assistance requests from mining inspectors, investigation in connection with federal "Ten Day Notices" and a few independent inspections based on information collected by the OEB on possible blasting irregularities;
- The OEB is developing a much needed expertise of blasting knowledge that did not exist prior to this office;
- In time, the OEB will expand its responsibilities to fully address all blasting activities on surface mines by continuing to develop trained blasting specialists.

The office will continue to address blasting activities, with progressively more routine inspections. By January 2004, our projections (identified later in this document) will allow the office to conduct routine investigations, as well as claims investigation, on a regular basis.



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**Implement and oversee the pre-blast survey process, as set forth in section thirteen-a, article three of this chapter.**

A new emphasis was placed on pre-blast surveys with passage of Senate Bill 681. Surveys were deemed a crucial part of the newly created damage claims process and homeowners were encouraged to have surveys completed.

During the early developmental stages of the office, a number of items became apparent concerning the pre-blast survey process:

- Mining was moving closer to residents and more surveys were already being processed;
- Residents now had to decline a survey instead of not responding to a request;
- The survey radius was expanded, resulting in an increase in the number of surveys;
- A single reviewer in the central office reviewed all surveys and coordinated notification requirements with mining and reclamation inspectors;
- The reviewer was also responsible for training and testing blasters;
- The workload influenced the quality of the reviews;
- There was no standardized survey format making the review and quality assessment difficult. No pre-blast survey was particularly better than another but all were formatted differently;
- Review of the notification list was conducted by the mining and reclamation inspector;
- OEB only had 15 days to review surveys before blasting could begin.

With these factors in mind, the OEB began taking steps to comply with the requirements of the rule, and began a full assessment of the entire survey process to determine necessary changes needed to adequately protect the public. In the interim, changes would be implemented as situations arose and written policy would be developed based on the circumstances that necessitated change and/or any legal interpretations, when necessary. Although the basic requirements for the contents of the surveys were set by rule, responses varied by individual interpretation.

With the assistance of the Office of Legal Services (OLS), the OEB created the forms and procedures for waivers (for structure owners that did not want a survey) and affidavits (for the few cases where the owners refused all contact with the surveyors). The waiver and affidavit forms are presently being used by the industry.

On a regular basis, we continue to address new questions or circumstances concerning surveys, but a written pre-blast survey policy is now available. The supporting forms standardize pre-blast information for the first time.

The OEB collected all the existing surveys from the mining and reclamation regional offices, inventoried, cataloged, and stored them at one location. As we collected these surveys and processed new ones, an electronic spreadsheet was created to track all surveys accepted. For the first time, a simple search could determine if a pre-blast survey was available.

Presently, over 17,000 pre-blast surveys (dating back to 1987), waivers and affidavits are stored in one location. OEB has reviewed over 50% of the documents (9,242). All surveys, waivers and affidavits are maintained confidentially.

As described in the rule, OEB is now responsible for delivery of surveys to the homeowners. Prior to passage of the rule, the coal company delivered. The OEB makes every attempt to review and deliver the surveys to the owners before blasting begins.

The federal Office of Surface Mining (OSM) recently completed a five-month oversight review of the pre-blast survey review process and the associated tracking system. OSM concluded the process to comply with the federal mandates for pre-blast survey reviews.

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The OEB is developing additional improvements to the process. The improvements can be implemented within the next year, depending on the availability of staff from the Information Technology Office (ITO) and include the following:

- Develop an electronic system that allows for automatic entry of survey support information data from CD/Disk provided by permittee or designee;
- Develop an electronic review, with a checklist of required information, that will automatically maintain a history of survey deficiencies and creates correction letter to permittee. This system will create an automated acceptance letter to permittee and an automated cover letter to citizen.

**Maintain and operate a system to receive and address questions, concerns, and complaints relating to mining operations.**

With the assistance of Information Technology Office, the OEB has created an electronic-based system called iCitizens Services for receiving, responding and tracking blasting question concerns and complaints. The system was initially developed for use by OEB. As more of the DEP offices became aware of the system, it became apparent that this system could be utilized for the benefit of all the DEP. Development was slowed for this reason, but the OEB has been using the system since July of 2002 and the Logan Regional Office of DMR was included in October. Thus far, the system is working as designed. The system is increasing the efficiency in responding to the public's concerns. In addition, DMR is saving time and effort in routing blasting complaints to the OEB and routing other complaints within the mining office. The other DMR offices will be added in the near future.

The OEB has published an informational handout entitled iCitizen's Guide to Blasting that explains, in general terms, why mines blast, what to expect, the kinds of damage that could occur, the importance of a pre-blast survey, measuring blast vibration, the claims and arbitration process, and what to do if the citizen has a complaint.

The OEB has collected, and continues to collect, publications relating to blasting and make them available to the public through a lending library. The purpose is to provide as much information on blasting as possible to the public. The publications are made available to the public, at no charge, much in the same manner as a public library.

Many of the publications and OEB forms are also available on our website.

**Set the qualification for individuals and firms performing pre-blast surveys.**

During our initial examination of the pre-blast survey process, the OEB noted several items concerning pre-blast surveys and the people and companies conducting them:

- Most surveys generally complied with the requirements of the code;
- No one survey was significantly better than another, but all could be improved;
- The previous review process did not meet the elevated standards reflected in the OEB blasting rule;
- Most coal companies contract the preparation of pre-blast surveys to consulting firms with expertise in performing surveys;
- The OEB has little contact with coal companies during the review process;
- Most companies have already selected a consultant to perform surveys and the OEB seldom received a request for the name of companies performing surveys;
- Consulting engineering and pre-blast surveying companies provide internal training to the individuals performing the surveys;
- The bulk of the OEB pre-blast surveyor training program needed to focus on the issues addressed by the pre-blast survey policy and standardized OEB forms;

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- Standardized review of the pre-blast surveys produced a similar effect as training while the policy and forms were being developed. The industry and consultants were receptive to this approach and provided comments during the process.

The decision to prioritize improvement of surveys rather than the training of surveyors was based on the facts listed above and our belief that the creation of a pre-blast survey policy and standardized form was necessary before training could begin. It did not appear that the citizens were placed at any greater risk since:

- The OEB was continually improving the quality of the surveys through our review process;
- Most consulting companies had experienced employees performing the surveys;
- New surveyors were trained by the consulting firms before those persons could conduct surveys;
- The insurance companies that provided blasting coverage to the coal companies supplied written acknowledgement of the consulting firm or individuals completing the surveys;
- The OEB is enforcing the mandates requiring that every citizen be provided a survey.

In order to identify any potentially hazardous conditions, OEB responds to alleged damage claims within 24 hours. OEB assesses the damage claim and prioritizes if the claimant identifies any hazardous conditions. During the course of investigating blasting damage claims by the OEB, we have not observed any cases of hazardous living conditions that were a result of blasting damage.

As stated before, the OEB has completed an extensive review of the pre-blast survey process and published a detailed pre-blast survey policy. In addition, a standardized form, with itemized instructions, was developed and is ready for implementation following surveyor training. Pre-blast surveyor training is scheduled for the week of February 24, 2003.

### **Educate, train, examine and certify blasters working on surface mining operations.**

The initial assessment of the blaster certification program caused some concerns. There was no set schedule for training or testing. Training and examination was conducted on an as requested basis and occasionally conducted in a storage trailer on a mine site. Many times, insufficient space was available to properly examine the applicants. The OEB felt that any improvement made in this program would provide immediate results and we took action to increase the quality of training and testing.

- The application process was improved to provide verification of the blaster's experience and to insure that the information was correct to avoid the potential for fraudulent information or errors on applications;
- Centralized the training location and scheduled the training dates for the calendar year for applicants wanting formalized training rather than self-study;
- Centralized the testing location, and scheduled the testing dates for the calendar year;
- Provided advanced notice to re-certification candidates;
- Added a mandatory 2 hour training session prior to administering the test that explains the blasting rules and certified blaster's responsibilities;
- Placed more emphasis on proper blaster training and proctoring the examinations to insure that blasters actually demonstrated the required level of knowledge of a certified blaster.

Presently, there are nearly 600 certified blasters in West Virginia. This year the OEB has trained and certified 54 new blasters. The OEB currently projects that 200 blasters will re-certify annually. Re-testing is required every six years.

Other initiatives are in progress and are presently benefiting the program or have the potential for benefit in the future.

- OEB can provide a 12-hour refresher-training course. We are auditing other continuing education programs for content and approve those training programs if they meet the criteria required by the rule;

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- OEB now conducts a monthly 8-hour training course for applicants for certification:
  - OEB initiated a workgroup comprised of state regulators from the surrounding mining states and federal counterparts in order to compare blaster training and testing procedures and to seek common ground for granting reciprocity certification. A procedure was developed to verify if a blaster is in good standing before granting reciprocity. This process is now being utilized with Kentucky and Virginia, a direct outcome of working with this group. Standardized blaster training and testing criteria is being reviewed for development by this group.

### **Propose rules for legislative approval.**

It is OEB's understanding that the first set of rules were created by a stakeholder group with limited input from the regulatory representatives and with no representatives from the OEB. Title 199CSR1, which contained the funding mechanism for the office, became effective April 18, 2000, but lacked provisions for adequate inspection and violation procedures, enforcement and procedural powers, civil penalty assessment procedures, blaster disciplinary procedures, and due process procedures. Revisions were made to 199CSR1, adding these provisions, which became effective May 19, 2001. Changes were also made in §22-3 to comply with the federal Office of Surface Mining's rejection of some of the language contained in Senate Bill 681. Those changes included deleting provisions that exempted the surface effects of underground mines from the blasting requirements of the statute, requiring that every owner who has a pre-blast survey be provided with a copy of the report and deleting a provision that improperly allows an owner to waive a requirement that coal companies submit information to the DEP.

The OEB implemented procedures for the review, modification and approval of blasting plans. Blasting plans are a part of every permit package proposing to conduct blasting on a mine site. Blasting may not necessarily be conducted for the purpose of recovering coal. Many operations require blasting to face-up deep mines or construct roads. In the past, many permit reviewers lacked the expertise to adequately review blasting plans. The OEB recognized that a review by a blasting specialist would immediately benefit the public. We identified this as a high priority that could be accomplished with existing the limited staff.

- A thorough review of blast plans and subsequent corrections ensured compliance with the blasting rule;
- The OEB reviews and approves all blasting plans as part of the permit review process;
- A total 196 blast plans have been reviewed by OEB since July 2001, 132 plans have been approved and the others are pending corrections;
- OEB is presently current with all permit review actions in all four DMR regional offices.

The OEB also developed and established disciplinary procedures for all certified blasters responsible for blasting on surface mine operations. These procedures identified specific circumstances where a blaster would be cited for violations. The penalties associated with blaster violations may include temporary suspension or revocation of the blaster's certification.

### **Establish and manage a process for the filing, administering, and resolving blasting damage claims.**

Admittedly, OEB has struggled with the claims process. The process requires specially trained individuals capable of determining the merit of blasting damage claim. The primary mechanism to adequately serve the citizens in regards to blasting complaints and blasting damage claims is to have staff of investigators with the necessary expertise, knowledge, and skills to effectively investigate blasting claims. This source of specialized personnel did not exist in the DEP agency. Therefore, a training program was implemented to address the skills needed to investigate blasting claims. The skills required involve general blasting knowledge, blast design techniques, blast dynamics, blast vibration analysis, structural response, seismic monitoring methods and analysis, structural response to vibration and frequency, construction practices.

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Several factors contributed to the present backlog.

- The current claims process is a 'first of its kind' approach to provide a low cost option to blasting damage litigation. Development often required seeking legal advice from OLS and delayed the process;
- A backlog of 150 blasting damage claims existed when the OEB blasting specialists began initial investigations;
- ITO is developing an electronic notification, authorization, tracking, and invoicing system, but major delays have prevented implementation. The OEB is proceeding without the process being in place;
- The OEB lacked the required number of blasting specialists and the loss of key individuals who had technical blasting advice during the development of the office;
- OEB is currently taking action to investigate the claims, but until the new staff is sufficiently trained, the backlog will remain;
- Based on our calculations the backlog will be eliminated in approximately one year;
- All activities, with regard to blasting claims, are tracked by use of a computerized spreadsheet. This spreadsheet is intended to provide a general overview of the claim;
- All claims have a paper file that is opened when the initial blasting claim is made. The details and specifics of each claim are documented in this file.

The tracking system was developed by OEB to track milestones, provide a digital record of claims events and to provide general details of pertinent aspects of each claim. This system was not intended to be an expansive database. For the intended purposes, this system serves the office needs. However, OEB appreciates the recommendation of the auditor and plans to review the existing data system for areas of improvement.

#### **Office to conduct study.**

The office shall conduct or participate in studies or research to develop scientifically based data and recommendations. The office recognizes the reasoning for mandating this requirement. Unfortunately, staffing levels have never been adequate to devote time and effort to implement a research project. Additionally, the expertise needed to fully conduct a research project and sufficiently analyze the results is beyond the capabilities of the current OEB staff. However, once the staff is trained and the backlog of existing claims is eliminated, the resources should be available to conduct research projects. All seismic information we are currently collecting is being stored for reference and future use.

The surrounding states blasting workgroup that OEB has developed provides the opportunity to evaluate research projects in conjunction with these experts.

This is an important issue and although there is no research to report, the intent is not taken lightly by the office.

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### **OEB plan to eliminate backlog of claims.**

An analysis was made to evaluate the two aspects of the claims process, the investigation of incoming claims and the elimination of the backlog of current claims. A review has been made of the claims database to estimate the levels of completeness of the current claims backlog and to predict the requirements necessary to process this backlog. Historical data was reviewed to forecast the manpower to stay current with incoming claims and to assist in the other mandates of the office where blasting specialist are skills utilized.

- The OEB currently has received 211 blasting damage claims;
- There have been 58 claims that have been investigated and closed by OEB, 22 claims investigations are complete, 92 are assigned, and at various levels of investigations, and 39 claims are unassigned and awaiting investigations;
- A total of 5,465 man hours have been spent by specialists investigating claims since July 2001;
- Using time and activity reports, The OEB estimates 56.0 man hours to fully investigate and complete one blasting damage claim;
- The OEB estimates it will take 3.34 trained blasting specialists to investigate and finalize the current backlog in one year;
- Based on current data OEB predicts that there will be approximately 100 claims submitted annually;
- In order to investigate these damage claims it will require 5.11 blasting specialist to stay current;
- In summary, to stay current with the blasting damage claims and to eliminate the current backlog the OEB will require 8.45 trained blasting specialists.

OEB will implement a training program involving a mentoring aspect. The experienced blasting specialists and the technical staff will train the new specialists. This will involve the rotation of the new specialist between training and claims investigation for increased efficiencies in the overall processing of claims. We feel that the efficiencies we can realize from the mentoring approach with the new hires will result in faster processing of the claims than we have historically encountered, without losing investigation resources, while the new inspectors are being trained.

By following this plan to eliminate the backlog, we should be in a position in one year to shift our blasting specialist resources to absorb the blasting duties that the mining and reclamation inspectors are currently providing.



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## Staffing Issues.

As noted by the auditors, staffing problems plagued OEB since its creation. The loss of employees dramatically affected the office and constantly forced changes in our priorities. Losing key personnel, especially the training staff, at the critical stages of development crippled, not only the training program, but also shifted workloads and influenced employee moral.

During the early stages of development, four persons temporarily transferred to the OEB from the Office of Mining and Reclamation (OMR). The assistant chief/ trainer, a blasting expert, also had years of environmental regulatory experience. The supervisor/ assistant trainer also had a great deal of experience in blasting and regulatory compliance. A third individual managed the pre-blast survey and blaster certification programs. The administrative assistant provided clerical support. She also had years of experience in the day-to-day operations of the mining program.

During the creation of the blasting legislation, the mining program calculated a staff of 18 as an adequate number to operate this office. A fee of  $\Omega$  cent (\$0.005) per pound of explosives was recommended to fund the office. Prior to approval of the rules, a reduced fee of  $^{\circ}$  cent (\$0.0025) per pound decreased the staff to 15 persons. Fee collection began in August 2000, but budget issues within the mining office prevented hiring field employees until January 2001.

The first blasting specialist transferred from the mining program. All had regulatory experience, including blasting compliance knowledge, but required extensive training to fully comply with new job requirements. However, during their initial training, the assistant trainer passed away. The assistant chief/ trainer was incapacitated due to an illness to a degree that progressive absences finally resulted in a six-month absence from work. The illness finally caused the employee to leave the office without returning to work. Due to limitations of the salary and DOP hiring practices, replacement for these individuals was hampered. The delays incurred in staffing these positions resulted in loss of technical guidance for the office.

The trainers also shared management and development responsibilities. Their loss left only a partially trained field staff to assume those duties. In addition, the pre-blast survey reviewer and blaster certification manager accepted a supervisory position with another state office and the field staff assumed those responsibilities.

Of the five original inspectors promoted to blasting specialists, one accepted an assistant supervisory position with the mining program, and another returned to mining with a promotion. Two of the original field specialist returned to the mining program without a loss in salary. One of the two recently reapplied to the OEB, but withdrew upon receiving a pay increase.

The recent unexpected passing of the administrative secretary created a void that is not easily filled. Debbie Jeffrey's knowledge, energy, and attitude created an atmosphere of learning, cooperation, and dedication. Interviews are scheduled for early January 2003.

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Despite of the staffing issues that challenged OEB, positive steps taken during the past year and pending hiring actions, will correct the deficiency of the past. Baring unforeseen events, OEB will attain full staff, for the first time, in February 2003.

- The OEB hired 3 additional blasting specialists in October 2001. Presently, two of them investigate blasting damage claims, exclusively. The other specialist reviews blasting plans in the four DMR regional offices;
- The OEB hired a blasting expert as an assistant manager and trainer in January 2002. This employee overhauled the pre-blast survey process, established creditability in the blaster certification program, and resumed blasting specialist training. This person will also administer surveyor training in February 2003;
- The OEB hired an experienced DMR employee to review pre-blast surveys and assist with surveyor training in August. Survey reviews are current and no backlog or delays are expected;
- A group of 6 new blasting specialists trainees report for work on January 2, 2003. A training program is formulated to accelerate claims investigations. Calculations by OEB's staff projects the elimination of the damage claims backlog by January 2004.

OEB's effectiveness is directly dependent on managing the conflict between satisfying program requirements and providing adequately training that develops permanent blasting experts within DEP.

### **Conclusion**

The OEB acknowledges that we are not yet fulfilling all mandates as provided in the Code. In regard to the specific concerns of the Legislative Auditor, OEB has outlined an improvement plan that will allow OEB to complete all enforcement actions by January 2004.

- Training for pre-blast surveyors is scheduled for February 2003;
- Based on our projections the backlog of claims will be eliminated by January 2004;
- The office has been operating a system of receiving complaints since July 2002. The DMR regional mining office will soon be joining the process. The long-term plan would include all the DEP offices.

We believe that our goals are attainable and welcome a review of this office next year.