PERMITTING HANDBOOK

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF MINING & RECLAMATION

January, 2017

Table of Contents

- Introduction
- Management Plan
- General Permitting Procedures & Information
- Permit Applications
  - Notice of Intent to Prospect (MR3)
  - Surface Mine Application (MR4)
  - Surface Mine Permit Amendment (MR4)
  - Incidental Coal Removal (MR4C)
  - Dam (MR4D)
  - Permit Revision Significant (MR4PR)
  - Permit Revision Insignificant (MR4PR)
  - Incidental Boundary Revision Significant (MR4PR)
  - Incidental Boundary Revision Insignificant (MR4PR)
  - Permit Renewal (MR17)
  - Operator Assignment (MR19)
  - Permit Transfer, Assignment Or Sale (MR19A)
  - Permittee Merger/Name Change (MR19B)
  - Officer Update/Change Of Owners/Controllers(MR19C)
  - Permit Reinstatement (MR19R)
  - Increment Start (INB)
  - Emergency Warning Plan (EWP)
  - Quarry Applications
  - Remining

- Reference Information
    - Blasting Information
    - Bond Information
    - Certified Record Information
    - Citizen Participation
    - Coal Ash Utilization, Tire Disposal & Other Information
    - Cooperating & Affected Local, State & Federal Agencies
    - Dam Information
    - Drainage & Sediment Control Information
    - Excess Spoil Disposal & AOC Information
    - Fish & Wildlife Information
    - FOIA Processing
    - Hydrologic Information
    - Informal Conference Process
    - Ownership & Control Information
    - Post Mining Land Use Information
    - Pre-Inspection for Surface Mine Application
    - Pre-Submittal Meetings
    - Refuse Disposal and Reprocessing
    - Roads
    - State Historic Preservation Office
    - Subsidence Information
    - Surface Mine Board Appeals

INTRODUCTION

The **Permitting Handbook** provides a comprehensive guide to understanding the processes of permit applications. It establishes procedures for preparing, handling reviewing and approving permit applications. It includes sections on new permits, revisions, transfers, renewals, bonding and insurance, informal conferences, protests, subsidence, blasting, SHPO, fish and wildlife and more.

Although basically administrative in nature, this **Handbook** also includes technical information, interpretations or memorandums. Additional procedures, requirements, memorandums, technical information, etc. will be provided for inclusion, as they become available. Hyperlinks are provided throughout the **Handbook** for referencing useful information.

The West Virginia Department of Environmental Protection (DEP) now provides helpful user information from the Division of Mining and Reclamation over the Internet. Check out the DEP home page at **http://www.dep.wv.gov/Pages/default.aspx**

Want to read or copy the latest laws and regulations that govern mining and reclamation?
The West Virginia Surface Coal Mining and Reclamation Act **22-3** and the West Virginia Surface Mining Reclamation Regulations **38CSR2** are available for you to read or print directly from the Internet. Additional laws and regulations associated to mining and reclamation can be referenced in the **Important Links** section of the **Handbook**.

Need to browse or research DEP mining databases for information?
Online TAGIS (Technical Application & Geographic Information Systems) data has been made available for all online users. Using the TAGIS system, a user can browse the mining permit database. **http://tagis.dep.wv.gov/home/**

The permit database can be used to identify permit numbers, responsible parties, issue/expiration dates, mine types, facility names, and acreage. Interactive maps of permitted sites can also be viewed. **http://tagis.dep.wv.gov/mining/**

Want to keep up on the latest publications submitted by the Division of Mining and
Reclamation?
In an attempt to keep the public current on what is happening in the Division of Mining and Reclamation, the office's latest publications are available on the Internet for users to access. **http://www.dep.wv.gov/dmr/Pages/default.aspx**

Related Sites:
Users can explore more coal mining information by checking out related sites linked to DEP's home page including the U.S. Environmental Protection Agency, the federal Office of Surface Mining, the National Research Center for Coal and Energy, West Virginia Geologic & Economic Survey, and Natural Resources Conservation Service.

ACRONYMS

AEPP	Aquatic Ecosystem Protection Plan
AG	Attorney General
AMP	Adaptive Management Plan
AOC	Approximate Original Contour
AOI	Area of Interest
APE	Area of Potential Effect (SHPO)
AST	Above ground Storage Tank
AVS	Applicant Violator System
AX	ApplicationXtender
BAS	Biological Assessment Station
BMP	Best Management Practice
BWQ	Baseline Water Quality
CD	Certificate of Deposit
CHIA	Cumulative Hydrologic Impact Assessment
CIA	Cumulative Impact Area
CIF	Consolidated Investment Fund
CO	Cessation Order
COCF	Centralized Ownership & Control Files
DEP	Department of Environmental Protection
DMR	Discharge Monitoring Report
DMR	Division of Mining and Reclamation
ELG	Effluent limitation Guidelines
ERIS	Environmental Resource Information System
eSS	Electronic Submittal System
FAN	Final Action Notification
FOIA	Freedom of Information Act
FRA	Forestry Reclamation Approach
FTACO	Failure to Abate Cessation Order
GPP	Groundwater Protection Plan
HPI	Historic Property Inventory (SHPO)
HPU	Hydrologic Protection Unit
HPR	Hydrologic Reclamation Unit
HQ	Headquarters
IBR	Incidental Boundary Revision
I & E	Inspection and Enforcement
IUAR	Infrequently Used Access Road
LOC	Letter of Credit
MSHA	Mine Safety and Health Administration
NOI	Notice of Intent
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service (formerly SCS)
NWQS	Narrative Water Quality Standards

O&C	Ownership and Control
OES	Office of Emergency Services
OSM	Office of Surface Mining (Federal)
OSMRE	Office of Surface Mining Recommendation *(from AVS)*
PEP	Protection & Enhancement Plan
PIO	Public Information Office
PHC	Probable Hydrologic Consequences
PMLU	Post Mining Land Use
PMP	Probable Maximum Precipitation
POC	Parameter of Concern
POV	Pattern of Violations
PRT	Permit Review Team
PUMA	Post Underground Mining Assessment
RP	Reasonable Potential
RTE	Rare, Threatened, Endangered (species-WVDNR)
SCMRA	Surface Coal Mining& Reclamation Act (West Virginia)
SCS	Soil Conservation Service (current NRCS)
SHPO	State Historical Preservation Officer
SMA	Surface Mine Application
SMB	Surface Mine Board
SMCRA	Surface Mining Control and Reclamation Act of 1977 (Federal)
SOAP	Small Operator Assistance Program
SOP	Standard Operating Procedure
SPCC	Spill Prevention Control & Countermeasure (Plan)
SPLP	Synthetic Precipitation Leaching Procedure
SWROA	Surface Water Runoff Analysis
TBEL	Technology Based Effluent Limit
TCLP	Toxicity Characteristic Leaching Procedure
TDN	Ten Day Notice
TDS	Total Dissolved Solids
TIPS	Technical Innovation & Professional Services
TMDL	Total Maximum Daily Limit
UIC	Underground Injection Control
USACE	US Army Corps of Engineers
VER	Valid Existing Rights
WET	Whole Effluent Toxicity (Testing)
WQBEL	Water Quality Based Effluent Limit
WQC	Water Quality Criteria
WQS	Water Quality Standards
WVSCI	WV Stream Condition Index

Regional Offices

REGION 1 & 2 – Philippi
47 School Street
Suite 301
Philippi, WV 26416
Office - 304-457-3219
Fax - 304-457-5613
County Responsibility – Barbour, Berkeley, Braxton, Brooke, Calhoun, Clay, Doddridge, Gilmer, Grant, Hampshire, Hancock, Harrison, Hardy, Jackson, Jefferson, Lewis, Marion, Marshall, Mineral, Monongalia, Morgan, Nicholas, Ohio, Pendleton, Pleasants, Pocahontas, Preston, Randolph, Ritchie, Roane, Taylor, Tucker, Tyler, Upshur, Webster, Wetzel, Wirt, Wood

REGION 3 & 4 – Fayetteville
1159 Nick Rahall Greenway
Fayetteville, WV 25840
Office - 304-574-4465
Fax – 304-574-4480
County Responsibility – Fayette, Greenbrier, Kanawha, Mason, McDowell, Mercer, Monroe, Nicholas, Putnam, Raleigh, Summers, Wyoming

REGION 5 – Logan
1101 George Kostas Dr.
Logan, WV 25601
Office - 304-792-7250
Fax – 304-792-7258
County Responsibility – Boone, Cabell, Lincoln, Logan, Mingo, Wayne

HEADQUARTERS – Charleston
601 - 57th Street
Charleston, WV 25304
Office – 304-926-0490
Fax – 304-926-0456

MANAGEMENT PLAN

The Division of Mining and Reclamation has developed a Management Plan which became effective on June 1, 1994. This section of the Permit Handbook entails the portion of this plan which focuses on the Permitting Unit.

Permitting Unit:

A. Purpose:

This Plan establishes official policy and procedure for the Permitting Management Plan (PMP). Goals of the Division of Mining & Reclamation are outlined, and standards are established in order to assure that appropriate compliance is maintained with program requirements.

1. **Headquarters -** Applications received in Headquarters for decision consists of surface mining permits, permit amendments and transfer of permits. A quality check of ownership and control findings, a checklist for completeness and accuracy, and a brief technical review is conducted by headquarters staff.

2. **Regional Office -** The Permitting Unit consists of review sections in each of the-three DEP regional offices that handle the permitting workload. The review section is divided into review teams which consists of: Geologist/Hydrologist, Engineer, Environmental Resource Specialist, Inspector and support staff. Each team has the responsibility for processing all permitting applications related to coal and non-coal facilities.

B. Management Tools in Place and Pending:

1. **Administrative Computer Operations:**
The following is information concerning databases maintained on the Environmental Resource Information System (ERIS) and the Federal Applicant Violator System (AVS). Immediately after permit issuance, the required permit and ownership and control information is entered in both the state and federal computer systems.

   a. An application tracking system is part of the ERIS database which tracks applications for Notices of Intent to Prospect, Surface Mining, National Pollutant Discharge Elimination System, Transfer of Permits, Operator Assignment, Permit Revisions, Incidental Boundary Revisions, Permit Renewals, Surface Mining for Minerals other than Coal, Increment Start, Emergency Warning Plans, and Certificates of Approval for a Dam. As the need arises, additional application types are being added to ERIS for tracking purposes.

      (1) The Environmental Resources Information System (ERIS) database contains data regarding permit applications and the tracking thereof.

      (2) The status and progress of pending applications throughout the state can be reviewed at any time by Headquarters, enabling DEP to instantly analyze applications by region, type of application, etc.

      (3) ERIS offers various reports for regional offices and/or headquarters.

b. Applicant Violator System **AVS Login Page**

(1) Applications for Surface Mining, Transfer of Permits and Operator Assignment, are entered in the AVS with ownership and control information associated with the applicant.

(2) Data into the AVS is entered by designated Headquarters staff only. However, regional staff is provided with a browse access to view the organizational family trees and to request recommendations on individuals and companies.

2. Permit Application Procedures Handbook:

The contents of this handbook consist of procedures for the receipt, review, and decision of all types of permit applications. Procedures for informal conferences, types of acceptable bonding methods, etc. are also included. It is our intention to maintain current procedures and to provide updates on a quarterly basis.

3. Geologic Guidance Handbook:

The West Virginia Department of Environmental Protection (WVDEP), Division of Mining and Reclamation, has developed the Geology Handbook for the purpose of assuring consistency in the technical review of permit applications. It is also intended to be used as a technical manual for industry representatives preparing a permit application under the West Virginia Surface Mining Program. The document explains the types of information, which may be required in a permit application, including procedures to sample and analyze geologic strata. **Geology Handbook**

4. The Technical Innovation & Professional Services (TIPS):

Staff members are responsible for learning to use various software in their field of expertise in order to assist in specific areas of application review. Included is a wide range of software applications from automated measurements through slope stability analyses and hydrology /sedimentology watershed calculations to sophisticated three-dimensional geology and subsidence prediction modeling. The TIPS generated documentation is used to develop the facts and findings relative to the area proposed to be impacted by the SMA. **Technical Innovation and Professional Services**

5. Technical Guidance Handbook:

This handbook consists of general standards and specifications for erosion and sediment control, excess spoil disposal and haulage ways for mining operations in West Virginia which have been accepted by professional engineers and technicians as general practices within the mining industry. However, this handbook is not to be considered nor utilized as the West Virginia Surface Mining Reclamation Regulations, rules, policies, or law. **Technical Handbook**

C. Program Supervision:

Each regional **Permitting Supervisor/Environmental Resource Program Manager** is responsible for the scheduling of reviews and the timely processing of all types of permit applications for coal and non-coal mines on all lands in West Virginia including permits on Federal lands. Ensures consistency and quality of the review of permits in accordance with policies and procedures. Ensures that all types of applications are entered into the application tracking part of ERIS upon receipt through the final decision. Responsible for compiling various reports of permitting actions as requested and/or required.

Coordinates permit review team activities with other sections and government agencies to ensure that all regulations are complied with. Ensures that copies of the required permit applications are placed in the county courthouse and regional office for public review. Schedules and acts as the Secretary's authorized representative for informal conferences, hearings, and meetings in accordance with DEP procedures and guidelines. When necessary, shall work with the Attorney General's Office in the preparation and defense of DEP related cases. Conducts weekly meetings with the Permitting Unit to assess the review status, provide clarification and guidance in interpretation of law, rules and regulations, policies and procedures. Will identify and resolve issues between the Permitting Unit and Applicant and/or Consultant. Will oversee and assign designated staff to special projects. Assess job performance and training needs of Permitting Unit staff and will recommend to Headquarters the specific areas in which training is needed, including refresher training. Responsible for the approval or denial of notices of intent to prospect, permit revisions, incidental boundary revisions, permit renewals, operator assignments, and incremental bonding. Responsible for the recommendations to the Secretary and preparation of facts and findings on surface mining applications and permit transfers.

D. Goals:

1. To improve staff training and to provide effective management so that the laws and regulations are interpreted and applied appropriately, accurately, and consistently.

2. To review and process permitting applications in the most effective and efficient manner by adhering to the Application Review Timetable.

3. To provide clear guidance to the coal industry as to the requirements of the laws and regulations, and to use full powers provided by law to see that those requirements are met.

4. To ensure that all permitting decisions are made fairly and objectively, and in accordance with the laws and regulations.

5. To operate efficiently, maximizing use of available resources to provide the services the public and the industry deserve, as economically as possible.

GENERAL PERMITTING PROCEDURES & INFORMATION

Electronic Permitting (eSS)
Assigning Permit Numbers
Filing Fees
Advertising Requirements
Review Time Guideline
Permit Status Report
Application Processing
Application Findings Overview
Additional Instructions for Findings
Application Decision Overview

I. Electronic Submission System (eSS) electronic Submission System

The Electronic Submission System (eSS) or ePermitting is the preparation, submittal, review, correction, approval and publication of permit application data via the internet. eSS integrates industry, regulators and the public with a common interface.

Information requirements are the same as the paper counterparts. The only technical requirements for using eSS are a login ID, an internet connection and an e-mail address.

Under the ePermitting process, an applicant prepares an electronic application and submits to the WVDEP via the internet. The applicant is able to do all of the work associated with an application "on line" in a secure environment.

eSS, from the beginning, has been engineered to maintain a persistent and secure transaction state so that an application may be completed over any length of time, while the contents of the work-in-progress remains secure from all (including WVDEP personnel) except the applicant and those authorized by the applicant. When the applicant has completed the application, it can then be submitted to WVDEP electronically.

When the WVDEP receives the permit application and any associated filing fees, the staff can begin the initial review process of determining the completeness of the application. Historically, WVDEP staff would, at this point, begin entering the contents of the hard copy paper permit application in the ERIS system. With eSS, this step is no longer necessary, resulting in a considerable savings in time and dollars. This savings does not result in any additional burden on the applicant.

The completeness review process is also much less labor intensive, to WVDEP, staff in that reviewing for completeness via eSS is much more efficient than wading through large stacks of hard copy documents to determine if all the needed materials are present. Further, the completeness review is conducted electronically, further reducing time and cost. The applicant receives corrections and comments, to their application, via email thus significantly reducing time, expense and effort to both WVDEP and the applicant.

All eSS applications, once closed, are available for Public Query. Pending applications requiring public notice are available for Public Query during the application's advertising and public comment period and when closed as well.

II. APPLICATION/PERMIT NUMBER ASSIGNMENT

The assignment of surface mining application (SMA) numbers will be the responsibility of the Permitting Section in each regional office.

The regions are numbered as follows:
Region 1 - Philippi (formerly Fairmont)
Region 2 - Philippi
Region 3 – Fayetteville (formerly Oak Hill)
Region 4 - Fayetteville (formerly Welch)
Region 5 – Logan

Each regional office is assigned a block of numbers (001-999) for each calendar year to be utilized for all types of applications for permits. Each surface mine application shall be assigned a surface mining application (SMA) number which uniquely identifies that operation.

The SMA number will be a combination of mine type, region number, I.D. Number, and year in which the SMA is assigned, i.e. SMA S100192.

MINE TYPE	REGION	I.D. NUMBER	YEAR	=	SMA #
Surface	1	001	92	=	S1001-92

TYPE OF MINE	PERMIT NO.
Surface	S100192
Underground	U300293
Other (prep plant, haulroad, etc.)	O500394
Quarry (minerals other than coal)	Q400997
Prospect	P210998
Reprocessing	R304199

Approvals for Notices of Intent to Prospect will receive a separate block of numbers (001-999).

Permit revisions shall be sequentially numbered by the applicant as they are submitted (Revision #1, Revision #2, etc.) and shall be reflected in the application. However, it is the region's responsibility to verify that the numbering sequence remains in order.

Incidental Boundary Revisions (IBR) shall be sequentially numbered by the applicant as they are submitted (IBR #1, IBR #2, etc.) and shall be reflected in the application. However, it is the region's responsibility to verify that the numbering sequence remains in order.

Permit Numbers have been issued in various formats throughout the years. ERIS requires a 7-digit number; therefore, zeros were added to numbers issued prior to 1986. The first space indicates the type of operation and will always be an alpha character. The last two spaces of a number generally represent the year the SMA or permit was issued. If there are zeros in these two spaces, a year was not assigned to the permit number (see note). The following identifies the appropriate translation to be entered in ERIS:

PERMIT NUMBERS

PREVIOUS PERMIT NUMBER FORMAT	ENTER AS
D-1-83	D000183
D-1	D000100
EM-1; AO	E000100
H-1	H000100
I-1	I000100
INC-8-83	C000883
L-1	L000100
M100194	M100194
O-1-83	O000183
P-1	P000100
P-1-83	P000183
Q-1-83	Q000183
R-1	R000100
R-1-83	R000183
S-1-83	S000183
S-34	S003400
U-1-83	U000183
UO-1	U000100
SMA-858 (DR-21)	F000858
256-69 (DR-21)	F027569
SMA 2682	M268200
SMA 808	M080800
BOR SMA 977	B097700
**WILDCAT	W100000
Y100194	Y100194

**See Wildcat Log (Contact DMR database administrator)

Note: For 1981 only, convert 1-81 to Z000181. This prevents duplicates of the Permanent Program permits issued in 1981, which have an "S" prefix.

Effective 1/1/2000, permits will be issued with 00 indicating the year 2000. The permit number being issued in 2000 will also include the four-digit prefix indicating the regional office.

III. PERMIT APPLICATION FILING FEES

APPLICATION TYPE		FILING FEE
• **MR3**	Notice of Intent to Prospect	$2000
• **MR4**	Surface Mine Application	$3500
• **MR4**	Surface Mine Permit Amendment	$2550
• **MR4C**	Incidental Coal Removal	$3500
• **MR4D**	Dam Control Application	$300
• **MR4PR**	Permit Revision Insignificant	$0
• **MR4PR**	Permit Revisions Significant	$2000
• **MR4PR**	Incidental Boundary Revision Insignificant	$0
• **MR4PR**	Incidental Boundary Revision Significant	$2000
• **MR17**	Permit Renewal	$3000
• **MR19**	Operator Assignment Per Permit	$1500
• **MR19A**	Permit Transfer, Sale or Assignment per permit	$1500
• **MR19B**	Merger/Name Change	$0
• **MR19C**	Change of Owners/Controllers	$0
• **MR19R**	Reinstatement of Permit	$0
• **INB**	Incremental Bonding	$0
• **EWP**	Annual Emergency Warning Plan	$100
• **REMINING**		$3500
• **QUARRY APPLICATIONS – Quarry Handbook**		

Note: For dams not requiring an annual Emergency Warning Plan, an annual registration fee of $100 will be required at the yearly anniversary date of the Certificate of Approval.

Accepted Application Fee Payment Methods: Cash, Certified Check, Cashier's Check, Bank Money Order, US Postal Service Money Order, Credit Card (Visa, Discover, American Express, Master Card), and Wire Transfer.

Application fee payment may be made via credit card by contacting WVDEP Accounts Receivable at 304-926-0499 ext. 4888. All application fee submittals should be accompanied by the following information: The DMR regional office, applicant name, permit number, application type, and the application sequence. WVDEP Accounts Receivable staff will notify the DMR regional office of payment received.

IV. APPLICATION ADVERTISEMENT REQUIREMENTS

APPLICATION TYPE	NUMBER OF ADS REQUIRED	COMMENT PERIOD	INFORMAL CONFERENCE
(MR3) Notice of Intent to Prospect	NA	NA	NA
(MR3) Notice of Intent to Prospect greater than 260 Tons	1	15	NA
(MR4) Surface Mine Application	4	30	YES
(MR4) Surface Mine Re-Advertisement for extension at 1 year Anniversary	1	10	NA
(MR4) Surface Mine Technically Complete	1	15	NA
(MR4) Surface Mine Permit Amendment	4	30	YES
(MR4C) Incidental Coal Removal	1	15	NA
(MR4D) Dam Application	1	15	NA
(MR4PR) Permit Revision or IBR Insignificant	NA	NA	NA
(MR4PR) Permit Revision or IBR Significant	4	30	YES
(MR4PR) Permit Revision for Tire Disposal	4	30	YES
(MR4PR) Permit IBR within 100’ of Public Road	4	30	YES
(MR4PR) Permit IBR Involving New Landowners	4	30	YES
(MR17) Permit Renewal	4	30	YES
(MR19) Operator Assignment	1	30	NA
(MR19A) Permit, Transfer, Sale or Assignment	1	30	NA
(MR19B) Merger and/or Name Change	1	30	NA
(MR19C) Change of Owners/Controllers	NA	NA	NA
(MR19R) Reinstatement of Permit	1	30	NA
Emergency Warning Plan	NA	NA	NA
Incremental Bond	NA	NA	NA
Remining	4	30	YES

ADDITIONAL INFORMATION REGARDING APPLICATION ADVERTISEMENT

1. Application must first be placed for public review in the courthouse or courthouses in the county or counties of the proposed surface-mining operation. A signed, date stamped courthouse placement acknowledgement must be submitted to the permit review section before permission to advertise the application will be granted.

2. Location maps are required for the advertisement of the following applications: Notice of Intent to Prospect, Surface Mine Applications, Permit Amendment Applications, Significant Permit Revisions, Significant IBR, Permit Renewal and Permit Transfers.

3. For applications proposing activity in multiple counties, advertisement is required in all counties reported where surface and/or underground activity is proposed. If a permit amendment or IBR application proposes activity in a new county, advertisement is required in the new county in addition to the county of the original permit.

4. Refer to 38CSR2-3.2 & 22-3-9(a) (6) & 22-3-20(a) for additional guidance relative to advertising and public notice requirements.

V. APPLICATION REVIEW TIMETABLE GUIDELINES

APPLICATION TYPE	FIRST REVIEW COMPLETED (DAYS)	SUBSEQUENT REVIEWS COMPLETED (DAYS)
(MR3) Notice of Intent to Prospect	**15**	**5**
(MR4) Surface Mine Application Administrative	**5**	**NA**
(MR4) Surface Mine Application Technical	**30**	**15**
(MR4) Surface Mine Permit Amendment	**30**	**15**
(MR4D) Dam Application	**45**	**20**
(MR4PR) Permit Revision or IBR	**15**	**5**
(MR17) Permit Renewal	**15**	**10**
(MR19) Operator Assignment	**10**	**5**
(MR19A) Permit Transfer, Sale or Assignment	**10**	**5**
(MR19B) Merger and/or Name Change	**10**	**5**
(MR19C) Change of Owners/Controllers	**10**	**5**
(MR19R) Reinstatement of Permit	**10**	**5**
Emergency Warning Plan	**10**	**5**
Incremental Bond	**5**	**5**
*****Review days are considered work days.		

Note: All forms, letters and signage utilized in the Permitting Program processes, referenced in this handbook, are located on the WVDEP Intranet @ Mining and Reclamation →Permitting Program.

Note: All Memorandums of Understanding and Memorandums of Agreement referenced in this handbook are located on the WVDMR website.

VI. Permit Status Report

A. A report consisting of those permits issued during a specific month shall be prepared no later than the 5th day of the month for those activities completed the previous month. This report shall be advertised in newspapers of general circulation in the locality where the new permit area is located. Sample available at WVDEP Intranet @ Mining and Reclamation →Permitting Program.

B. This status report shall also be provided to the County Clerk's Office of those counties in which new permits have been issued.

VII. Application Processing

A. Gatekeeping – All Application Types

1. Designated permit review section staff is notified via email that application has been submitted to eSS.

2. Confirm receipt of application filing fee if required.

3. Confirm certification of application date is within thirty (30) days, and authorized signature appears in blue ink.

4. Notify Permitting Supervisor of application submittal for Reviewer/Review Team assignments.

5. Application information entered in ERIS upon Permitting Supervisor direction.

    a. The inspector assigned to a permit must be listed as an associated party for all application types submitted in order to have knowledge of all permitting transactions.
    b. DMR headquarters bond specialist must be listed as an associated party for Increment Start, IBR's, Revisions, Prospects, and Renewal applications.
    c. DMR headquarters AVS specialist must be listed as an associated party for SMA, Permit Amendment, MR19, MR19A, and MR19B applications.
    d. Applicant's consultant should be listed as an associated party if applicable.
    e. Application status in eSS will transition from New to Pending.

Note: Refer to the Cooperating and Affected Local, State & Federal Agencies section for instructions regarding applications proposing valley fills.

B. Application Review, Findings and Decision

1. Certification of application for all application types must be dated within thirty (30) days of final approval.

2. Refer to the Permit Applications section of this handbook for additional guidance relative to each application type.

3. Refer to the Citizen Participation section of this handbook for guidance relative to comments and informal conference requests received on applications during comment periods.

4. Permit applications will not be approved for expired permits unless conditions exist beyond the control of both the permittee and WVDEP, which delay approval of the permit renewal.

5. O&C reviewers must request AVS reports for SMA, Permit Amendment, MR19, and MR19A applications. This should occur during the initial review so that the applicant may resolve any AVS issues reported and avoid delays once all other requirements have been met. For guidance refer to AVS Findings.

• Notice of Intent to Prospect (MR3)

- Review
  - WVDEP decision must be made within fifteen (15) days of receipt of application or corrections must be sent to applicant within fifteen (15) days of receipt.
  - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
  - Confirm all applicable sections have been completed and approved.

- Findings
  - Application checklist
  - Reviewer recommendation
  - Inspector recommendation
  - SHPO consultation
  - WV Unemployment Compensation Compliance
  - WV Secretary of State Verification
  - WV Tax Department Compliance
  - AVS Report
  - Ground Water Protection Plan Fee Compliance
  - ERIS Applicant Block List Report

- Decision
  - Quality Control Checklist completed by Permitting Supervisor.
  - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
  - Application must be refreshed in ERIS prior to issuance.
  - Application decision transmitted to associated parties via Final Action Notification email.
  - Application status will transition from Pending to Closed in eSS.

• Surface Mine Application (MR4)

- Administrative Review
  - Commence review and within five (5) working days notify applicant whether application is administratively complete or corrections are required.
  - If corrections are required, the applicant must resubmit the corrected application within thirty (30) working days. If the application is not resubmitted within thirty (30) working days or if application is resubmitted

within thirty (30) working days and is still not administratively complete, report application to permitting supervisor for denial. Following denial, the application may be resubmitted, accompanied by a new filing fee. (See Application Decision Overview)

- Once application is deemed administratively complete, SMA number will be assigned.
- Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
- The SMA is also available for public review at the regional WVDEP office where SMA review is being conducted.
- The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
- Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).
- Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
- A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.

- Technical Review

  - SMA number is valid for one year. Extension of the SMA number, by the permitting supervisor, may be necessary for applications requiring more than one year to obtain final decision. The initial extension must be requested by the applicant, in writing, prior to the expiration of the original assignment, and re-advertisement conducted (one (1) time advertisement with ten (10) day comment period). The applicant must demonstrate diligent pursuit by resubmitting the corrected application within thirty (30) working days of corrections received. Extensions are to be granted for no more than sixty (60) day increments. Subsequent requests for SMA number extension may be granted provided diligent pursuit of application approval is demonstrated, however, re-advertisement is not required. If the applicant has not made timely and complete corrections, the SMA number will not be extended and the SMA will be terminated. (See Application Decision Overview)
  - The review team leader will transmit the review team's first technical corrections to the applicant within thirty (30) working days of SMA number issuance. Subsequent reviews are to be completed and transmitted to the applicant within fifteen (15) working days. The applicant is required to resubmit the corrected application within thirty (30) working days of corrections received. If the application remains incomplete after two (2) rounds of technical review, a meeting shall be scheduled with applicant and/or their consultant, to address completion of the application.
  - Confirm all applicable sections have been completed and approved.
  - After the Secretary deems a Surface Mine Application technically complete, the Secretary shall cause the applicant to advertise that the

application is technically complete. The one time notice shall state that the application has been deemed technically complete by the Secretary and include a fifteen (15) day public review period: Provided that, Notice of Technical Completeness is not necessary if the application was technically complete prior to the end of the comment period of the original advertisement or a decision is made within ninety (90) days of the end of the comment period or informal conference.

- Findings
  - Application Checklist
  - Tracking Form
  - Pre-Inspection Narrative
  - MR2A
  - Waivers
  - Permitting Supervisor Recommendation
  - Geologist Recommendation
  - Engineer Recommendation
  - Environmental Resource Specialist Recommendation
  - Forester Recommendation
  - Soil Scientist Recommendation
  - Inspector Recommendation
  - Blasting Recommendation
  - NPDES Summary
  - O&C Recommendation
  - CHIA
  - Buffer Zone Analysis
  - WV Division of Labor Compliance
  - WV Workers Compensation Compliance
  - WV Unemployment Compensation Compliance
  - WV Secretary of State Verification
  - WV Tax Department Compliance
  - AVS Recommendation
  - Informal Conference Information
  - Community Impact Statement
  - Affected Agency Notifications
  - Relevant Correspondence
  - Ground Water Protection Plan Fee Compliance
  - ERIS Applicant Block List Report

- Decision
  - Quality Control Checklist completed by Permitting Supervisor.
  - Application must be refreshed in ERIS prior to issuance
  - Regional Permitting Supervisor will notify DMR headquarters staff of application recommendation. DMR headquarters staff will confirm adequacy of bond, insurance compliance and final AVS compliance.
  - Assistant Deputy Director for Coal & Non-Coal Permitting will review region and headquarter findings and make recommendation to DMR Director for final action decision. Director's decision is prepared and uploaded to eSS application.

- When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
- Application decision transmitted to associated parties via Final Action Notification email.
- Application status will transition from Pending to Closed in eSS.

• Surface Mine Permit Amendment (MR4)

- Review

  - Confirm permit has not expired.
  - Initial review shall confirm information requirements for advertising.
  - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
  - The SMA is also available for public review at the regional WVDEP office where SMA review is being conducted.
  - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
  - Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).
  - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
  - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
  - The review team leader will transmit the review team's first technical corrections to the applicant within thirty (30) working days of application being gatekept. Subsequent reviews are to be completed and transmitted to the applicant within fifteen (15) working days. The applicant is required to resubmit the corrected application within thirty (30) working days of corrections received. If the application remains incomplete after two (2) rounds of technical review, a meeting shall be scheduled with applicant and/or their consultant, to address completion of the application. If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
  - Confirm all applicable sections have been completed and approved.

Note: Bond submittal is not required for application approval, however, bond must be provided prior to any activity on proposed permit amendment area or if permit amendment area is proposed in an existing active increment.

- Findings
  - Application Checklist
  - Tracking Form

        - Pre-Inspection Narrative
        - MR2A
        - Waivers
        - Permitting Supervisor Recommendation
        - Geologist Recommendation
        - Engineer Recommendation
        - Environmental Resource Specialist Recommendation
        - Forester Recommendation
        - Soil Scientist Recommendation
        - Inspector Recommendation
        - Blasting Recommendation
        - NPDES Summary
        - O&C Recommendation
        - CHIA
        - Buffer Zone Analysis
        - WV Division of Labor Compliance
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - WV Secretary of State Verification
        - WV Tax Department Compliance
        - AVS Recommendation
        - Informal Conference Information
        - Community Impact Statement
        - Affected Agency Notifications
        - Relevant Correspondence
        - Ground Water Protection Plan Fee Compliance
        - ERIS Applicant Block List Report

    - Decision
        - Quality Control Checklist completed by Permitting Supervisor.
        - Application must be refreshed in ERIS prior to issuance.
        - Regional Permitting Supervisor will notify DMR headquarters staff of application recommendation. DMR headquarters staff will confirm adequacy of bond, insurance compliance and final AVS compliance.
        - Assistant Deputy Director for Coal & Non-Coal Permitting will review region and headquarter findings and make recommendation to DMR Director for final action decision. Director's decision is prepared and uploaded to eSS application.
        - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Revision (Insignificant) (MR-4PR)**
    - Review
        - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
        - Applications shall be reviewed and recommended for approval, denial or

corrections requested within fifteen (15) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
    - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
    - Confirm all applicable sections have been completed and approved.

  - Findings
    - Application Checklist
    - Tracking Form
    - Waivers
    - Review Team Recommendations
    - WV Workers Compensation Compliance
    - WV Unemployment Compensation Compliance
    - Relevant Correspondence
    - ERIS Applicant Block List Report
    - Ground Water Protection Plan Fee Compliance

  - Decision
    - Quality Control Checklist completed by Permitting Supervisor.
    - Application must be refreshed in ERIS prior to issuance.
    - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
    - Application decision transmitted to associated parties via Final Action Notification email. Application status will transition from Pending to Closed in eSS.

- **Revision (Significant) (MR-4PR)**

  - Review

    - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
    - Applications shall be reviewed and recommended for approval, denial or corrections requested within fifteen (15) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
    - Initial review shall confirm information requirements for advertising.
    - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
    - The application is also available for public review at the regional WVDEP office where application review is being conducted.
    - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
    - Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).

        - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - Pre-Inspection Narrative
        - MR2A
        - Waivers
        - Permitting Supervisor Recommendation
        - Review Team Recommendations
        - CHIA
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - WV Tax Department Compliance
        - Informal Conference Information
        - Affected Agency Notifications
        - Relevant Correspondence
        - Ground Water Protection Plan Fee Compliance
        - ERIS Applicant Block List Report

    - Decision
        - Quality Control Checklist completed by Permitting Supervisor
        - Application must be refreshed in ERIS prior to issuance.
        - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
        - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Incidental Boundary Revision (IBR) (Insignificant)**

    - Review
        - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within fifteen (15) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
        - SHPO consultation can be waived if additional area proposed is under 5 acres or proposed additional area was previously disturbed.

        - Endangered Species Consultation (See Fish & Wildlife Information section for guidance)
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - Waivers
        - Review Team Recommendations
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - Relevant Correspondence
        - ERIS Applicant Block List Report
        - Ground Water Protection Plan Fee Compliance

    - Decision
        - Quality Control Checklist completed by Permitting Supervisor.
        - Application must be refreshed in ERIS prior to issuance.
        - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
        - Application decision transmitted to associated parties via Final Action Notification email. Application status will transition from Pending to Closed in eSS.

- **Incidental Boundary Revision (IBR) (Significant)**

    - Review
        - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within fifteen (15) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
        - Initial review shall confirm information requirements for advertising.
        - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
        - The application is also available for public review at the regional WVDEP office where application review is being conducted.
        - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
        - Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).

        - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
        - SHPO consultation can be waived if additional area proposed is under 5 acres or proposed additional area was previously disturbed.
        - Endangered Species Consultation (See Fish & Wildlife Information section for guidance)
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - Pre-Inspection Narrative
        - MR2A
        - Waivers Permitting Supervisor Recommendation
        - Review Team Recommendations
        - CHIA
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - WV Tax Department Compliance
        - Informal Conference Information
        - Affected Agency Notifications
        - Relevant Correspondence
        - Ground Water Protection Plan Fee Compliance
        - ERIS Applicant Block List Report

    - Decision
        - Quality Control Checklist completed by Permitting Supervisor.
        - Application must be refreshed in ERIS prior to issuance.
        - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
        - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Permit Renewal (MR17)**

    - Review
        - Confirm application submittal occurred one hundred (120) days prior to permit expiration date. Notify I&E staff if application submittal was not received one hundred (120) days prior to permit expiration date.
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within fifteen (15) working days of application being

gatekept. Resubmitted corrected applications shall be reviewed within ten (10) working days.

- Initial review shall confirm information requirements for advertising.
- Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
- The application is also available for public review at the regional WVDEP office where application review is being conducted.
- The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
- Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).
- A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
- A time extension of sixty (60) days may be granted by the Secretary for a permit renewal which has been submitted but is logistically impractical to process before the expiration date. The extension must be granted prior to the permit expiration date.
- If the applicant has not made timely and complete corrections, notify the inspector.
- Confirm all applicable sections have been completed and approved.

- Findings
  - Application Checklist
  - Tracking Form
  - Reviewer Recommendation
  - Inspector Recommendation
  - WV Workers Compensation Compliance
  - WV Unemployment Compensation Compliance
  - WV Secretary of State Verification
  - WV Tax Department Compliance
  - Informal Conference Information
  - Affected Agency Notifications
  - Relevant Correspondence
  - Ground Water Protection Plan Fee Compliance

- Decision
  - Quality Control Checklist completed by Permitting Supervisor.
  - Application must be refreshed in ERIS prior to issuance.
  - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
  - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
  - Application decision transmitted to associated parties via Final Action Notification email.

        - Application status will transition from Pending to Closed in eSS.

- **Operator Assignment (MR19)**

    - Review
        - Confirm permit has not expired.
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
        - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
        - Initial review shall confirm information requirements for advertising.
        - Refer to the Permit Applications - Operator Assignment section of the handbook for guidance relative to Advance Approval requests.
        - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
        - The application is also available for public review at the regional WVDEP office where application review is being conducted.
        - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
        - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - Inspector Recommendation
        - O&C Recommendation
        - WV Division of Labor Compliance
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - WV Secretary of State Verification
        - WV Tax Department Compliance
        - AVS Recommendation
        - Advance Approval Documents
        - Relevant Correspondence
        - Ground Water Protection Plan Fee Compliance
        - ERIS Applicant Block List Report

    - Decision
        - Quality Control Checklist completed by Permit Supervisor.

- Application must be refreshed in ERIS prior to issuance.
- Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
- When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
- Application decision transmitted to associated parties via Final Action Notification email.
- Application status will transition from Pending to Closed in eSS.

• Permit Transfer, Assignment or Sale (MR19A)

- Review
  - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
  - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
  - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
  - Initial review shall confirm information requirements for advertising.
  - Refer to the Permit Applications – Permit Transfer Assignment or Sale section of the handbook for guidance relative to Advance Approval requests.
  - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
  - The application is also available for public review at the regional WVDEP office where application review is being conducted.
  - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
  - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
  - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
  - Confirm all applicable sections have been completed and approved.

- Findings
  - Application Checklist
  - Tracking Form
  - MR2A
  - Permit Supervisor Recommendation
  - Inspector Recommendation
  - O&C Recommendation

- WV Division of Labor Compliance
- WV Workers Compensation Compliance
- WV Unemployment Compensation Compliance
- WV Secretary of State Verification
- WV Tax Department Compliance
- AVS Recommendation
- Advance Approval Documents
- Relevant Correspondence
- Ground Water Protection Plan Fee Compliance
- ERIS Applicant Block List Report

- Decision
  - Quality Control Checklist completed by Permitting Supervisor.
  - Application must be refreshed in ERIS prior to issuance.
  - Regional Permitting Supervisor will notify DMR headquarters staff of application recommendation. DMR headquarters staff will confirm adequacy of bond, insurance compliance and final AVS compliance.
  - Assistant Deputy Director for Coal & Non-Coal Permitting will review region and headquarter findings and make recommendation to DMR Director for final action decision.
  - Director's decision is prepared and uploaded to eSS application.
  - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
  - Application decision transmitted to associated parties via Final Action Notification email.
  - Application status will transition from Pending to Closed in eSS.

- **Permittee Merger or Name Change (MR19B)**

  - Review
    - Review conducted at DMR headquarters.
    - Confirm permit has not expired.
    - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
    - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
    - Initial review shall confirm information requirements for advertising.
    - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
    - The application is also available for public review at the regional WVDEP office where application review is being conducted.
    - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
    - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
    - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
    - Confirm all applicable sections have been completed and approved.

  - Findings
    - Application Checklist
    - Tracking Form
    - O&C Recommendation (COCF if applicable)

    - WV Secretary of State Verification
    - Relevant Correspondence

  - Decision
    - Application must be refreshed in ERIS prior to issuance.
    - DMR headquarters staff will confirm bond information, insurance compliance and final AVS compliance.
    - Assistant Deputy Director for Coal & Non-Coal Permitting will review headquarter findings and make recommendation to DMR Director for final action decision.
    - Director's decision is prepared and uploaded to eSS application.
    - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.

        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Officer Update/Change of Owner /Controller (MR19C)**

    - Review
        - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
        - Review conducted at DMR headquarters.
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - O/C Recommendation (COCF if applicable)
        - WV Secretary of State Verification
        - Relevant Correspondence

    - Decision
        - Application must be refreshed in ERIS prior to issuance.
        - Reviewer's decision is prepared and uploaded to eSS application.
        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Permit Reinstatement (MR19R)**

  Note: Within one year following the notice of permit revocation, subject to the discretion of the director and based upon a petition for reinstatement, the revoked permit may be reinstated. The reinstated permit may be assigned to any person who meets the permit eligibility requirements of this article.

    - Review
        - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (5) working days.
        - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
        - Initial review shall confirm information requirements for advertising.
        - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.

        - The application is also available for public review at the regional WVDEP office where application review is being conducted.
        - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
        - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
        - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
        - Confirm all applicable sections have been completed and approved.

    - Findings
        - Application Checklist
        - Tracking Form
        - Permit Supervisor Recommendation
        - Inspector Recommendation
        - O&C Recommendation
        - WV Division of Labor Compliance
        - WV Workers Compensation Compliance
        - WV Unemployment Compensation Compliance
        - WV Secretary of State Verification
        - WV Tax Department Compliance
        - AVS Recommendation
        - Relevant Correspondence
        - Ground Water Protection Plan Fee Compliance
        - ERIS Applicant Block List Report

    - Decision
        - Quality Control Checklist completed by Permitting Supervisor.
        - Application must be refreshed in ERIS prior to issuance.
        - Regional Permitting Supervisor will notify DMR headquarters staff of application recommendation. DMR headquarters staff will confirm adequacy of bond, insurance compliance and final AVS compliance.
        - Assistant Deputy Director for Coal & Non-Coal Permitting will review region and headquarter findings and make recommendation to DMR Director for final action decision.
        - Director's decision is prepared and uploaded to eSS application.
        - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
        - Application decision transmitted to associated parties via Final Action Notification email.
        - Application status will transition from Pending to Closed in eSS.

- **Dam (MR4D)**
    - Review
        - Confirm permit has not expired.
        - Applications shall be reviewed and recommended for approval, denial or

corrections requested within forty five (45) working days of application being gatekept. Resubmitted corrected applications shall be reviewed within five (20) working days.
    - Initial review shall confirm information requirements for advertising.
    - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
    - The application is also available for public review at the regional WVDEP office where application review is being conducted.
    - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
    - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.
    - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
    - Confirm all applicable sections have been completed and approved.

  - Findings
    - Application Checklist
    - Tracking Form
    - Region Dam Engineer Recommendation
    - Inspector Recommendation
    - Blasting Recommendation
    - Ground Water Protection Plan Fee Compliance
    - ERIS Applicant Block List Report
    - Relevant Correspondence

  - Decision
    - Application must be refreshed in ERIS prior to issuance.
    - Decision based on application findings, made by DMR Dam Engineer, is prepared and uploaded to eSS application.
    - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
    - Application decision transmitted to associated parties via Final Action Notification email.
    - Application status will transition from Pending to Closed in eSS.

- **Increment Start (INB)**

  - Review
    - Confirm permit has not expired.
    - Applications shall be reviewed and recommended for approval, denial or corrections requested within five (5) working days of application being

gatekept Resubmitted corrected applications shall be reviewed within five (5) working days.
    - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
    - Confirm all applicable sections have been completed and approved.

  - Findings
    - Application Checklist
    - Tracking Form
    - Reviewer Recommendation
    - Relevant Correspondence

  - Decision
    - Quality Control Checklist completed by Permitting Supervisor.
    - Application must be refreshed in ERIS prior to issuance.
    - Decision based on application findings, made by Regional Permitting Supervisor, is prepared and uploaded to eSS application.
    - Application decision transmitted to associated parties via Final Action Notification email.
    - Application status will transition from Pending to Closed in eSS

- **Emergency Warning Plan (EWP)**

  - Review
    - Confirm permit has either not expired, or has obtained Phase I or Phase II release, or has been granted a renewal waiver.
    - Applications shall be reviewed and recommended for approval, denial or corrections requested within ten (10) working days of application being gatekept Resubmitted corrected applications shall be reviewed within five (5) working days.
    - If the applicant has not made timely and complete corrections, the application will be terminated. (See Application Decision Overview)
    - Confirm all applicable sections have been completed and approved.

  - Findings
    - Application Checklist
    - Tracking Form
    - Reviewer Recommendation
    - Inspector Recommendation
    - Relevant Correspondence

  - Decision
    - Application must be refreshed in ERIS prior to issuance.
    - Decision based on application findings, made by Regional Dam Engineer, is prepared and uploaded to eSS application.
    - Application decision transmitted to associated parties via Final Action Notification email.
    - Application status will transition from Pending to Closed in eSS.

- **Remining Application**

  - Administrative Review
    - Commence review and within five (5) working days notify applicant whether application is administratively complete or corrections are required.
    - If corrections are required the applicant must resubmit the corrected application within thirty (30) working days. If the application is not resubmitted within thirty (30) working days or if application is resubmitted within thirty (30) working days and is still not administratively complete, report application to permitting supervisor for denial. Following denial, the application may be resubmitted, accompanied by a new filing fee. (See Application Decision Overview)
    - Once application is deemed administratively complete, SMA number will be assigned.
    - Applicant will at this point be sent a courthouse acknowledgement form to document placement of the application, in the courthouse or courthouses in the county or counties of the proposed surface-mining operation, for public review.
    - The application is also available for public review at the regional WVDEP office where application review is being conducted.
    - The regional office must receive the signed, date stamped courthouse acknowledgement form before permission to advertise the application can be granted. The permission to advertise milestone should be entered in ERIS.
    - Notify affected agencies (See Cooperating and Affected Local, State & Federal Agencies section).
    - Request WV Division of Labor and WV Workers Compensation compliance review. (See Application Findings Overview)
    - A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.

  - Technical Review
    - SMA number is valid for one year. Extension of the SMA number, by the permitting supervisor, may be necessary for applications requiring more than one year to obtain final decision. The initial extension must be requested by the applicant, in writing, prior to the expiration of the original assignment, and re-advertisement conducted (four (4) time advertisement with thirty (30) day comment period). The applicant must demonstrate diligent pursuit by resubmitting the corrected application within thirty (30) working days of corrections received. Extensions are to be granted for no more than sixty (60) day increments. Subsequent requests for SMA number extension may be granted provided diligent pursuit of application approval is demonstrated, however, re-advertisement is not required. If the applicant has not made timely and complete corrections, the SMA number will not be extended and the SMA will be terminated. (See Application Decision Overview)
    - The review team leader will transmit the review team's first technical corrections to the applicant within thirty (30) working days of SMA number issuance. Subsequent reviews are to be completed and transmitted

to the applicant within fifteen (15) working days. The applicant is required to resubmit the corrected application within thirty (30) working days of corrections received. If the application remains incomplete after two (2) rounds of technical review, a meeting shall be scheduled with applicant and/or their consultant, to address completion of the application.
    - Confirm all applicable sections have been completed and approved.

- Findings
    - Application Checklist
    - Tracking Form
    - Pre-Inspection Narrative
    - MR2A
    - Waivers
    - Permitting Supervisor Recommendation
    - Geologist Recommendation
    - Engineer Recommendation
    - Environmental Resource Specialist Recommendation
    - Forester Recommendation
    - Soil Scientist Recommendation
    - Inspector Recommendation
    - Blasting Recommendation
    - NPDES Summary
    - O&C Recommendation
    - CHIA
    - Buffer Zone Analysis
    - WV Division of Labor Compliance
    - WV Workers Compensation Compliance
    - WV Unemployment Compensation Compliance
    - WV Secretary of State Verification
    - WV Tax Department Compliance
    - AVS Recommendation
    - Informal Conference Information
    - Community Impact Statement
    - Affected Agency Notifications
    - Relevant Correspondence
    - Ground Water Protection Plan Fee Compliance
    - ERIS Applicant Block List Report

- Decision
    - Quality Control Checklist completed by Permitting Supervisor.
    - Application must be refreshed in ERIS prior to issuance.
    - Regional Permitting Supervisor will notify DMR headquarters staff of application recommendation. DMR headquarters staff will confirm adequacy of bond, insurance compliance and final AVS compliance.
    - Assistant Deputy Director for Coal & Non-Coal Permitting will review region and headquarter findings and make recommendation to DMR Director for final action decision. Director's decision is prepared and uploaded to eSS application.
    - When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application,

each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
  - Application decision transmitted to associated parties via Final Action Notification email.
  - Application status will transition from Pending to Closed in eSS.

VIII. Application Findings Overview

- **Application Checklist:** Completed for each application type to insure permitting requirements are addressed.
- **Tracking Form:** ERIS reporting of application activities and milestones.
- **Pre-Inspection Narrative:** Completed for Surface Mine Applications and Permit Amendment Applications, and if deemed necessary by I&E and Permit Review staff, Permit Revision Application.
- **MR2A Facts & Findings:** Form is required to be reviewed and signed by the permitting supervisor for SMA, Permit Amendment Application, Significant Permit Revision, and Transfer Applications.
- **Waivers:** Reviewer finding must be made for each waiver request contained within the application.
- **Endangered Species Consultation:** Required for SMA (See Fish & Wildlife Information section for guidance relative to other application types).
- **Permitting Supervisor Recommendation:** Required for SMA, Permit Amendment Application and Permit Transfer Application.
- **Geologist Recommendation:**
- **Engineer Recommendation:**
- **Region Dam Engineer Recommendation:** Required for Dam Application.
- **Environmental Resource Specialist Recommendation:**
- **Forester Recommendation:** Required for commercial forestry and forestry PMLU.
- **Soil Scientist Recommendation:** Required for commercial forestry PMLU.
- **Inspector Recommendation:** Inspector Narrative Form "A" is required for SMA, Permit Amendment Application and Significant Permit Revision Application. Inspector Narrative Form "B" is required for Permit Transfer Application – must address all permits contained in application. Inspector recommendation is to be recorded in the DEP Only section of the eSS application for all other application types except MR19B and MR19C, for which no recommendation is required.
- **Blasting Recommendation:** Required for SMA, Permit Amendment Application and Permit Revisions adding blasting or affecting approved plan.
- **NPDES Summary:** Required to ensure an associated HPU application has been issued or is currently under review.
- **O&C Recommendation:** Required for SMA, Permit Amendment Application, Operator Assignment Application and Permit Transfer Application. If an application references a COCF then a signoff by the DMR HQ COCF specialist shall be included with the O&C Recommendation.
- **Cumulative Hydrologic Impact assessment (CHIA):** Required for SMA, Permit Amendment Application, Permit Revision Applications that include a PHC update, and UIC related applications. The WVDEP is required to perform a cumulative hydrologic

impact assessment for each permit application to determine whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area. The WVDEP currently utilizes a qualitative to semi-quantitative approach to the CHIA development. CHIA describes existing hydrologic conditions in the cumulative impact area (CIA) based on water quantity and quality information in the permit application and other sources which are available. The CHIA also provides a description of the geology and the watershed characteristics of the area where the operation is located.

- **Buffer Zone Analysis:** Required for applications proposing excess spoil, disposal fills, refuse disposal fills, or refuse impoundments to be located in intermittent or perennial streams.
- **WV Division of Labor Compliance:** Required for SMA, Permit Amendment Application, Operator Assignment Application, Permit Transfer Application, Permit Reinstatement Application and Remining Application.
- **WV Workers Compensation Compliance:** Required for SMA, Permit Amendment Application, Operator Assignment Application, Permit Transfer Application, Permit Merger and/or Name Change Application, Permit Reinstatement Application and Remining Application.
- **WV Unemployment Compensation Compliance:** Required for Notice of Intent to Prospect Greater Than 250 Tons, SMA, Permit Amendment Application, Permit Revision Application,
  Permit Renewal Application, Operator Assignment Application, Permit Transfer Application, Permit Reinstatement Application and Remining Application.
- **WV Secretary of State Verification:** Required for Notice of Intent to Prospect, SMA, Permit Renewals, Operator Assignment Application, Permit Transfer Application, Permit Name Change or Merger Application, Permit Reinstatement Application and Remining Application.
- **WV Tax Department Compliance:** Required for all applications except INB Application, EWP Application, Dam Application, and Permit Change of Owner/Controller Application.
- **AVS Recommendation:** Completed by DMR HQ AVS specialist for SMA, Permit Amendment Application, Operator Assignment Application, Permit Transfer Application, Permit Merger/Name Change Application.
- **Informal Conference Information:**
- **Community Impact Statement:** See **145CSR8** for requirements.
- **Affected Agency Notifications:** See Cooperating & Affected Agency section.
- **Relevant Correspondence:**
- **Ground Water Protection Plan Fee Compliance:** Retrieved from ERIS for all application types.
- **Applicant Block List Report:** Retrieved from ERIS to confirm applicant is not delinquent on civil penalty payment and does not have a cessation order in effect. Required for all application types except Permit Renewal Application.

IX. Additional Instruction for Findings

A. AVS Findings:

When a (MR4) surface mine application, (MR4) permit amendment application, (MR19A) permit transfer application, (MR19B) permit merger/name change application, or (MR19) operator assignment application is received that requires an AVS Report be made part of the application findings, the reviewer responsible for review of the O&C information will perform the following:

- **Follow the protocol for conducting AVS-OSMRE Requests**
- **Conduct a preliminary check of the permit AVS status early in the review process so that applicant may resolve outstanding issues prior to HQ receiving application for decision.**
- **Contact the applicant regarding reported AVS issues.**
- **Contact DMR HQ AVS specialist regarding AVS issues which may require OSM inquiry for narrative or clarification.**
- **Contact DMR HQ AVS specialist for inquiries regarding civil penalty payment plans which may be in effect.**
- **If necessary HQ will prepare findings to explain and /or provide for exclusion for outstanding WV violations that should not affect the application approval.**
- **Recommend application for HQ decision upon receiving an affirmative AVS report or notification of HQ findings.**
- **DMR HQ AVS specialist will conduct the final OSMRE prior to application approval.**

All contact made regarding AVS issues emailed to DMR HQ AVS specialist and/or the applicant should have a subject line as follows:

- **AVS Report for Applicant Name, Permit Number & Application Type**.

This will allow DMR HQ AVS specialist to create a folder for pending AVS inquiries and periodically check the status until application decision is made. This will also allow the subject inquiries be searched efficiently in email communications by all parties

B. AVS – OSMRE Requests AVS Login Page

All application types listed below should be entered in the AVS System.
When entering an application leave the Letter off the Application/Permit Number: S501397 would be entered as 501397 **UNLESS** it is a permit number that is in an old format: S-128-78 then you should enter the application as S012878. This will be the only time you use the letter when entering an application.

Application Type	Entity Type	Application Evaluation	Permit Evaluation
SMA		X	
AMEND		X	
19B		X	
19A		X	
19	X		X

1. If **Application Evaluation** leave off the Letter on the application/permit number: S501397 would be 501397.
2. If **Permit Evaluation** use permit number including the Letter.
3. All application will have the status of "under review" unless it's a 19.
4. If there is a violation on a 19 when you do a **Permit Evaluation,** then do an **Entity Evaluation**.
5. If out of state violations appear and are "conditional" please contact that state to see if they are in good standing. Write either that they are in good standing or that they are not on the OSMRE Narrative below the summary.

C. WV Division of Labor (DOL) Findings:

Form **MR-1** shall be completed for SMA, Permit Amendment Application, Operator Assignment Application, Permit Transfer Application, Permit Reinstatement Application and Remining Application and forwarded to DOL. Dates to DOL and from DOL are entered in ERIS. If DOL reports noncompliance, the application will not be approved until compliance is achieved.

D. WV Unemployment Compensation Division Findings:

A query of the WV Unemployment Compensation Division database is required for Notice of Intent to Prospect Greater Than 250 Tons, SMA, Permit Amendment Application, Permit Renewal Application, Permit Revision and IBR Application, Operator Assignment Application, Permit Transfer Application, Permit Merger and/or Name Change Application, Reinstatement of Permit Application and Remining Application. This database is accessed via the Internet at **UC Defaults Login**. Queries of this database should use the applicants FEIN first and if no record is found then search by the company name. This will lessen the likelihood of misidentification of the applicant. For all types of applications: If the database shows the applicant to be in default, the applicant shall be informed that the database shows them to be in default and that the application cannot be approved until they are no longer shown to be in default. If an application is not approved within 14 days of receiving a "Compliance" reply from the database a new query shall be performed prior to approval. If this new query shows the applicant to be in default, the application will not be approved until compliance is achieved.

E. WV Workers Compensation Division (WC) Findings:

Form **MR-1WC** shall be completed for SMA, Permit Amendment Application, Operator Assignment Application, Permit Transfer Application, Permit Merger and/or Name Change Application, Permit Reinstatement Application and Remining Application and forwarded to WC. Dates to WC and from WC are entered in ERIS. WC is allowed 15 calendar days to provide DEP with a response. Failure of WC to respond in this time frame will result in DEP's assumption that the applicant is in compliance. If WC reports noncompliance, the application will not be approved until compliance is achieved. SMA and Permit Transfer Applications, for which the applicant reports no employees, may be issued with the following conditions placed on the permit face: (1) Applicant must obtain WV Workers Compensation coverage for all applicable workers on site prior to permit activation or reactivation. (2) If the mine operator will be different from the applicant, it will be necessary to complete and submit as a separate "Application for Operator Assignment" to the appropriate DEP Regional Office prior to permit activation or reactivation.

F. WV Secretary of State (SOS) Findings:

A query of the WV Secretary of State database is required for Notice of Intent to Prospect, SMA, Permit Renewal Application, Operator Assignment Application, Permit Transfer Application, Permit Merger and/or Name Change Application, Reinstatement of Permit Application and Remining Application to insure applicants are active companies (they do not have a closed status) and registered to do business in West Virginia (unless they are sole proprietorships or general partnerships). The officers list should also be reviewed; however, only a major discrepancy in the SOS officer listing and the application listing should be questioned (i.e. if an ended officer is listed in SOS and a new officer is listed in the application, do not consider this a correction). But, if a new officer (an individual which has never been listed in AVS and/or ERIS) is listed in SOS and the list in the application does not have this individual, then this should be considered a correction.

G. WV Tax Department Findings:

Required for all applications except INB Application, EWP Application, Dam Application, and Permit Change of Owner/Controller Application. The Coal Reclamation Monthly Detail Report provided by the Excise Tax Unit shall be reviewed for applicant delinquency prior to application issuance. If the report indicates applicant noncompliance, the application will not be approved until compliance is achieved.

X. Application Decision Overview

A. Application Approval

- Application is complete and accurate, and applicant has complied with all requirements of 38CSR2 and 22-3.
- Applicant has demonstrated that reclamation as required by 38CSR2 and 22-3 can be accomplished under the reclamation plan contained within the permit application.
- Application findings recommend issuance.
- When application decision is rendered, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
- Final Action Notification (FAN) email sent to associated parties.
- Within thirty (30) days of FAN, any person with an interest which is or may be adversely affected by the director's decision may request a hearing before the Surface Mine Board.

B. Application Denial

- Application is incomplete and does not comply with 38CSR2 and 22-3.
- Applicant has not demonstrated that reclamation as required by 38CSR2 and 22-3 can be accomplished under the reclamation plan contained within the permit application.
- Application findings recommend denial.
- Prior to the FAN, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.
- Final Action Notification (FAN) email sent to associated parties.
- Within thirty (30) days of FAN, applicant may request a hearing before the Surface Mine Board.

C. Application Termination

- Application has not been resubmitted in a timely manner following request for corrections to the application.

Note: When reviewing the ERIS pending application list for application inactivity, contact the applicant to either schedule a meeting or generate application resubmittal or application withdrawal prior to termination notice being sent.

  - Notice of application termination will be sent if application is not resubmitted within sixty (60) days following a request for corrections to the application.
  - Notice of application termination will be transmitted via email to all parties associated to the application. Verify email receipt.
  - Applicant must respond to notice of application termination within 15 days of receiving notice, to avoid application termination.

    - Acceptable responses are:

      (1) Resubmittal of application with all requested corrections addressed.

      (2) Request for additional time to resubmit with justification. Permitting Supervisor will review and grant extension if justified.

      (3) Application withdrawal. Withdrawal request from authorized applicant representative is required. A Final Action Notification (FAN) email is sent to associated parties informing of application withdrawal.

  - If no response is received or justification for extension is not granted, a Final Action Notification (FAN) email is sent to associated parties informing of application termination.
  - Prior to the FAN, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.

- Application resubmitted with in-complete corrections to the application.

Note: Insure that requests for corrected information were effectively communicated prior to proceeding with a termination notice. Applicant should be provided opportunity to meet and discuss the application prior to termination notice being sent.

  - Notice of application termination will be transmitted via email to all parties associated to the application. Verify email receipt.

  - Applicant must respond to notice of application termination within 15 days of receiving notice, to avoid application termination.

    - Acceptable responses are:
      (1) Resubmittal of application with all requested corrections addressed.
      (2) Request for additional time to resubmit with justification. Permitting Supervisor will review and grant extension if justified.

(3) Application withdrawal. Withdrawal request from authorized applicant representative is required. A Final Action Notification (FAN) email is sent to associated parties informing of application withdrawal.

- Prior to the FAN, the Secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission.

- If no response is received or justification for extension is not granted, a Final Action Notification (FAN) email is sent to associated parties informing of application termination.

PERMIT APPLICATIONS

I. (MR3) NOTICE OF INTENT TO PROSPECT

(Section 13 of 38CSR2 & Section 7 of 22-3)

Application Fee: $2000
Advertisement: Not Applicable for Prospect Less Than 250 Tons
Comment Period: Not Applicable for Prospect Less Than 250 Tons
Advertisement: 1 Time for Prospect Greater Than 250 Tons
Comment Period: 15 Days for Prospect Greater Than 250 Tons
Term: 2 Years

Application is required for the field gathering of surface or subsurface geologic, physical, or chemical data by trenching, drilling, geophysical, or other techniques necessary to determine the quality and quantity of overburden and coal of an area; or the gathering of environmental data to establish the conditions of an area before beginning surface mining and reclamation operations, where such activity may cause any disturbance of the land surface or may cause any appreciable effect on land, air, water, or other environmental resources. Regardless of whether or not any disturbance is anticipated, the gathering of environmental data on lands designated unsuitable pursuant to Section 22 of **22-3** shall be considered prospecting and subject to the requirements of Section 13 of **38CSR2.**

A complete and accurate "Notice of Intent to Prospect" will expedite the review process. A Notice of Intent to Prospect must show approximate routes and locations of roads to be used or constructed. The approximate location of each anticipated prospecting excavation or drill hole shall be indicated on the map. If applicant is unsure how many drill holes or pits will be used, they shall propose the maximum anticipated number of holes and anticipated total acres to be disturbed. Minor movement of these sites when prospecting is acceptable as long as total permitted acreage is not exceeded and there are no new surface owners.

Additional Information:

- Cannot be transferred or sold via a MR-19A unless a complete stock purchase or an asset purchase thru bankruptcy court. It is, however, to be included in a MR-19B application since the original due to the company having a name change or merger;
- In cases of merger and name change (MR-19B), open prospect operations shall be included
- Cannot be revised, unless ordered by the Secretary;
- Cannot conduct blasting activities, unless approved by Secretary and in accordance with Section 6 of the Surface Mining Reclamation Regulations;
- Shall be valid for two years;
- Sediment control for the disturbed area may take several forms depending upon the circumstances. Sediment sumps, ditches, straw bales, or filter cloth are all acceptable alone or in combination as long as the proposed plan will prevent sedimentation from leaving the disturbed area.
- A typical site plan for each type of prospect site is required. Also, typical cross sections for each type of proposed site will be required. The typical site plan should show flow direction, sediment control, access road, and provide dimensions of the site. Bore holes should show grouting the entire length. The typical site plan is only an example and does not have to be to scale.
- If the applicant proposes "dropping a dozer blade, grader, etc." on existing roads and sites, then the area must be bonded. This includes widening, upgrading, etc. of existing roads.

- SHPO, Wildlife Heritage Lands Inquiry, reclamation bond, and requirements of Section 13 of the regulations may be waived if there is no surface disturbance (i.e., dropping of a dozer blade, grader, etc.);
- The prospect map submitted with the application does not have to be signed by RPE or company.

II. (MR4) SURFACE MINE APPLICATION

(Section 3 of 38CSR2 & Section 9 of 22-3)

Application Fee: $3500
Advertisement: 4 Times
Comment Period: 30 Days
Term: 5 Years

Application is required for activities conducted on the surface of lands for the removal of coal, or, subject to the requirements of Section 14 of 22-3, surface operations and surface impacts incident to an underground coal mine, including the drainage and discharge from the mine. The activities include: Excavation for the purpose of obtaining coal, including, but not limited to, common methods as contour, strip, auger, mountaintop removal, box cut, open pit and area mining; the uses of explosives and blasting; reclamation; in situ distillation or retorting, leaching or other chemical or physical processing; the cleaning, concentrating or other processing or preparation and loading of coal for commercial purposes at or near the mine site; and the areas upon which the above activities occur or where the activities disturb the natural land surface. The areas also include any adjacent land, the use of which is incidental to the activities; all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of the activities and for haulage; and excavations, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas and other areas upon which are sited structures, facilities, or other property or materials on the surface, resulting from or incident to the activities: Provided, that the activities do not include the extraction of coal incidental to the extraction of other minerals where coal does not exceed sixteen and two-thirds percent of the tonnage of minerals removed for purposes of commercial use or sale, or coal prospecting subject to Section 7 of 22-3.

A. Subject: Facilities or Structures Used in Common
Date: February 15, 1994

Applicants for new mining permits or revisions to existing permits which propose to jointly use mining-related facilities or structures permitted on adjacent operations, will conform to the following policy.

The plans of a facility or structure (i.e., haulroad, drainage structure, etc.) that is to be shared by two or more separately permitted mining operations may be made a part of each application or may be included in one permit application and referenced in the other applications.

Each permittee shall be required to bond the facility or structure unless the permittees proposing to share it agree to another arrangement for assuming their respective responsibilities.
A copy of this written agreement must be made a part of each application and shall at a minimum specify the respective bonding responsibilities of each party (to include a bond release procedure) for the facility or structure to be commonly used.

The Secretary may approve such an agreement where it is demonstrated that all regulatory requirements for the facility or structure will be met.

B. Subject: Permitting of Coal Preparation Facilities
Date: November 1995

Coal preparation plants are defined under Section 38-2-2.23 of the Rules and Regulations. Coal loadout facility is any facility which is used to load coal for transportation and is not included under the definition of a coal preparation plant.

All coal preparation plants require a permit under Chapter 22, Article 3 regardless of their distance from the mine site.

The only sites which do not require a permit are coal loadout facilities as defined above. However, these sites shall be required to obtain an NPDES permit where there is a point source discharge.

Any facility which physically (including crushing, sizing or sieving) or chemically (even if with water only) processes coal is required to obtain an Article 3 reclamation permit.

C. Subject: Y Permit-Underground Workings in WV with No Surface Disturbance
Date: January 18, 2001
Approval: John Ailes

This is the procedure for underground mining operations extending into West Virginia from a surrounding state but having no surface disturbance in West Virginia. These types of operations are permitted in another state and only the underground workings are within the West Virginia border. West Virginia needs to be aware of these underground mining operations as they are subject to law and regulations like any other mining permit and have the same potential problems.

An application that proposes this type of situation is called a “Y” permit and will be tracked in ERIS as a type “WHY” application. A “Y” prefix is added to the application number once the application has a SMA number.

The surface mine application (MR4) will be used and the following sections are required: A-1, A-2, A-3, D-1, E-1, Section I, Section J, Part III General Applicant Information, Section M, Section S, Section U, Section X and Section Y. Additional sections may be required, if applicable, at the discretion of the field office permit supervisor. The filing fee, advertisement and comment period will follow MR4 application requirements. A copy of the permit approval from the surrounding state must also be included in the application to verify that the applicant does have a valid permit.

Upon review and approval, a permit face will be prepared for signature in headquarters. As stated on the permit face, yearly updates on the progress of the mining will be required to be submitted to the regional I & E Supervisor. The updates should include a Progress Map. Update will be filed with the permit.

D. Subject: Coal Bed Methane
Date: Revised March 23, 2020
Approval: Harold Ward, Director/ Deputy Secretary

The West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA) at §22-3-3(u), covers, among other things, surface disturbances associated with coal mining. Accordingly, sites for coal prospecting boreholes and degasification of coal mines for the purpose of mineral extraction are to be covered by the applicable mining permit. However, jurisdiction over exploration for coal bed methane and production wells for coal bed methane (CBM) gas, as defined at WV Code §22-21-2(e), is not subject to WVSCMRA.

Specifically, WVSCMRA applies where coal seams are being processed (burned, heated, liquefied, etc.) in situ to extract the coal itself in a gaseous or liquid state and where degasification holes are solely for the purpose of ventilating an underground mine.

At the point these degas holes become CBM production wells they are no longer covered under WVSCMRA. If there is a WVSCMRA permit, the area, including the road to the well, can be deleted from the permit by changing the post mining land use and applying for release on the areas to be used.

If an entity proposes to flare coal bed methane outside of the conduct of mining operations from a WVSCMRA permitted underground coal mine, WVDEP will only require a permit revision to the subsidence control plan. The permit revision to the subsidence control plan shall address the location and the method for sealing, casing, lining, or otherwise managing the flare well to prevent acid or other toxic drainage from entering ground and surface waters, to minimize disturbance to the prevailing hydrologic balance, and to ensure safety of people, livestock, fish and wildlife, and machinery. The abandonment plan for a flare well is to state that the sealing of the well will be initiated immediately upon cessation of flaring operations for that particular well. The surface disturbance associated with this abandonment activity is not to be considered part of the WVSCMRA permitted area.

At the time of final release of the bond, the flare wells must either be sealed in a safe and environmentally sound manner or with the prior approval of WVDEP, be transferred to another party for further use. The conditions of the transfer shall comply with State and local laws, regulations, and other requirements.

This memo applies only to WVSCMRA. Permits issued by other divisions within DEP may be required such as groundwater protection, oil and gas, Construction Storm Water General permit, or DAQ to name a few. Also, authorization from WV Miner's Health, Safety, and Training and the federal Mine Safety and Health Administration may be required.

III. (MR4) SURFACE MINE PERMIT AMENDMENT

(Section 19(b) (3) of 22-3)

Application Fee: $2550
Advertisement: 4 Times
Comment Period: 30 Days

A. Subject: Permit Amendments
Date: March 5, 1998

Application may be submitted to allow extension to an area already covered by the permit, except incidental boundary revisions, shall be made by application for another permit. If the permittee desires to add the new area to his or her existing permit in order to have existing areas and new areas under one permit, the Secretary may so amend the original permit". These two statements are intended to authorize amendments to existing permits, when the public notice and performance requirements for coal removal are satisfied, that allow new and existing areas to be placed under one permit. As a result, permit amendments are permissible under the following criteria. The permit amendment application will consist of a surface mine application (MR-4) with "AMENDMENT" written on the front in bold letters. The application for the new area is subject to all procedures and requirements applicable to applications for original permits under this article. All sections of the MR-4 including filing fees, public notices and recalculation of site specific bond for total area (original and new area) will be required. The only sections or information that may be referenced and not included are the sections which are identical to the original permit. The amendment, as outlined in Section 19(b) (3) of 22-3, will be restricted to extensions of mining area contiguous to the original permit area (not including haulroads). Amendment acreage will be limited to no more than 35% of the original permitted acreage. Variances of the 35% limit may be approved by the Secretary on a site-specific basis. The type of mining must be continued as approved in the original permit. Since amendments become part of the original permit, release provisions will be incorporated and processed with the original permit. There are advantages to allowing this, both to industry and regulatory authorities.

Many mining complexes comprising of multiple permit numbers would be under one permit. The savings in paperwork and time required to complete and file paperwork would be substantial. Additionally, it would facilitate reclamation of abandoned sites contiguous to active permits and provide for more effective mining in the case of newly discovered reserves. All the laws and regulations would apply to amendments, therefore, no law or regulation is compromised.

IV. (MR4C) INCIDENTAL COAL REMOVAL

(Section 28 of 22-3)

Application Fee: $3500
Advertisement: 1 Time
Comment Period: 15 Days
Term: 2 years

Application is required for a special authorization to engage in surface-mining as an incident to the development of land for commercial, residential, industrial or civic use.
Application and instructions for completing are at DMR Forms.

V. (MR4D) DAM APPLICATION

(Section 2.5 of 38CSR4 & Section 5 of 22-14)

Application Fee: $300
Advertisement: 1 Time
Comment Period: 15 Days

Application is required to place, construct, enlarge, alter, remove, abandon, or repair a dam or whenever there is a change in ownership or control of dam.

VI. (MR4PR) PERMIT REVISION "SIGNIFICANT"

(Section 3.28 of 38CSR2 & Section 19 of 22-3)

Application Fee: $2000
Advertisement: 4 Times
Comment Period: 30 Days

Application is required for departure from the terms and conditions of the existing permit. Where the permit revision constitutes a significant departure from the terms and conditions of the existing permit which may result in a significant impact in any of the following areas:

- The health, safety, or welfare of the public;
- The hydrologic balance in the area of operation;
- The postmining land use;
- Areas prohibited from mining pursuant to the provisions of subsection (d) section 22 of 22-3 ;
- An individual's legal right to receive notice, as prescribed by the provisions of this rule;
- It shall be deemed to be a significant revision and be subject to the public notice requirements of subdivisions 3.2.a, 3.2.b., 3.2.c. and 3.2.d. of **38CSR2**

Examples of Significant Revision

- Alternative postmining land use
- Change in underground mining area to include or add mining of reserves underneath dwellings, structures, perennial or intermittent streams. (Gas lines excluded if stated in lease or other documentation.)
- Change in underground mining area to include or add mining of reserves in or underneath a watershed not addressed in the original application.
- Method of mining is changed to include augering or another mining method.
- Addition of fly ash for any purpose other than a soil amendment
- Disposal of tires generated on site (**one time, ten-day advertisement**)
- Add refuse to any permit not originally approved with refuse disposal

VII. (MR4PR) PERMIT REVISION "INSIGNIFICANT"

(Section 3.28 of 38CSR2 & Section 19 of 22-3)

Application Fee: Not Applicable
Advertisement: Not Applicable
Comment Period: Not Applicable

Application is required for departure from the terms and conditions of the existing permit. Where the permit revision constitutes only an insignificant departure from the terms and conditions of the approved permit, it shall be deemed to be a non-significant revision requiring no public notice.

Examples of Insignificant Revision

- Sewage sludge or fly ash as soil amendment
- Change in method of operation

- Change in mining and reclamation plan (unless mining type change)
- Changes in drainage control (unless under dam control)
- Changes in drainage plan
- Changes to backfilling and regrading plan (unless variance required)
- Changes to revegetation plan
- Changes to haulroads, access roads, or other transportation facilities
- Expansion of underground mining area (except those listed as “significant”)

VIII. (MR4PR) PERMIT INCIDENTAL BOUNDARY REVISION "SIGNIFICANT"
(Section 29 of 38CSR2 & Section 19 of 22-3)

Application Fee: $2000
Advertisement: 4 Times or 1 Time (See Table)
Comment Period: 30 Days or 10 Days (See Table)

Application is required to allow minor shifts or extensions of the permit boundary into non-coal areas or areas where any coal extraction is incidental to or of only secondary consideration to the intended purpose of the IBR. IBRs may also include the deletion of bonded acreage which is overbonded by another valid permit and for which full liability is assumed in writing by the successive permittee. IBRs may also include the deletion of undisturbed bonded acreage. IBRs shall not be granted for any prospecting operations. Where the permit revision constitutes a significant departure from the terms and conditions of the existing permit which may result in a significant impact in any of the following areas:

- The health, safety, or welfare of the public;
- The hydrologic balance in the area of operation;
- The postmining land use;
- Areas prohibited from mining pursuant to the provisions of subsection (d) section 22 of 22-3;
- An individual's legal right to receive notice, as prescribed by the provisions of this rule;
- It shall be deemed to be a significant revision and be subject to the public notice requirements of subdivisions 3.2.a, 3.2.b., 3.2.c. and 3.2.d. of **38CSR2**

Examples of significant IBR

- Disturbance within 100 feet of right of way of public road (except where mine access road joins right of way)
- Disturbance in new drainage area or watershed
- Opening in different drainage even within original mine development area, i.e. populated area, recreational area, etc.

IBR's may be approved for:

- Add and delete to add mineral in valley fill where coal will be covered
- Add and delete to add mineral where geologic variations occur (changes in dip, etc.)
- Punch outs from an underground mine required for production
- Punch ins are allowed only if the original portals need to be moved because of problems or if incidental or of secondary consideration, i.e. belt coal to different mines.
- Punching out of a mountain and punching into a different mountain will require a new permit application.

IBR's may not be approved for:

- Adding a coal seam not included in the original permit unless it is incidental to the construction of valley fills, ponds, etc.

A. Subject: Incidental Boundary Revision (IBR) Limitations
Date: September 2, 1999

An application to exceed IBR limitations would only be designated as significant if the permit revision also constitutes a significant departure from the terms and conditions of the existing permit.

"For purpose of surface mining operations, the maximum total acreage to be permitted under one or more IBR(s) shall not exceed twenty (20) percent of the original permitted acreage or a maximum of fifty (50) acres, whichever is less, throughout the life of the permit. Acreage limitation for IBR(s) on underground mining operations shall be limited to one hundred fifty (150) percent of the original permitted acreage or a maximum of fifty (50) acres, whichever is less, throughout the life of the permit; Provided, that the Secretary may grant a waiver specifying larger acre limits where the applicant demonstrates that the nature and complexity of the operation clearly requires more than fifty (50) acres for additional facilities to include but not be limited to site development, air shafts, fan ways, vent holes, roads, staging areas, etc." The question has arisen as to which types of operations can be granted a waiver as provided for under this regulation. It is the position of this agency that this waiver may only be considered for underground mining operations and those refuse disposal or preparation operations where the activity directly facilitates these operations. Furthermore, the provision at 38-2-3.29(e) shall be required of the permittee when an IBR application request this waiver.

Note: The proposal map contained within an approved IBR application shall be the permit map of record, therefore, all permit activity since permit issuance must be reflected. If the proposal map requires multiple maps to reflect the permitted area, the entire map set must be submitted. This will also apply to drainage maps, blasting maps and supplemental maps for underground coal mining.

IX. (MR4PR) PERMIT INCIDENTAL BOUNDARY REVISION "INSIGNIFICANT"
(Section 29 of 38CSR2 & Section 19 of 22-3)

Application Fee: Not Applicable
Advertisement: Not Applicable
Comment Period: Not Applicable

Application is required to allow minor shifts or extensions of the permit boundary into non-coal areas or areas where any coal extraction is incidental to or of only secondary consideration to the intended purpose of the IBR. IBRs may also include the deletion of bonded acreage which is overbonded by another valid permit and for which full liability is assumed in writing by the successive permittee. IBRs may also include the deletion of undisturbed bonded acreage. IBRs shall not be granted for any prospecting operations.

Examples of insignificant IBR

- Geologic variations requiring a shift in boundary (except those listed as significant)
- Relocation of portal adjacent to original opening if within same mine development area

IBR's may be approved for:

- Add and delete to add mineral in valley fill where coal will be covered
- Add and delete to add mineral where geologic variations occur (changes in dip, etc.)
- Punch outs from an underground mine required for production
- Punch ins are allowed only if the original portals need to be moved because of problems or if incidental or of secondary consideration, i.e. belt coal to different mines.

- Punching out of a mountain and punching into a different mountain will require a new permit application.

IBR's may not be approved for:

- Adding a coal seam not included in the original permit unless it is incidental to other construction valley fills, ponds, etc.

Note: The proposal map contained within an approved IBR application shall be the permit map of record, therefore, all permit activity since permit issuance must be reflected. If the proposal map requires multiple maps to reflect the permitted area, the entire map set must be submitted. This will also apply to drainage maps, blasting maps and supplemental maps for underground coal mining.

X. (MR17) PERMIT RENEWAL

(Section 3.27 of 38CSR2 & Section 19 of 22-3)

Application Fee: $3000
Advertisement: 4 Times
Comment Period: 30 Days

Permit renewal applications must be submitted 120 days prior to permit expiration date**.** All active surface mining operations shall be subject to the renewal requirements and provisions for issuance of a renewal discussed in Section 19 of 22-3: Provided, That the Secretary shall waive the requirements for renewal if the permittee certifies in writing that all coal extraction is completed, that all backfilling and regrading will be completed and reclamation activities are ongoing.

The certification must be signed and notarized by an accountable official of the applicant. If the certification is complete and accurate, the inspector shall initial and date the request in the upper right corner and forward the request to his/her immediate supervisor for formal approval. By initialing the request, the inspector will be confirming that all coal extraction is complete and reclamation activities are complete or ongoing. Note: Coal extraction does not include coal that is stockpiled on the permit area; the company should be encouraged to haul this coal stockpile, if any, off of the permit prior to the permit expiration date.

A. Subject: Bond Calculation for Permit Renewal
Date: September 8, 2003
Approval: Joe Parker, Acting Director, DMR

In the June 27, 2003 Federal Register, the Office of Surface Mining approved a change to 38CRS-2- 11.5.a to require the agency to make a determination as to the adequacy of the existing bond at renewal. The approved section reads "All existing permits for surface mining operation in the four major categories set forth in subdivision 11.5b of this subsection shall be reviewed by the Secretary at the time of a renewal, and a determination as to the adequacy of existing bond and shall not be renewed by the Secretary until the appropriate amount of bond has been posted."

The reviewer shall compare the information in the existing bond calculation using the matrix(s) with information submitted with the renewal and the inspector to determine if there have been any changes in any of the criteria's used to determine correct bond amount. The reviewer and inspector shall make this determination within 15 working days of the end of comment period or submittal of the certificate of publication and the applicant is to be notified of the bond determination if there is

an increase in amount to be posted for the renewed operation. If there is an increase in the amount to be posted, the new bond shall be submitted and approved prior to approval of the renewal.

This applies to Renewal submitted after July 1, 2003

B. Subject: Current Standard Compliance
Date April 15, 2016

Be advised that when an application for Article 3 permit renewal is submitted, 38CSR2-3.27.a.3 requires the existing permit be in compliance with current applicable environmental protection standards of the Act and Regulations.

The applicant shall confirm in an attachment to the renewal application that the permit is in compliance, with particular attention to the following areas:

- **Site Specific Bond**
  - Contemporaneous Reclamation Waiver & Required $5000/Acre
  - Bond Increase or Decrease
- **Surface Water Runoff Analysis (SWROA)**
  - Has It Been Completed or Waived?
- **Surface Water & Ground Water Monitoring**
- **Mining & Reclamation Plan**
  - Regrading Cross Section Compliance?
- **Revegetation/Planting Plan**
  - Invasive/Noxious Plants?
  - Is Forest Reclamation Approach Being Followed?
  - Topsoil & Topsoil Substitute Recovery and Redistribution
- **Fish & Wildlife**
  - Endangered & Threatened Species?
- **Selenium Potential**
  - Handling Plan?
- **Post Mining Land Use Change**
- **Probable Hydrologic Consequences**
  - Is Monitoring Adequate to Demonstrate Predictions?
- **Blasting**
- **Underground Injection**
  - Is the Injection Activity Permitted Under Article 3?
- **Post Underground Mining Assessment (Puma)**
  - Discuss Timing of Submittal

The reviewer of the permit renewal may need to confer with geologists and engineers to determine if permit compliance is current. Inspectors will be relied upon for their thorough knowledge of the permit. If evidence that areas of the existing permit do not meet current applicable environmental protection standards of the Act and Regulations, either through applicant acknowledgement or reviewer discovery, a revision to the existing permit must be submitted to address deficiencies.

Additional Information:

- **38CSR2**-3.27.a.2 requires a statement within the renewal application that the terms and conditions of the preplan are being satisfactorily met.

- **38CSR2**-3.27.a.3 requires a statement within the renewal application that the operation is in compliance with current applicable environmental protection standards of the Act and Regulations.

- Those operations which have been granted inactive status in accordance with subsection 14.11 of **38CSR2** shall also be subject to the renewal requirements of Section 19 of **22-3**.

- **38CSR2**- 3.27.d allows a time extension of sixty (60) days be granted by the Secretary for permit renewal which has been submitted but is logistically impractical to process before the expiration date.

1. Progress maps submitted with the MR-17 should be entitled "Renewal Progress Map" and should provide all the information contained on the original proposal map. In addition, all subsequent permit modifications affecting the original proposal map and incidental boundary revisions must also be included on the Renewal Progress Map. Renewal Progress Maps must adhere to the size, scale and color-coding requirements contained in Section 3.4 of **38CSR2**.

Please insure that regraded, operational, and undisturbed areas are properly reflected and color-coded on the Renewal Progress Map. It is important to note that once the permit renewal application is approved, the Renewal Progress Map will then become the official map. This will also apply to drainage maps, blasting maps and supplemental maps for underground coal mining.

2. If a permit renewal application is submitted early to change from full permit bond to incremental bond the following will apply:

- All increments reporting any disturbed area must be recorded as active.
- Increments without disturbed area may be recorded as inactive and eligible for bond refund.
- Each active increment must have a minimum $10,000 bond posted.
- Environmental liabilities must be assessed prior to any bond refunded. I&E staff will make findings on liabilities identified.
- Bond adjustment must be documented in the milestones.
- Progress and Incremental Bond maps must be included in the application.
- Any deletion of undisturbed permit area or overbonded permit area must be addressed with an IBR application.
- New expiration date will be 5 years from the approval date of the early renewal application.

XI. (MR19) OPERATOR ASSIGNMENT

(Section 3.25.c of 38CSR2 & Section 19 of 22-3)

Application Fee: $1500 per Permit
Advertisement: 1 Time
Comment Period: 30 Days

Application is required when a permittee wishes to assign the mining operation through an agreement, contract, job contract, etc., to another person, but retain the permit. This also includes underground mining operations, augering, highwall mining, and underground faceup operations. All other contractors are exempt. One application may include multiple permits when the applicant is the same, the permittee is the same, and all of the permits are located within one DEP regional office.

Additional Information:

A. Complete MR-19 when the following changes in ownership or control (officers and/or owners) occurs for Operators:

- 50% or more of ownership change in operator or its owner
- Less than 50% change in ownership in operator or its owner but the percentage is the largest block of stock owned (i.e. no one with 50% or more ownership)
- **All** the officers for the operator or its owner have changed

1. Include changes in all levels of the organizational structure where applicable.

2. Ownership or control changes not identified above shall be submitted on Form MR-19C.

B. Additional permits may be added to an existing MR-19 approval when:

- The permits to be added **are** in the same geographical area or within the same mining complex and can only be requested if **no ownership or control changes** have occurred since original approval of MR-19.
- The request shall include a statement that the operator's ownership and control has not changed since the original MR-19 approval.
- Request shall be entered in ERIS as a new application with a comment that it is an addition and reference the permit number that it is added to.
- The O/C reviewer compares the data in ERIS, AVS, and Secretary of State for consistency, confirms compliance with Worker's Compensation, Division of Labor and OSMRE is requested and received.
- If a discrepancy exists, approval is not granted and operator is advised to submit new MR-19.
- If Worker's Compensation or Division of Labor is not in compliance, **and/or** if OSMRE is "DENY", approval is not granted until the permit block is resolved.
- The Permit Supervisor shall issue the approval reflecting the additional permit number(s).

Note: It shall be the responsibility of the permittee and/or operator to notify DEP when operator has left the site by submitting the "Notice to Cease Operator Assignment" form to the regional office. **DMR Forms**

C. Advance Approval:

Permit Supervisor may grant Advance Approval for 60 days for Operator Assignment and/or Transfer, Assignment or Sale of permit after the following has been completed:

- Insurance coverage for the permit has been confirmed
  - There are no WV delinquent civil penalties
  - There are no WV unabated cessation orders
  - There have been no permits revoked
  - Division of Labor compliance
  - Worker's Compensation compliance
  - Company at this point is advised to advertise
  - Request for Advance Approval is signed by permit supervisor (Advance Approval can be granted on or after date company is advised to advertise if DOL and WCD are received in compliance.

Note: Advance approval dates are to be entered in both ERIS and AVS (notify HQ for AVS entry). If application is withdrawn or terminated, the inspector and headquarters are notified and an "end date" is entered in ERIS and AVS. If final approval has not been granted at the 60-day deadline, the inspector shall be notified and the operator must cease operations. Extensions of advance approvals requires prior consultation with the Assistant Deputy Director for Coal and Non-Coal Permitting.

XII. (MR19A) PERMIT TRANSFER, ASSIGNMENT OR SALE

(Section 3.25 of 38CSR2 & Section 19 of 22-3)

Application Fee: $1500 per Permit
Advertisement: 1 Time
Comment Period: 30 Days

Application is required to address a change in ownership pursuant to **38CSR2** subsection 2.85 or other effective control over the right granted in a permit. One application may include multiple permits when the applicant is the same and the permittee is the same.

Additional Information:

- **Complete MR-19A when the following changes in ownership or control (officers and/or owners) occurs for Permittee:**
  - 50% or more of ownership change in permittee or its owner
  - Less than 50% change in ownership in permittee or its owner but the percentage is the largest block of stock owned (i.e. no one with 50% or more ownership)
  - **All** of the officers for the permittee or its owner have changed

  Include changes in all levels of the organizational structure where applicable.

- **Advance Approval:**
  Permit Supervisor may grant Advance Approval for 60 days for Operator Assignment and/or Transfer, Assignment or Sale of permit after the following has been completed:

  - Insurance coverage for the permit has been confirmed
  - There are no WV delinquent civil penalties
  - There are no WV unabated cessation orders
  - There have been no permits revoked
  - Division of Labor compliance
  - Worker's Compensation compliance
  - Company at this point is advised to advertise
  - Request for Advance Approval is signed by permit supervisor (Advance Approval can be granted on or after date company is advised to advertise if DOL and WCD are received in compliance.

Note: Advance approval dates are to be entered in both ERIS and AVS (notify HQ for AVS entry). If application is withdrawn or terminated, the inspector and headquarters are notified and an "end date" is entered in ERIS and AVS. If final approval has not been granted at the 60-day deadline, the inspector shall be notified and the operator must cease operations. Extensions of advance approvals requires prior consultation with the Assistant Deputy Director for Coal and Non-Coal Permitting.

- **Addressing Permit Applications for Permits Pending Transfer:**

  - Applications submitted for a permit pending transfer must be submitted under the current permittee name. If the permit transfer is approved before other permit applications obtain approval, the applicant name must be changed to reflect the new permittee.

  - The application must be on the applicant side in eSS in order to change the name.

  - These requests should go to HQ ERIS/eSS Program Support Team Member in the form of an email. That person will verify the permit has been transferred and change the name in eSS. The requestor will get an automated email confirmation of the name change.

  - Once the name is changed, in eSS, the regional office is tasked with ending the old Permittee/Applicant, and adding the new Permittee/Applicant using the issue date of the permit transfer as the start date on the "Assoc. Parties" tab in ERIS. This must happen on all applications that are pending at the time of the transfer.

  - The new Permittee/Applicant should then be instructed to reset all eSS Sections that reflect the old Permittee/Applicant as well as replace any attachments referencing the previous permittee, for all pending applications.

XIII. (MR19B) PERMITTEE MERGER/NAME CHANGE

(Section 3.26 of 38CSR2 & Section 19 of 22-3)

Application Fee: Not Applicable
Advertisement: 1 Time
Comment Period: 30 Days

Application is required to address a permittee merger or name change.
Note: Application is processed at headquarters.

XIV. (MR19C) OFFICER UPDATE /CHANGE OF OWNERS/CONTROLLERS

(Section 3.26 of 38CSR2 & Section 19 of 22-3)

Application Fee: Not Applicable
Advertisement: 1 Time
Comment Period: 30 Days

Application is required when the following changes in ownership or control (officers and/or owners) occurs for **Permittee and/or Operator**:

- Any changes in officers and/or directors
- 10 to 49% of ownership change

Note: Application is processed at headquarters.

Note: During the review of the MR-19C, it may be determined that Forms MR19A or MR19 may be required. This may happen if the situation falls under the definition of "Transfer, Assignment or Sale" in the WV Surface Mining Reclamation Regulations. If MR19A or MR19 is required, the company and the regional office will be notified.

A. Subject: Annual Update and/or Notification of Change of Owners, Officers, Directors or Partners (Form MR-19C)
Date: October 1, 1994

Permittee shall submit MR-19C application to the DEP **Headquarters** office. Within 24-hours of receipt, the MR19C shall be entered in ERIS.

If fifty percent or more of the ownership has changed because of this "update", the change must be identified on the application sections for MR-19A.

Result of Cessation Order:

- If permittee indicates "no changes in ownership and control":
    - The assigned reviewer verifies that current officers and owners match in ERIS and AVS. If so, reviewer completes an O&C Signoff form and sends approval letter to company. Any new address information or phone number should be entered in the systems. Enter approval date in ERIS and file update in the O&C company file; or

- If discrepancies exist between the systems, the company is notified in writing to submit documentation to correct the databases. O&C Signoff form to include in the comment section that a "verification request" has been sent. A listing of the owners and controllers in SMIS shall be sent to the company along with a request that the information be reviewed and if any changes have occurred, a new 19C must be submitted.

If DMR has sufficient documentation indicating changes in ownership and control have occurred, the appropriate enforcement staff shall be notified and instructed to proceed with enforcement action.

- When update indicates "changes have occurred in ownership and control", the assigned reviewer completes the appropriate checklists and:
  - compiles a deficiency letter;
  - ensures that ERIS and AVS are updated;
  - completes an O&C Signoff form, enters date in ERIS and files update in the O&C company file
- Verification of submittal shall be the responsibility of the inspector (or I & E regional staff) by inquiring in ERIS.

Change of Ownership and Control:

- When update indicates "changes have occurred in ownership and control", the assigned reviewer completes the appropriate checklists and:
  - compiles a deficiency letter; or
  - ensures that ERIS and AVS are updated;
  - completes an O&C Signoff form, ensures that date is entered in ERIS and files update in the O&C company file

If current ownership and control information is not submitted by the permittee within a twelve-month period (i.e. SMA, 19A, or 19C), the appropriate enforcement staff shall be notified and instructed to issue a Notice of Violation.

If the assigned reviewer determines a "permit block" exists with an owner or controller, the reviewer notifies the company in writing.

XV. (MR19R) PERMIT REINSTATEMENT
(Section 17(b) of 22-3)

Application Fee: Not Applicable
Advertisement: 1 Time
Comment Period: 30 Day

The MR-19R is utilized when a petition for reinstatement has been approved by the Secretary for a revoked permit, **within one year of revocation.** This reinstated permit may be assigned to any person who meets the eligibility requirements of Chapter 22, Article 3, Section 17 of the Act. There is no "advance approval" for this application. Application is processed in the regional office.

XVI. (INB) INCREMENT START

(Section 11.4 of 38CSR2 & Section 11 of 22-3)

Application Fee: Not Applicable
Advertisement: Not Applicable
Comment Period: Not Applicable

Application is required for bonding of succeeding increments of surface mining and reclamation operations. Minimum bond amount per increment shall be $10,000. The scheduled amount of each bond increment shall be filed in the sequence approved in the permit, and shall be filed with the Secretary at least thirty (30) days prior to the commencement of surface coal mining and reclamation operations in the subject incremental area.

XVII. (EWP) EMERGENCY WARNING PLAN

(Section 33 of 38CSR4 & Section 10 of 22-14)

Annual Registration Fee: $100
Advertisement: Not Applicable
Comment Period: Not Applicable

Application is required annually to address notification and action procedures for public protection and remedial action in the event of an emergency related to a Class C dam.

Note: For dams not requiring an annual Emergency Warning Plan, an annual registration fee of $100 will be required at the yearly anniversary date of the Certificate of Approval.

XVIII. QUARRY APPLICATIONS

Refer to Quarry Handbook

XIX. REMINING

(Section 23 of 38CSR2 / Section 2.26 of 38CSR2 & Section 13(b) 3 of 22-3)

Application Fee: $3500
Advertisement: 4 Times
Comment Period: 30 Days
Term: 5 Years

A. Subject: Coal Remining Operations
Date: May 25, 2011
Approval: Lewis Halstead

The West Virginia Surface Mining and Reclamation Rules §38-2-2.26 states "Coal Remining Operations means a coal mining operation on lands which would be eligible for expenditures under section 4, article 2 of Chapter 22." That means created prior to August 3, 1977 or AML eligible.

The criteria in the rules §38-2-23 outlines the performance standards for this type of remining operation. §38-2-23.1.b. states that a demonstration must be made in writing that the volume of all

reasonably available spoil located in the vicinity must be used to reclaim the reaffected or enlarged highwall. It is obvious that the language "reaffected or enlarged" means that an additional fresh cut of the pre-existing highwall can be taken and if there is not enough reasonably available spoil, an approximate original contour (highwall) variance can be granted using the surface mine application Section O-5-A.

All spoil generated during the second cut operation, in addition to all reasonably available spoil from the prelaw area, must be utilized to eliminate as much highwall as that volume of spoil will provide for. Keep in mind that 14.8.a.4 (pertains to steep slope mining) says "The operator shall at a minimum retain all overburden and spoil on the solid portion of the existing or new benches and backfill and grade the area to the most moderate slope possible.

Where the highwall contains more than one coal seam and both are not remined in all places and a demonstration has been made that there is not enough spoil available to totally eliminate all highwall, the highwall AOC variance can be applied to either, or both, of the seams as long as all available spoil is used for reducing the highwall (overstacking on the bottom seam would not constitute eliminating as much of the wall as possible) and all of the other criteria in §38-2-23 are met.

Those criteria are:

1. Demonstrate in writing that the volume of all reasonably available spoil located in the vicinity of the remining operation is insufficient to completely backfill the reaffected or enlarged highwall.

2. Demonstration that the highwall has been reduced to the maximum extent technically practical.

3. All spoil was used to reclaim high wall and there is no overstacking.

4. Demonstrate the post mining slope will not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides and will not cause a hazard to public safety or significant damage to the environment.

5. Sufficient number x-sections characterize pre and postmining conditions. The steeper the area the more x-sections are needed.

6. The remaining requirements of §38-2-23.1.

Additional Information:

- Statutory authority Subsection 301(p) of the federal Clean Water Act (33 U.S.C. Section 1311(p)).
- Statutory authority Chapter 22B, Article 3, Section 4c of the State Code of West Virginia.
- Regulatory authority Title 47, Series 30, WVNPDES Rules for Coal Mining Facilities.
- Regulatory authority Title 46, Series 6, Section 6, variances from Numeric Water Quality Standards for Remining Activities.
- WV DEP Policy dated September 29, 1993, Compliance Limits for Water Quality on Remining Operations.

The development of modified effluent limits for an NPDES remining permit is derived through a Best Professional Judgement (BPJ) methodology developed by the State and subject to review by the U. S. Environmental Protection Agency (EPA). These BPJ limits are based on a combination of

factors including the collection and analysis of baseline water quality premining discharges over a period of at least twelve (12) months. It is advantageous to sample premining discharges for longer periods because the larger number of samples will more accurately reflect seasonal variability. In no event, can the BPJ limits exceed the load levels of pH, iron, and manganese which existed prior to the remining operation covered by the NPDES remining permit. The BPJ limits will generally be less stringent than the technology-based limits set forth in federal EPA regulations at 40 CFR Part 434. Also, these BPJ limits apply only to the portion of the operation which involves remining. The Environmental Quality Board may grant a specific variance for remined areas of coal remining operations from standards of water quality set forth in Title 46, Series 1, setting standards for iron, manganese, or pH prior to the issuance of Coal Mining NPDES Permit.

REFERENCE INFORMATION

Blasting Information

Guidelines for Blasting Near Impoundments & Dams
Blasting Requirements for IBRs & Amendments
Reactivating an Inactive / Phase Released Permit
SOP for Review and Approval of Waivers of Blasting Limits

SUBJECT: Guidelines for Blasting Near Impoundments & Dams

EFFECTIVE DATE: September 10, 2010
REVISED: August 25, 2016

The Division of Mining & Reclamation will consider all dams/impoundments meeting the definitions in WV Legislative Rule, Title 38, Series 2, Sections 5.4.c.5, 5.4.c.6, 22.4a and 22.4.b to be "other structures" even if owned by the permittee. Blasting near these "other structures" shall comply with WV Legislative Rule, Title 199, Series 1, Section 3.7. Airblast limits in 199CSR, Section 3.6.c.1 shall not apply to dams or impoundments. The protection afforded in 199CSR1, Sections 3.6.h and 3.6.i shall apply unless alternate limits are approved by the Secretary. If the permittee requests a waiver of the limits stated above, then sufficient data on the engineering properties of either the embankment or foundation materials, must be included with the waiver to support the alternate limits requested. The specific area for analysis of material properties will be those zones identified by critical failure analysis consistent with safety failure analysis submitted for seismic events that were submitted for the structure.

Permittee may use the US Department of the Interior, Bureau of Reclamation's study GR-85-9 (November 1985), titled "Review of Present Practices Used in Predicting the Effects of Blasting on Pore Pressure", or other studies and data as guidance when submitting the alternate limits. The following shall be used in preparing and analyzing waivers of this type.

1. All blasting waivers must be submitted as a permit revision.

2. The prevention of liquefaction of those critical zones due to blasting vibrations shall be demonstrated. The construction and foundation material must meet the classification of:
- **a.** Saturated loose sand or silts sensitive to vibrations,
- **b.** Medium dense sands or silts, or
- **c.** Material not sensitive to vibrations, or
- **d.** Equivalent, as identified in submitted test analysis results.

3. If the analysis indicates the foundation material is "saturated loose sand or silts" then an alternate limit will not be allowed without site specific data showing the material is not sensitive to proposed blasting vibrations, such that it could cause seismic failure of that zone.

4. If the analysis indicates the material is "medium dense sands and silts" a PPV limit of 2 in/sec may be granted. Monitoring data (see Item 6 below) must be collected for all shots which register above a 1 in/sec PPV monitoring level.

5. If the analysis indicates the material is "not sensitive to vibrations" a PPV limit of 4 in/sec may be granted. Monitoring data (see Item 6 below) must be collected for all shots which register above a 3 in/sec PPV monitoring level.

6. Monitoring data shall include:
- **a.** The location of all blasts, seismographs and monitoring well used to compile the data.
- **b.** The blast log, seismograph readings and pore pressure/water level readings for each shot registering over the monitoring level.
  - Must be able to correlate each type of data with the shot producing it.
  - All piezometers, extensometers or other ground monitoring devices on or near the dam must be read immediately before and immediately after each shot above the monitoring level.

c. Records of review of pore pressure/water level increases by a qualified professional (see 11. below).

7. The revision must state that all monitoring data will be maintained at or near the site, and made readily available for review by DMR.

8. The compliance point will be located in the most sensitive material, within the critical zone (usually the foundation material).

a. For up-stream construction of refuse impoundments, the compliance point will be established within the foundation material of each completed stage of the embankment.

b. If monitoring is not done in the most sensitive material in question, then the compliance point will be in natural ground just off the embankment on the side blasting will occur.

9. If site specific studies can demonstrate the structure will maintain structural seismic safety factors with higher PPVs, then DMR will consider increasing the limit above the assigned limit. Site specific data on the relationship between the compliance seismograph and pore pressure/water level would be needed to support the increase, or the submission of additional studies to justify the requested increase limits. A minimum set of viable, statistical, site specific data must be submitted for DMR to consider an increase in the PPV limit. Should the permittee submit a dynamic response analysis (based on the embankment's design specifications) showing the structure could withstand a higher PPV limit, then DMR will review that analysis for a potential increase in the PPV limit assigned. The analysis needs to address the potential for destabilization of the embankment and the foundation material.

10. The revision must address when increases of pore pressure/water level reading (due to blast vibrations) will halt blasting until the structural data is reviewed by a registered professional engineer experienced in the design and construction of impoundments (see 39CSR2, Section 5.4.d.4) and they document it is safe to resume blasting. This review (and monitoring data reviewed) must be maintained at or near the site, and made readily available for review by DMR.

A. SUBJECT: Blasting Requirements for IBRs & Amendments
DATE: August 29, 2012
REVISED: June 6, 2016

The permit (as currently approved) has met all requirements for blasting. If an application for an IBR or Amendment to that permit is submitted, then the IBR/Amendment area will be addressed separately from the existing permitted area. The exception would be if a revision was included with the IBR/Amendment to add blasting to the existing permitted area. If such a revision was included, then the entire existing permit and the IBR/Amendment area would be addressed together and would require a complete update of blasting section.

All IBRs and Amendments constitute a change to the pre-blast survey area and the blasting map. The "proposal" map can also be used as the "blasting map", provided all information required can be **clearly** shown on the combined proposal/blasting map. On maps where no blasting will occur there needs to be a note stating "There will be no blasting on the permitted area shown on this map". For applications where blasting is proposed, a map insert on the proposal map should be depicted to indicate where a separate blasting map is required to address blasting requirements.
When an IBR/Amendment is proposed (without revising blasting on the existing permitted area) there are 4 possible scenarios; (1) Blasting is currently permitted, and you propose to blast on the new area also, (2) Blasting is currently permitted, and you do not propose to blast on the new area, (3) Blasting

is not currently permitted, and you propose to blast on the new area, (4) Blasting is not currently permitted, and you do not proposed to blast on the new area either. The blasting requirements in the IBR/Amendment for each scenario is addressed separately below.

1. Blasting is currently permitted, and you propose to blast on the new area also.
- **a.** Submit appropriate updated sections of the blast section which are changed by the addition of the area. (T4 list, DMM-67, 1,000-foot site specific blast plans, new waivers, etc.)
- **b.** A new blast map showing all the proposed, deleted and currently permitted area must be submitted.

2. Blasting is currently permitted, and you do not propose to blast on the new area.
- **a.** The application narrative must clearly state no blasting will occur on ANY portion of the proposed IBR/Amendment area.
- **b.** A revised blast map must be submitted showing all the proposed, deleted and currently permitted area.
  - Show revised half mile (or seven tenths mile) survey limits if deletion of area occurs.
  - Use an easily identifiable symbol (crosshatched etc.) to identify each of the "No Blasting" areas being added.
  - Show the "No Blasting" area symbol being used in the legend.

3. Blasting is not currently permitted, and you propose to blast on the new area.
- **a.** The entire blasting section must be addressed, but only concerning the areas being added. (Ex. If the new area added is not within 500 feet of an underground mine, but the original area was, you mark that section as NA)
- **b.** A revised blast map must be submitted showing all the proposed, deleted and currently permitted area.
  - Show the half mile (or seven tenths mile) survey limits from the areas being added only.
  - Use an easily identifiable symbol (crosshatched etc.) to identify the "No Blasting" areas (originally permitted area).
  - Show the "No Blasting" area symbol being used in the legend.

4. Blasting is not currently permitted, and you do not proposed to blast on the new area either.
- **a.** The application narrative must clearly state no blasting will occur on ANY portion of the permit.
- **b.** The proposal map must state there will be no blasting on the entire permit.
- **c.** A Blasting Map would not be need to be submitted.

B. SUBJECT: Reactivating an Inactive / Phase Released Permit
DATE: May 5, 2006

If a permit went inactive or was phase released prior to implementation of 199CSR1 and is being reactivated, then Section T of the surface mine application must be updated and submitted as a revision. Section T-4 and the blasting map should identify the structures being added by the 0.7-mile radius and be updated to show any structures added or removed since the last update. If the permit meets the criteria requiring pre-blast surveys to 0.7 mile of the blasting area (22-3-13a(a), then pre-blast surveys must be completed for those structures between 0.5 mile of the permit area and the 0.7 mile of the blasting area radii. All of Section T may need updated.

C. SUBJECT: SOP for Review and Approval of Waivers of Blasting Limits
DATE: September 1, 2010
REVISED: April 26, 2016

Requests for a waiver of peak particle velocity (PPV) and/or airblast limits or requests for a waiver of the 300-foot blasting restriction must be submitted to the Division of Mining and Reclamation (DMR), permitting section, as a minor revision or included in any other type of permitting application.

A blasting map identifying the structure(s) the waiver is requested for, must be a part of the application if the approved map on record does not coincide with the waiver. The waiver must reference the structure identification on the blast map.

Section L of the SMA form must be included listing the type waiver.
No waiver shall become effective until approved by the Secretary.

Requests for alternate limits:

1. The request must state the permit number(s), limits being requested, what structures it will apply to and how compliance will be determined.

2. The request must state a maximum PPV limit and maximum airblast limit. PPV and airblast cannot be unlimited.

3. The seismograph must be capable of monitoring above the numerical limits set in the waiver.

4. The request must be signed by a principal officer of the permittee.

5. An agreement from the structure owner must accompany the request.
- **a.** The agreement must identify the parties and principals involved.
- **b.** The agreement must have sufficient information for DMR to verify the legitimacy of the document (IE: owner's letterhead, owner name and contact info, etc.).
- **c.** The agreement must be signed by the structure owner or an authorized representative.
- **d.** The agreement must clearly identify the structure(s) to which the agreement applies (IE: gas well numbers, power tower numbers, all wells or towers in a specific area, etc.).
- **e.** The agreement must contain a statement that the permittee is not relieved of any liability, if the structure is damaged by the blasting.
- **f.** Waiver must address all safety precautions to ensure the safety of those involved and public.

Requests to blast within 300 feet of a protected structure:

1. The request must state the permit number.

2. The request must be signed by a principal officer of the permittee.

3. The request must include provisions for monitoring each blast within 300 feet of the structure with a seismograph.

4. An agreement from the structure owner must accompany the request.

a. The agreement must identify the parties and principals involved.
b. The agreement must have sufficient information for DMR to verify the legitimacy of the document (IE: owner's letterhead, owner name and contact info, etc.).
c. The agreement must be signed by the structure owner or an authorized representative. If the structure is occupied by other than the owner; the occupant must also waive the restriction.
d. The agreement must clearly state that the owner and occupant know that they may refuse permission to blast within 300 feet.
e. The agreement must clearly identify safety precautions to be employed by the operator and state that the owner and occupant will also comply with the safety precautions.
f. The agreement must clearly identify the structure(s) to which the agreement applies (IE: house number from the T-4 list, physical address, etc.)
g. The agreement must contain a statement that the permittee is not relieved of any liability, if the structure is damaged by the blasting.

Bond Information

General Bonding Requirements
Procedure for Consolidated Investment Fund
Procedure for Site Specific Bonding
Procedure for Certificates of Deposit
Reviewing Bond Requirements

A. Subject: General Bonding Requirements
Date: August 5, 2005 (Revised May 2006)
Revised: August 25, 2016

Method of Bonding:

Section 22-3-11. of the Surface Coal Mining and Reclamation Act states in part:

"…The penal amount of the bond shall be not less than one thousand dollars not more than five thousand dollars for each acre or fraction thereof…"

"…The bond shall cover (1) the entire permit area, or (2) that increment of land within the permit area upon which the operator will initiate and conduct surface mining and reclamation operations within the initial term of the permit. …"

1. **Full Permit Bonding** *(*the entire permit area*)*:

   If operator chooses to bond the entire permit area, bond shall be submitted before issuance at the approved site-specific rate(s).

2. **Incremental Bonding** *(*that increment of land within the permit area*)*:

   If operator chooses to incrementally bond a permit, bond amount for each increment shall be an amount sufficient to cover any fractions for each increment.

   For example, a permit that has multiple increments with a site-specific rate of $3,800 as follows:

   Increment #1 - 10.8 Acres *(round to 11.0)* x $3,800 site specific rate = $41,800.00 bond

   Increment #2 - 4.3 Acres *(round to 5.0)* x $3,800 site specific rate = $19,000.00 bond

   If multiple site-specific rates apply to one permit, any one increment must be confined to only one site-specific rate.

   An **Increment Start** application is required for bonding of succeeding increments of surface mining and reclamation operations. Minimum bond amount per increment shall be $10,000. The scheduled amount of each bond increment shall be filed in the sequence approved in the permit, and shall be filed with the Secretary at least thirty (30) days prior to the commencement of surface coal mining and reclamation operations in the subject incremental area.

B. Subject: Cash Performance Bonds - Request to Invest Consolidated Investment Fund
Date: March 1, 1997

Cash performance bonds posted with the Department of Environmental Protection "DEP" pursuant to §22-2-11, §22-6-26, and §22-15-12 of the Code of West Virginia are invested in the West Virginia Consolidated Investment Fund "C.I.F.".

Cash performance bonds placed in the C.I.F. earn interest at a variable monthly rate. Statements are issued to the remitter on a monthly basis. Principal amounts and interest earned may be distributed at

any time throughout the year when applicable regulations for release of bond have been met or upon acceptable alternate bonding.

Investors whose bonds are forfeited will receive interest earned up to date of forfeiture. Principal amounts become property of DEP. Interest on bonds which remain in the fund will be withdrawn in January and paid in March.

Applicant must complete the "Request to Invest - West Virginia Consolidated Investment Fund" form and submit with a cash performance bond in order to place in the C.I.F. The W-9 Internal Revenue Service Form **must also be completed and submitted.**

C. Subject: Site Specific Bonding
Date: March 1, 1997
Revised: August 25, 2016

West Virginia Surface Mining Reclamation Regulations 38-2-11.6, effective December 1, 1992, provides that the four major categories of mining permits, specifically surface mines, underground mines, coal refuse disposal sites, and coal preparation plants, shall be subject to the site-specific bonding requirements of Section 11a of the Act and this subsection.

1. The applicant will complete the site-specific bond section of the eSS application using the criteria and tables set forth in Section 11.6 of the regulations.

2. The applicant must provide documentation, i.e., copies of awards, etc. for the applicant only, to support environmental enhancement reductions.

3. If the site-specific bond amount proposed by the applicant complies with Section 11.6 of the regulations, the Permit Review Team will approve the site-specific bond section of the eSS application.

4. If the applicant's proposed site specific bond amount is not deemed acceptable by the Permit Review Team and the Permit Supervisor, the bond may be rebutted in accordance with the regulations within fifteen (15) days of receipt of notification.

5. If a written rebuttal is received, a conference will be scheduled by the Permit Supervisor within fifteen (15) days of receipt of the written rebuttal with the applicant to hear arguments and applicant is notified of conference.

6. The Permit Supervisor shall issue a written decision within five (5) days following the conference setting forth a final bond amount.

7. All documentation pertaining to the site-specific bond determination shall be included in the Facts and Findings of the application.

Note: All forms for the various types of performance bonds accepted by WVDEP are found on the WVDEP website**.**

D. Subject: Certificates of Deposit as Collateral Bond
Date: March 1, 1997

Certificates of Deposit submitted as collateral bond shall be subject to the following conditions:

1. Certificates of Deposit "CD" shall be assigned to the Department of Environmental Protection, reflect the assignment upon the books of the bank issuing CD, and be automatically renewed for successive terms. If applicant desires CD to include applicant name, CD will only be acceptable if assigned as follows and includes a letter of assignment (See Sample)

- Department of Environmental Protection or
- Department of Environmental Protection *AND* "Applicant/Permittee Name"

2. Bank must affix their seal to CD.

3. A statement by the bank that "the depositor is entitled to interest accrued on this CD".

4. A waiver in accordance with §22-3-11 and Section 11.3 of the Rules and Regulations must be included with CD. (Sample waiver).

5. The DEP will only accept CD's issued by a bank authorized to conduct business in WV.

6. The DEP shall value collateral at their current market value, not face value.

Therefore, a supplemental amount must be submitted, either included in the CD amount of a separate check, to include the maximum amount of interest penalty for each CD *or* a notarized letter from the bank issued CD waiving the interest penalty.

7. The DEP shall obtain possession of and keep in custody all collateral submitted by applicant until authorized for release or replacement.

8. Transfer of CD as performance bond must be submitted with Transfer of Performance Bond found on our DMR web page under DMR Forms.

REVIEWING BOND REQUIREMENTS

7. CASHIER'S/CERTIFIED CHECK

1. Cashiers or Official Check payable to Department of Environmental Protection.
2. Request to Invest WV Consolidated Investment Fund form (signed by Co. official).
3. W-9 Form Completed.

B. CERTIFICATE OF DEPOSIT

1. CD must be payable to:
Applicant and Department of Environmental Protection.
2. CD must:
a. Contain statement indicating the depositor is to receive any and all interest,
b. Be on WV bank,
c. Include bank seal.

3. A separate check in the amount of an early withdrawal penalty (amount to be determined by the issuing bank) shall be submitted with the CD, and be accompanied by the W-9 Form and Request to Invest (Option to Invest) Form for investment of the penalty amount.
4. Include the CD Waiver form from bank specifying that the bank holds no liens
5. Include the Letter of Assignment form.
6. Combined total of CDs and LOCs issued by one banking institution cannot exceed $250,000 per depositor.

C. LETTER OF CREDIT

1. Irrevocable Letter of Credit format must be followed exactly. Letter must be typed on bank letterhead.
2. Balance Sheet (from bank) must be included
3. Combined total of CDs and LOCs issued by one banking institution cannot exceed $250,000 per depositor.

D. SURETY BONDS

1. Reclamation Surety Bond form.
2. Confirm accuracy of applicant name, address, county location, acreage and bond amount.
3. Acreage fractions must be rounded up to the next whole acre for calculation of bond amount.
4. Pg. 1 must bear official corporate seals for Applicant and Surety corporations. If Applicant is an LLC, they won't have a corporate seal so they must attach a copy of their Articles of Organization.
5. Pg. 2 - Verify that the proper block for Acknowledgement and Notary Seal is completed for each signatory on 1st page of bond.
6. An Attorney-in-Fact usually signs for the insurance provider and, if that is the case, the Power of Attorney document must be attached to the bond naming the person who signed as an Attorney in Fact. The POA document must bear the same date as the bond instrument.

All forms available on our DMR web page.

Certified Record Information

Certified Record Policy
Procedures for Preparing a Certified Record

A. Subject: Preparing a Certified Record Policy
Date: August 7, 2007

This procedure shall be utilized for the preparation of a certified record to be submitted to the Surface Mine Board (SMB) as outlined in WV Code §22B-1-7(e) and §49-1-3. The rule for certified record read as follows:
W.Va. Code 22B-1-7(e)

Within fourteen days after receipt of a copy of the notice of appeal, the appropriate chief or the secretary shall prepare and certify to the board a complete record of the proceedings out of which the appeal arises including all documents and correspondence in the applicable files relating to the matter in question.

W. Va. C.S.R. §49-1-3 The Certified Record.

- 3.1. Certifying the Record. Within fourteen (14) days after receipt of a copy of the notice of appeal, the director or the director's designee shall prepare and certify to the board a complete record of the proceedings out of which the appeal arises, including all documents and correspondence in the applicable files relating to the matter in question.

- Preparation of the Record. A single copy of each document shall be submitted in chronological order with each page numbered consecutively.

- Evidence. The certified record shall be evidence of the agency's consideration of the matter appealed, and shall form the basis of the board's review.

- Amendment. To remedy an omission, any party may request an amendment to the certified record upon written application to the board. During the hearing on the appeal, requests for amendments may be made orally.

DMR Procedures

The SMB receives the appeal, in written form, and will provide a copy to the DMR contact person. The DMR contact person will notify appropriate personnel to prepare the certified record. OLS will assign an attorney to the case and will contact the office preparing the certified record.

Within ten (10) days of SMB receipt of the notice of appeal, the supervisor shall be responsible for preparation of the complete record of the proceedings out of which the appeal arises, including all documents and correspondence in the applicable files relating to the matter in question. The certified record should **contain only pertinent information**. For example, if an appeal concerned blasting of an approved application, it would not be necessary to provide a copy of the entire permit application for the certified record, only the sections of the application dealing with blasting.

Once the information is gathered, and the **supervisor has discussed the case with the attorney,** it is then ready to be submitted to the DMR contact person. Please verify that all copies are legible. The certified record must be in chronological order, beginning with the most recent document. If the certified record is a permitting issue and inserts of all revisions are needed, then put all revisions together in the order of the SMA.
The DMR contact person will number the pages once their review is complete. A cover sheet must be attached indicating the following information:

(Company Name) vs. WVDEP
Surface Mine Board Case No. _____

Table of Contents (for each document in the certified record, give a description of the document, date and number of pages)

The record should then be submitted to the DMR contact in the headquarters office.

Please do not certify the record, it will be certified in the headquarters office.

** A sample format of the cover sheet inventory can be found on the intra-net under Mining and Reclamation - Administration Forms.

Certified Record Procedures

- The SMB receives a copy of the appeal and notifies DMR.
- The DMR contact person will notify appropriate personnel to prepare the certified record.
- OLS will assign an attorney, who will contact the office preparing the certified record within 5 days.
- The certified record must be submitted to the DMR contact person within 10 days.
- The supervisor will be responsible for the preparation of the complete record. This includes all documents and correspondence relating only to the matter in question.
- The record should contain only pertinent information.
    - If there is an appeal appealing an IBR and they specify blasting, only submit the documents that relate to blasting.
    - No green cards or copies of envelops, unless it is an appeal regarding an issue of time.
- Once the information is gathered, and the **supervisor has discussed the case with the attorney,** it is ready to be submitted to the DMR contact person.
- All copies must be legible.
- The certified record must be in chronological order, beginning with the most recent document.
- If the issue has more than one permit, put in permit order first and then chronological order.
- If the certified record is a permitting issue only submit the final corrected copy along with all correction request. (The attorney will request copies of corrections if needed.)
    - Do not put in nice folders with separators, separate by paper clips and do not staple.
    - Do not submit a copy of the appeal.

- Do not submit a narrative describing the case. If one is submitted it is given directly to the attorney and is not inserted in the certified record. A narrative is for attorney use only.
- Only submit documents that were used in the decision-making process.

• If the permit is an electronic permit, it has to be printed section by section with the attachments submitted at the end of each section.

• Maps must have signature and seal, unless specified otherwise.

• A Certified Record Inventory Sheet must be submitted with each case.

- You can find a sample copy of this on the intra-net.
- E-mail the completed Inventory Sheet to the DMR contact person.

• The record should then be submitted to the DMR contact person.

• The DMR contact person will number the pages once their review is complete and the attorney has approved it.

• Do not certify the record, it will be certified in the headquarters office.

Citizen Participation

Overview
Site Visits
Release of Liability Form

Citizen Participation
&
Surface Mine Permit Application Process

Process also applies to Article 3 permit renewal and significant permit revision applications.

Article 3 permit transfer application and operator assignment application processes do not include informal conference and site visit.

- Once administratively complete, the surface mine application (SMA) is advertised in a local newspaper of general circulation in the county of the proposed surface-mining operation once a week for four consecutive weeks followed by a comment period of thirty (30) days. **22-3-20(a)** Permit transfers and operator assignments are advertised one time with a comment period of thirty (30) days. The end of comment date can be found in the published advertisement

- The SMA is placed for public review at the courthouse or courthouses in the county or counties of the proposed surface-mining operation prior to the first advertisement being published. **22-3-20(a)**

- The SMA is also available for public review at the regional WVDEP office where SMA review is being conducted. **22-3-20(a)**

- A public notice of the application is automatically placed on the WVDEP enhanced mailing list for WVDEP public notice when the milestone for courthouse placement of the application is entered in ERIS.

- Comments received during the thirty (30) day comment period will be reviewed, an agency response will be sent and comments will be filed with the application. **22-3-20(b)**

- Petitions received during the comment period will be reviewed, an agency response will be sent to the selected petition representative and the petition will be filed with the application.

- A copy of the comments will be forwarded to the applicant, who must provide proof to the agency of their response to each commenter and petition representative.

- Comments received after the end of the comment period will be reviewed, made part of the application file and a copy provided to the applicant. Applicant response is not required for comments received after the close of the comment period.

- Commenters requesting an informal conference within the thirty (30) day comment period will be notified by certified mail of the date, time and place of the conference. **22-3-20(b)**

- The secretary may arrange with the applicant, upon request by any party to the conference proceeding, access to the proposed mining for gathering information relevant to the proceeding. **22-3-20(b)**

- The secretary shall hold a conference in the locality of the proposed surface-mining operation within three (3) weeks after the close of the public comment period. **22-3-20(b)**

- A notice of the informal conference will be published in a newspaper of general circulation in the locality of the proposed surface-mining operation at least fourteen (14) days prior to the informal conference. **22-3-20(b)**

- The secretary's written findings granting or denying the permit for the proposed surface-mining operation will be furnished to the persons who were parties to the informal conference within thirty (30) days of the informal conference. **22-3-21(a)**

- When a permit is issued or approved, the secretary shall notify within ten (10) days each person who filed comments or objections to the application, each party to an informal conference, and the appropriate local government agencies including the clerk of the county commission. **38CSR2-3.2.d**

- Within thirty (30) days after the applicant is notified of the secretary's decision, the applicant or any person with an interest which is or may be adversely affected may request a hearing before the Surface Mine Board. **22-3-21(b)** **Surface Mine Board**

Subject: Site Visit for Gathering Information Relevant to the Informal Conference
Date: February 17, 2012
Approval: Tom Clarke, Director, Division of Mining and Reclamation

After an informal conference request, W. Va. Code 22-3-20(b) and W. Va. CSR 38-2-3.27.c.2.C provides that the Director **may** arrange with the applicant, upon request by any party to the conference, access to property to gather information relevant to a **new** surface mine application, a **significant revision** of an existing permit, a permit **renewal** or a permit **extension**. Requests for access to the proposed mining area for the purpose of gathering information relevant to an informal conference will be arranged at the discretion of the Director, Regional Office Manager or permit supervisor.

Before the decision is made to grant a request for access, the following shall apply:

- Site visit shall be scheduled to occur prior to the informal conference.
- Interested parties shall identify in advance who plans to attend and any proposed sampling, photography or other activity they wish to undertake. The DEP may limit the number of participants as reasonably necessary to assure safety and conserve agency resources while allowing information to be gathered. All activities require prior coordination with operator.
- Each participant on a site visit shall be required to sign a DEP waiver of liability for each site visit and will be subject to any required operator safety training. The DEP waiver of liability form is attached.

- Each participant on a site visit shall be responsible for supplying their own personal protective equipment- i.e., hard hat, steel toed boots or other equipment as necessary to assure safety.
- Participants shall behave responsibly and follow the direction of the DEP representative. The DEP representative shall have discretion to immediately terminate any site visit.
- Information that is gathered shall be relevant to the informal conference scheduled to be held with regard to the specific issues presented by the pending permit application, significant revision, renewal or extension. If DEP determines that any information gathered during the site visit is not relevant to the informal conference or is used for any other purpose than presenting information at the informal conference, the DEP will refuse to arrange further information gathering site visits for the party or parties that abuse the process.

RELEASE OF LIABILITY (Refer to Intra-net for Printable/Computer form)

In exchange for access to the proposed mining area for the purpose of gathering information relevant to an informal conference pursuant to W.Va. Code § 22-3-20(b) and CSR §38-2-3.27.c.2.C, organized by the West Virginia Department of Environmental Protection ("WVDEP"), 601 57th Street, Southeast, Charleston, West Virginia, 25304, and for the use of the property, facilities or services of the WVDEP, I agree for myself and (if applicable) for the members of my family, to the following:

1. I agree to observe and obey all posted rules and warnings, and further agree to follow any oral instructions or directions given by WVDEP or the employees, representatives and agents of WVDEP.

2. I recognize that there may be certain inherent risks associated with the above-described activity and I assume full responsibility for personal injury to myself and (if applicable) my family members, and further release and discharge WVDEP, its employees, representatives and agents, for injury, loss or damage, including damage to my property, arising out of my participation in the information gathering site visit organized by WVDEP pursuant to W.Va. Code § 22-3-20(b) and CSR §38-2-3.27.c.2.C, whether caused by the fault of myself, my family, WVDEP or other third parties.

3. Any legal or equitable claim that may arise from participation in the above-described activity shall be resolved under West Virginia law.

I HAVE READ THIS DOCUMENT AND UNDERSTAND IT. I FURTHER UNDERSTAND THAT BY SIGNING THIS RELEASE, I VOLUNTARILY SURRENDER CERTAIN LEGAL RIGHTS.

Dated: _____
Signature: _____
Participant: _____
Address: _____
_____
In case of emergency, please call _____ (relationship:_____)
at telephone number _____ or _____.
Company & Mine Name: _____
Permit Number: _____
Application ID: _____
Date of Visit: _____

Coal Ash Utilization,

Tire Disposal,

Sludge

&

Other Information

Coal Combustion By-Product Utilization Policy (SCLP)
Municipal Waste Sludge as Soil Amendment on Mined Lands

A. Subject: Coal Combustion By-Product Utilization Policy
Date: January 13, 1998
Revision Date: October 20, 2016

1. Applicable Provision of State Law

The West Virginia Department of Environmental Protection (WVDEP) Division of Mining and Reclamation (OMR) recognizes the need for guidance to the mining, utility, and manufacturing industries on the beneficial use of coal combustion byproducts and the disposal of coal combustion wastes. The OMR further recognizes that coal combustion by-products and coal combustion wastes have both beneficial uses and the potential to provide positive impacts where properly managed. The following policy provides the necessary guidance and required criteria for the beneficial use of coal combustion by-products regulated under Articles 2, 3, or 4 of Chapter 22 of the West Virginia Code, so long as such placement is in conformance with an approved plan or permit issued pursuant to such provisions of the code.

Coal combustion by-products means the residuals, including fly ash, bottom ash, bed ash, boiler slag, and flue gas emission control waste produced by coal-fired or coal/gas-fired electrical or stream generating units which are beneficially used. Coal combustion wastes means these same materials which are disposed of and not beneficially used.

Coal combustion waste disposal and coal combustion by-product utilization are not defined as solid waste according to the Solid Waste Management Act Section 22-15-2.27 of the West Virginia Code, when placed on a facility regulated under Articles 2, 3, or 4. Coal combustion waste disposal and coal combustion by-product utilization are subject to the applicable Surface Coal Mining and Reclamation Act, the Surface Mining and Reclamation of Minerals Other than Coal Act, Abandoned Mine Lands and Reclamation Act, the Water Pollution Control Act, and the Groundwater Protection Act. This document addresses beneficial uses of coal combustion by-products. A document addressing the disposal of coal combustion wastes on mined areas may be developed at the discretion of the Secretary.

2. Permits, Revision, and Modifications

The OMR may approve the utilization of coal combustion by-products for a beneficial use as described in an application for an Article 3 or 4 permit or revisions to existing permits. Coal combustion by-products may also be used when approved by the DEP Office of Abandon Mine Lands (AML) under Article 2.

For pre-approved uses, as describe in this policy, a written notification shall be deemed sufficient to meet the permit revision application requirements. Pre-approved utilization notifications shall automatically, without further agency action, constitute an insignificant revision to the Article 3 or 4 permit and/or minor modification to the National Pollution Discharge Elimination System (NPDES) permit. Permit revisions for acceptable beneficial uses listed below will be subject to the provisions of the Code of State Regulations (CSR) 38-2-3.28 and will generally be handled as insignificant revision to the Article 3 and/or minor modification to the NPDES permit. Permit revisions of Article 4 and related NPDES permits will be subject to the provisions of CSR 47-10-9.2.

The beneficial use of coal combustion by-products on surface mining and quarry operations will be evaluated by the OMR in accordance with plans, design specifications, testing procedures,

and monitoring requirements as set forth and submitted on the MR-36 form. The MR-36 form will serve as an element to both Article 3 or 4 permit application and the NPDES permit application. Coal combustion byproducts may be utilized on a mining operation only within the permit area, or within such permit area as modified to accommodate the beneficial use of coal combustion byproducts.

3. Beneficial Uses

Pre-approved uses and examples of acceptable beneficial uses are listed below.
Beneficial uses other than those listed below will be evaluated by OMR on a case-by case basis through the evaluation of plans, design specifications, results of testing and analysis of the coal ash, water quality sampling and analysis, overburden analysis, and conformity with the applicable laws and regulations of the State.

a. Pre-approved uses include:

(1) Subsidence control as part of a confined cementitious mixture.

(2) Abatement of underground mine fires as part of a cementitious mixture.

Pre-approved uses will require written notification at least 30 days prior to initiation of such use. The notification will include a description of the use, start and completion dates, a map showing the area where the use will occur, details on the proposed mix including components and proportions, and the estimated amount of coal combustion by-product to be used. The 30-day notification period may be waived at the discretion of the Secretary.

b. Acceptable beneficial uses include:

(1) Coal combustion by-products may be used as a soil amendment, subject to the provisions of applicable regulation.

(2) Coal combustion by-products may be used as a source of alkaline addition to neutralize potentially acid-producing materials in the following: (a) coarse coal refuse, fine coal refuse, and combined coal refuse disposal sited (b) backfills, conventional excess spoil disposal fills, and (c) to line pit floors subject to the applicable regulations and the following criteria.

- Coal combustion by-products used for neutralizing potentially acid producing materials in coarse coal refuse, fine coal refuse, and combined coal refuse disposal sites shall comply with the following requirements:
  - The net neutralization potential of the coal combustion byproduct(s) shall be greater than or equal to 5 tons per 1000 tons $CaCO_3$ equivalent, and
  - The minimum application of coal combustion by-product will be determined by the formula:

Where:
A = Required amendment (in tons)

W = Amount of waste rock: refuse to be neutralized (in tons)

%S = Percent sulfur in waste rock, e.g. 2% = 2 tons per 100 tons of rock

%NNP= Percent net neutralization potential of amendment, e.g. %NP - %MPA (NP = Neutralization Potential, MPA = Maximum Potential Acidity)

$$A = \frac{(W \times \%S \times 3.125) \times 1.1}{\%NNP}$$

Notes:
Pyritic sulfur may be substituted for total sulfur.
The S and NNP are percentages which make them tons per 100 rather than tons per 1000. The formula was provided by Paul Ziemkiewicz of the National Mine Land Reclamation Center at West Virginia University.

- The ratio of coal combustion by-product(s) to refuse shall not exceed 8:1 calculated on a weight basis.

- Coal combustion by-products used for neutralizing potentially acid producing materials in backfills and conventional excess spoil disposal fills shall comply with the following requirements:

  - The net neutralization potential of the coal combustion byproduct(s) shall be greater than or equal to 5 tons per 1000 tons CaCO3 equivalent, and

  - The minimum application of coal combustion by-product will be determined by the formula:

    Where:
    A = Required amendment (in tons)

    W = Amount of waste rock: refuse to be neutralized (in tons)

    %S = Percent sulfur in waste rock, e.g. 2% = 2 tons per 100 tons of rock

    %NNP= Percent net neutralization potential of amendment, e.g. %NP - %MPA (NP = Neutralization Potential, MPA = Maximum Potential Acidity)

$$A = \frac{(W \times \%S \times 3.125) \times 1.1}{\%NNP}$$

Notes:
Pyritic sulfur may be substituted for total sulfur.
The S and NNP are percentages which make them tons per 100 rather than tons per 1000. The formula was provided by Paul Ziemkiewicz of the National Mine Land Reclamation Center at West Virginia University.

The addition of coal combustion by-products for alkaline addition will not be allowed if it will significantly increase the volume of excess spoil.

Neutralization potential of the spoil or backfill material may be considered in certain cases at the discretion of the OMR.

- Coal combustion by-products used for lining pit floors shall comply with the following requirements:
  - The net neutralization potential of the coal combustion byproduct(s) shall be greater than or equal to 20 tons per 1000 tons CaCO3 equivalent, or
  - The coal combustion by-product(s) must exhibit pozzolanic properties.
- Coal combustion by-products proposed as a source of alkaline addition not meeting the above criteria may be evaluated by the OMR on a case-by-case basis. The application of coal combustion byproducts as an alkaline additive should be uniformly mixed/blended throughout the material to be neutralized.

(3) Coal combustion by-products may be utilized to encapsulate potentially toxic material. Coal combustion by-products exhibiting a low hydraulic conductivity (less than or equal to 1 X 105 cm/sec) may be used to provide a low permeability zone around toxic materials.

(4) Coal combustion by-products may be utilized to replace coal refuse removed from a coal refuse pile, where the removal of the coal refuse is for the purpose of fueling a coal-fired or coal refuse-fired electric power generating facility. Only the coal combustion by-products generated from the facility may be utilized. The utilization of coal combustion by-products shall be subject to the provisions of CSR 38-2-22 provided that the moisture content of the coal combustion by-products as specified in the application is within the range required to achieve suitable compaction, and is placed in one foot lifts and compacted to ninety percent standard proctor.

(5) Coal combustion by-products may be utilized to fill underground voids or to reduce acid mine drainage discharges or otherwise improve water quality in permitted or abandoned sites in accordance with the applicable regulations.

(6) Coal combustion by-products may be used to improve the stability and/or enhance the material handling characteristics of coal refuse disposal facilities subject to the provisions of the applicable regulations and section III(B)(2)(a) of this policy.

(7) Coal combustion by-products may be used to prevent and control spontaneous combustion or to otherwise control burning of coal refuse disposal facilities subject to the provisions of the applicable regulations.

(8) Coal combustion by-products may be used to return disturbed areas to approximate original contour (AOC), where additional fill is required to properly reclaim the site, only after using all available spoil material subject to the provisions of the applicable regulations.

(9) Coal combustion by-products (bottom ash or boiler slag) may be used as anti-skid material, if such use is consistent with West Virginia Division of Highways specifications.

(10) Coal combustion by-products may be used as a partial replacement for soil in covering coal refuse disposal facilities (coarse coal refuse piles, combined coal refuse disposal facilities, and coal refuse slurry impoundments) subject to the provisions of the applicable regulations.

(11) Coal combustion by-products may be used to construct base material for roads, parking areas, storage areas, etc., to stabilize foundation soils.

(12) Coal combustion by-products may be used in accordance with the plan, as approved, on abandoned mine land (AML) reclamation and no-cost reclamation projects subject to the requirements of Article 2. Coal combustion by-products may be used for Special Reclamation Projects subject to the requirements of Article 3 and 4.

(13) Coal combustion by-products may be used in demonstration projects. The DEP encourages demonstration projects which will allow monitoring of beneficial use applications of coal combustion by-products and the collection of data to allow the evaluation of beneficial use performance.

(14) Coal combustion by-products may be used for the construction of liner systems. The evaluation of the liner system shall be included in the application and shall include engineering analysis and laboratory testing. The acceptability of liner systems shall be determined on a case-by-case basis.

(15) Coal combustion by-products may be used for sealing of underground mine openings.

More than one coal combustion by-product may be utilized on a permit so long as the overall coal combustion by-product mixture is determined to meet the criteria in Items 1 through 15 above.

c. Coal combustion by-products may be used in other applications as approved by the Secretary.

4. Water Quality

Surface and ground water monitoring stations for the purpose of monitoring coal combustion by-product leachates at coal combustion by-product facilities may be established at appropriate locations so as to satisfy the requirements of both the Surface Mining Act (SMCRA) and the NPDES program. In the event that discharge points are established at different locations than the designated monitoring stations, analysis of water at the discharge point will include the same chemical parameters as for the monitoring station.

5. Coal Combustion By-Product Assay

The coal combustion by-products or wastes to be utilized on a surface mining or quarry operation will be analyzed and tested by the applicant for the parameters and properties set forth in the MR-36 form. Periodic retesting of the coal combustion byproducts may be required from time to time by the OMR, provided that the Synthetic Precipitation Leaching Procedure (SPLP) test (for metals only) shall be performed, at least annually. **(EPA SW-846 Method 1312)**

In the event that the source of the coal combustion by-products or wastes being utilized or disposed of on a permit area changes, prior approval for the change must be requested on an updated MR-36 form and all required testing and analysis shall be performed on the coal combustion by-products from the new source.

Coal combustion by-products, which exhibit potentially toxic or potentially acid producing characteristics, will not be approved for beneficial use.

Coal combustion by-products may be modified by the generator prior to shipment.
If this is the case, the modified coal combustion by-products or wastes shall be analyzed and reported on the application form as such.

6. Permitting Decision

The decision on issuance or denial of an application for a permit and revision or modification of an existing permit will be in accordance with Chapter 22, Articles 3 and 4 of the Code of West Virginia. This decision will be based on an interpretation of: the mining and reclamation plan; sampling, testing, and analytical data; and other information known or made available to the Secretary. The Secretary's decision will be in favor of minimizing risk to the environmental integrity of the State's air, land, and water.

B. Subject: Municipal Waste Sewage Sludge as Soil Amendment on Mined Lands
Date: March 16, 1993

No sewage sludge disposal is allowed on any mining operation unless the permittee submits and obtains approval of a permit revision from the Division of Mining and Reclamation and the producing facility is permitted by the Office of Water
Resources. The revision application for sludge disposal must contain a copy of a permit and approved sludge disposal plan issued by the Department of Environmental
Protection, Office of Water Resources. The revision required for sludge use as a soil amendment or additive will be in the form of a non-significant revision to the revegetation plan.

The following procedures shall apply to non-significant permit revisions for use of sewage sludge:

(1) Each request for a permit revision will be submitted on forms prescribed by the Secretary, signed by an accountable official of the applicant and notarized.

(2) The applicant shall submit five (5) copies of the revision proposal.

(3) A map must be submitted which shows all of the original permit area and the area proposed for sludge disposal/use.

(4) Maps must be signed by the inspector, if he/she recommends approval. The revision must also be reviewed by the permit review team.

(5) The applicant must submit a cover letter describing the type and purpose of the proposed revision.

(6) The revision package must include a copy of the approval issued by the Office of Water Resources for the land application project, i.e. sewage sludge disposal.

(7) The information submitted must include the sewage sludge application rate as approved by the Office of Water Resources, and copies of all analyses of the sewage sludge as required by the Office of Water Resources.

(8) The final decision to approve or deny the permit revision will be made by the Department of Environmental Protection regional permit supervisor in consultation with the I & E Supervisor.

Cooperating
&
Affected
Local, State
&
Federal Agencies

Notification to Affected Agencies
Notification to the West Virginia Development Office
Affected Agencies to be Notified
Checklist - Affected Agency Notification
Memorandum regarding MOU
Notification Form to Federal Agencies in MOU
Agency Websites

A. Subject: Notification to Affected Agencies
Date: March 1, 1997
Revised: May 30, 2000

Upon receipt of an "Administratively Complete" application for a surface mining permit, Amendment, significant permit revision/IBR, or permit renewal, DEP shall notify all federal or state government agencies with authority to issue permits and licenses applicable to the proposed surface mining and reclamation operation or those agencies with an interest in the proposed operation. Send agency notification letter and a copy of the legal advertisement to the agencies listed on the following page. Reviewer Team Leader shall complete checklist.

B. Subject: Notification to the West Virginia Development Office
Date: May 30, 2000
Approval: Ken Politan, Assistant Chief, OMR

Effective immediately, the West Virginia Development Office (Development Office) is to be notified upon receipt of a Surface Mining Application (SMA), Amendment, Renewal, or significant revision/IBR when it pertains to surface mining only.

For this notification only, the notification letter included in this section must be revised to indicate the date the application was received by DEP. It is important for the Development Office to know the date the application was received because the applicant must submit information to the Development Office within a specific time frame. A copy of the legal ad is to be attached to the notification letter.

Affected Agencies to be Notified

1. WV Soil Conservation District **WVCA - Conservation District Offices**

2. Regional Planning Development Council **WV Regional Planning and Development**

3. **Applications in Northern WV to Pittsburgh except Braxton/Webster/Pocahontas/Gilmer to Huntington. Applications in Southern WV to Huntington**

   U. S. Army Corps of Engineers
   1000 Liberty Avenue
   ATTN: Chief Regulatory Branch
   Pittsburgh, PA 15222-4186

   U. S. Army Corps of Engineers
   502 8th Street
   ATTN: Chief of Energy Resource Branch
   Huntington, WV 25701
   michael.e.hatten@usace.army.mil

4. National Park Service
   National Resource Management Specialist
   104 Main Street
   P. O. Box 246
   Glen Jean, WV 25846
   mark_graham@nps.gov
   jessee_purvis@nps.gov
   john_perez@nps.gov
   Only applications on the Gauley, New, or Bluestone Rivers watersheds.

5. WV Department of Environmental Protection
   Division of Air Quality
   601 57th Street
   Charleston, WV 25304
   jennifer.l.rice@wv.gov

6. Division of Culture and History
   Historic Preservation Officer
   1900 Kanawha Blvd East
   Charleston, WV 25305
   belinda.d.gray@wv.gov

7. U. S. Fish & Wildlife Service
   P.O. Box 1278
   Elkins, WV 26241
   john_schmidt@fws.gov

8. DNR Wildlife Heritage Data Base
   Elkins Operations Center
   Box 67, Ward Road
   Elkins, WV 26241

9. Office of Miner's Health, Safety and Training
   1615 Washington Street, East
   Charleston, WV 25311-212610

10. Office of Miner's Health, Safety and Training
    14 Commerce Dr., Suite 1
    Westover, WV 26501

11. *Office of Surface Mining
    1027 Virginia Street, East
    Charleston, WV 25301
    Attn: Roger Calhoun

12. *Environmental Protection Agency (EPA)
    1650 Arch Street
    Philadelphia, PA 16103-2029
    Attn: Director of the NCER

13. If in city limits, notify municipal government

14. Any public works which may have an interest of be affected **(sewage & water treatment authorities or water companies in locality of operation).**

15. West Virginia Coalfield Development Office (**Surface applications only)**
    Capitol Complex, Building 6, Room 553
    Charleston, WV 25305-0311
    Attn: Energy Development Specialist

Note: When approved for advertisement, place copy of application on file at County Clerk's Office.

*** Notification required only for applications proposing valley fills.**

C. Subject: Notification to Affected Agencies
Date: April 12, 1999
From: Lewis A. Halstead, Assistant Chief

A Memorandum of Understanding (MOU) has been executed between DEP and the Office of Surface Mining, EPA, U. S. Army Corps of Engineers and the U. S. Fish and Wildlife Service. In accordance with the MOU, all surface mine applications submitted **with fills** will now require the attached notification letter to be submitted to each of the noted federal agencies along with a copy of the sample ad and two maps.

Please inform all applicants that if the surface mining application contains fills, they must submit eight (8) additional maps with the application. Four (4) topographic maps at a scale of 1" to 500' (1" to 200' for underground) and four (4) topographic maps of a scale of 1" to 2000' (standard USGS topographic maps) will be required by the applicant. The notification to the federal agencies is to be mailed within ten (10) days of receipt of the application. Each region is to insert their address on the letterhead of the notification to indicate which region is reviewing the application. At the bottom of the second page of the notification is the agency and contact person to receive the notification. Please use this notification process immediately. The notification to other affected agencies will not change. If you have any questions, please contact this office.

FREQUENTLY REFERENCED FEDERAL & STATE SITES

- **US Army Corps of Engineers**
  USACOE Civil Works Regulatory Program and Permits
- **US Dept. of Agriculture Natural Resources Conservation Service**
  Home | NRCS
  Web Soil Survey - Home
- **US Department of Agriculture Forest Service**
  Northeastern Area State & Private Forestry - USDA Forest Service
- **US Environmental Protection Agency**
  US Environmental Protection Agency
- **US Fish & Wildlife Service**
  U.S. Fish and Wildlife Service
  https://www.fws.gov/westvirginiafieldoffice/

- **US Geological Survey**
  USGS.gov
- **Miners Safety & Health Administration**
  Mine Safety and Health Administration (MSHA)
- **National Park Service**
  NPS.gov Homepage (U.S. National Park Service)
- **National Research Center for Coal and Energy**
  Home | NRCCE
- **Office of Surface Mining Reclamation & Enforcement**
  Office of Surface Mining Reclamation and Enforcement (OSMRE)
  The OSMRE Appalachian Region
  AVS Login Page
- **Appalachian Regional Reforestation Initiative (OSMRE)**
  ARRI
- **WV Development Office**
  West Virginia Department of Commerce Business & Work Force
  Office of Coalfield Community Development - Community Impact Statements
  WV Department of Commerce Office of Coalfield Community Development
- **WV Regional Planning & Development Districts**
  WV Regional Planning and Development
- **WV Attorney General**
  Office of the WV Attorney General
- **WV Conservation Agency**
  WVCA - Home
  WVCA - Conservation District Offices
- **WV Division of Forestry**
  Division of Forestry
- **WV Geological & Economic Survey**
  West Virginia Geological and Economic Survey (WVGES)
- **WV Department of Agriculture**
  Department of Agriculture
- **WV Department of Health & Human Resources**
  WVDHHR
- **WV Department of Transportation**
  West Virginia Department of Transportation
- **WV Division of Highways**
  Division of Highways
- **Coal Resource Transportation System Roads (CRTS)**
  CRTS
- **WV Division of Natural Resources**
  West Virginia Division of Natural Resources
- **WV Office of Miners' Health, Safety & Training**
  West Virginia Office of Miners' Health Safety and Training

- **WV State Historical Preservation Office**
  West Virginia Division of Culture and History
- **WV Division of Labor**
  West Virginia Division of Labor Home Page
- **WV Unemployment Compensation Division**
  WorkForce West Virginia - Employers
- **WV Workers Compensation Division**
  Workers' Compensation
- **WV Secretary of State**
  Secretary of State
- **WV Tax Department**
  WV State Tax Department

Dam

Information

Application for Certificate of Approval for a Dam
Monitoring & Emergency Warning Plan
Application Fee & Annual Registration for Coal Related Dams

A. Subject: Application for Certificate of Approval for A Dam - (MR-4, Part IV)
Date: May 1, 1994
Revised September 1, 2016

1. Applicant shall complete and submit the DAM application utilizing the West Virginia Department of Environmental Protection - Division of Mining and Reclamation - Electronic Submittal System (eSS). Applicant shall submit a filing fee in the amount of $300.00 for each dam application, payable to the WVDEP - Division of Mining and Reclamation. After technical review is complete, a Monitoring and Emergency Warning Plan (EWP) shall be either updated or prepared and submitted via the eSS system.

2. An appropriate reclamation bond is required if associated with an existing surface mining permit, pending surface mining application, or quarry operation.

3. The permit supervisor will assign the permit application to be reviewed by a Permit Review Engineer utilizing the eSS. Upon completion of the engineering review, the engineer shall prepare a facts and findings statement with recommendations. The Permit Review Engineer shall also complete a technical checklist.

4. Permit Supervisor will notify the applicant to begin the Class I Legal Advertisement (1-time publication with a 15-day comment period). Applicant is required to submit proof of publication (certification of publication) from the newspaper to be included in the facts and findings.

5. If a request for a public hearing is received within the comment period, a hearing shall be scheduled. The Permit Supervisor will:

- Preside over hearings and ensure that all proceedings are electronically recorded;
- Notify the person(s) making the request of said hearing by certified mail;
- Advise the Permit Review Engineer reviewing the application to be present at hearing;
- Notify applicant of hearing and advise that attendance by representative(s) of applicant is recommended, <u>but not mandatory</u>;
- Provide a brief explanation of the contents of application; and
- Prepare a recommendation for approval or denial to be included with facts and findings.

6. A Dam Certificate of Approval shall be prepared and signed by the Secretary or other designated Permit Review staff in headquarters. The engineer's facts and findings and completed technical checklist shall be uploaded to the eSS application.

7. Distribution of the approved application will utilize the WVDEP eSS system. Accompanying Monitoring and Emergency Warning Plans, if applicable, can be accessed through the eSS system.

eSS Application Available

EXAMPLE
Monitoring & Emergency Warning Plan

This document has been written as an *example guide and format* for monitoring and warning plans to be submitted to DEP for approval. The example has been written for a "worst case" scenario where the dam is above a community and has a high risk of failure. Obviously, many dams in WV will not fit this example in many respects and we expect the persons involved in designing the plans to design to the specific situation.

The DEP will assist the owners of dams in designing the plans to the specific situation, attend on-site meetings with owners, dam monitors, officers of the Office of Emergency Services, and law enforcement officials. DEP will show those involved in the plan what to look for under various monitoring conditions.

The owner of the dam is responsible for writing the monitoring plan and for coordinating with county emergency officials concerning the evacuation portion of the plan. One (1) original plus nine (9) copies of the plan must be prepared and submitted to the appropriate DEP regional office for review and approval. DEP will distribute approved plans.

Emergency plans usually become out of date quickly due to changes in persons involved, shelving of plans in a forgotten place, or changes made to the dam. To prevent this from happening, DEP will make periodic unannounced inspections of the dam and request that the owners produce the plan and discuss how it works as "dry run". An annual update of the plan shall be submitted for approval by DEP and may be submitted as part of the annual certification under the Dam Control Regulations. More frequent updating of the plans may be required by DEP based on rapidly changing personnel or site conditions.

B. Subject: Application Fee & Annual Registration for Coal Related Dams
Date: April 17, 2001
Revised September 1, 2016
Approval: Harold D. Ward, Acting Director - DMR

The applicant for a certificate of approval for placement, construction, enlargement, alteration, transfer, repair or removal of a coal related dam must pay a fee of $300.00 for review of the application.

Each company holding a Certificate of Approval for a Dam (coal-related) must pay an annual registration fee of $100.00. This annual fee will be submitted with the annual update of the Emergency Warning Plan (Dam Class C). For dams not requiring annual Emergency Warning Plans (Dam Class A or B), the annual registration fee will be required at the yearly anniversary date of the Certificate of Approval.

The fees shall be payable to the Department of Environmental Protection in the form of a cashier's check, certified check or bank money order. The regional office will deposit the fees. For tracking purposes, please indicate on the deposit slip in the Fee Type Box "Dam Fee".

Drainage
&
Sediment Control
Information

Sediment Control Ponds
Temporary Sediment Control Structures
Sediment Dams, Embankment Type: Elimination of Principal Spillway
Procedure for Termination of Surface Water Monitoring
Surface and Groundwater Monitoring
Guidance for Delineation of Ephemeral/Intermittent Streams
Stream Buffer Zone Policy
Constructed Outcrop Barriers
Surface Water Runoff
SWROA Requirements for Existing Permits
Surface Water Runoff Analysis
Permitting Guidance for Bioreactors
Determination of Precipitation Total for Design Storms

A. Subject: Sediment Control Ponds
Date: January 19, 1993

The West Virginia Surface Mining Reclamation Regulations at 38-2-5.4(a) require that sediment control structures shall be designed, constructed, located, maintained, and used in accordance with the Regulations and in such a manner as to minimize adverse hydrologic impacts in the permit and adjacent areas to prevent material damage outside the permit area. Additionally, 38-2-5.4(b) (2) of the Regulations requires that sediment control structures be located as near as possible to the disturbed area.

Recent permit applications have proposed constructing sediment control ponds which are located considerable distances from the disturbed areas to be controlled. However, it has been observed that substantial amounts of sediment can be deposited in the stream channel, prior to the drainage from the disturbed area entering the pond. This condition would therefore, be in direct conflict with 38-2-5.4(a) of the Regulations, as it relates to material damage outside the permit area.

In the past, this agency has allowed the permittee to bond the section of the stream located between the disturbed area and the sediment control structure, thus making it part of the permitted operation. However, this practice does not comply with the intent of the Regulations as they relate to preventing material damage to the stream and requiring that sediment control structures be located as near as possible to the disturbed area.

Therefore, for those applications which propose to locate sediment control structures outside the main operational area, it shall be the policy of this agency to require these structures to be located absolutely as near as possible to the disturbed area to be controlled and no longer allow the area of stream in question to be bonded. Additional sediment control measures, i.e. silt fences, temporary sumps, etc., may need to be incorporated into the permittee's drainage plan where sections of unpermitted streams are located between the sediment control structure and the disturbed area to be controlled. Failure to consider this in permit or field application may result in violations occurring in the stream segment between the disturbed area and the drainage structure.

B. Subject: Temporary Sediment Control Structures
Date: March 1, 1993

The West Virginia Surface Mining Reclamation Regulations at 38-2-5.4(a) require that sediment control structures be constructed in appropriate locations for the purposes of controlling sedimentation. Furthermore, all runoff from the disturbed area shall pass through a sedimentation control system. The Regulations at 38-2-5.4(d)(1) require that, prior to any surface mining activities in the component drainage area of a permit controlled by a sediment control structure, that specific structure shall be certified as to construction in accordance with the plans, designs, and specifications set forth in the preplan, or in accordance with as-built plans.

Therefore, in order to comply with these requirements, each application for a new permit must include plans which show that sediment control structures can be constructed and certified prior to any surface mining activities within the area to be controlled by each structure. It is realized, however, that some structures cannot be constructed until a certain amount of mining has occurred, particularly in steep slope areas. This situation would require that a "temporary" sedimentation control system be designed, constructed, and certified in accordance with the preplan and Regulations. These "temporary" structures would then provide the required sediment control for the area being disturbed, until such time that the "permanent" sedimentation control system could be constructed and certified.

It is important to remember that all new permit applications must include specifications for the design, construction, maintenance, location, and certification of all sediment control structures. Please ensure that you continue to require this information in the preplan.

Furthermore, for existing permits that do not contain plans which adequately comply with these requirements, an application for permit revision should be required at the next mid-term review, permit renewal, or it violations of associated performance standards arise.

C. Subject: Sediment Dams, Embankment Type: Elimination of Principal Spillway
Date: April 13, 1992

In accordance with the regulations Title 38, CSR2, Section 5.4 (c) (1), the principal spillway requirements may be waived by the Secretary if the emergency spillway is designed at a minimum to safely pass the peak rate of discharge of a 25-year, 24-hour frequency storm in an open channel constructed by non-erodible material and capable of maintaining sustained flows.

If the emergency spillway is excavated totally in solid rock, or if it is fully lined with properly placed concrete, it will be considered non-erodible. Further, for purposes of this regulation, non-erodible material may include a variety of engineered systems, such as but not necessarily limited to graded rock riprap, rock gabions, grout-filled filter point fabric systems, and synthetic meshes or grids (in which case the erosion protection may consist of a system incorporating soil, the mesh or grid, and the channel vegetation).

For any engineered channel lining, the approved plans must include adequate hydrologic and hydraulic analyses, information on material and system properties, and construction specifications to assure that the structure will perform and remain functional under design conditions. For instance, if a graded rock riprap lining is selected, the design must specify the rock gradation range (usually by size and percentage of the total), and general shape characteristics. In some cases, a graded bedding will be necessary.

The design certification of the sediment control structure must encompass the spillway and its erosion protection. The construction certification for the sediment control structure must likewise include the spillway and erosion protection.

D. Subject: Procedure for Termination of Surface Water Monitoring
Date: June 12, 1993

The West Virginia Surface Mining Reclamation Regulations at 38-2-14.7(a) provide for the termination of surface water monitoring as it relates to the Surface Mining Permit. 38-2-14.7(a) states “Monitoring shall continue until bond release unless the operator demonstrates that continued monitoring is unnecessary to achieve the purpose of the monitoring plan”.

Confusion has arisen regarding the procedure and the documentation necessary for the termination of surface water monitoring. In addition, inquiries have been made as to whether a surface water monitoring plan may be modified to delete surface water monitoring sites.

Therefore, the following is a description of the procedure and information to be utilized by this office in reviewing requests to terminate surface water monitoring.

1. The request should be processed as an insignificant permit revision;

2. For surface extraction mining operations, the permit and/or area of the permit associated with the request should meet the vegetation requirements of Phase II release. The request shall contain the following information:

- One year of raw water data for the area after backfilling has occurred;
- Surface water monitoring data for the requested area;
- Comparison of the pre and post mining data to document the impacts of the operation; and
- Documentation that the operation does not require chemical treatment to meet effluent limits.

3. For underground mining operation, the permit and/or area of the permit associated with the request should have been active for at least five (5) years. The request shall contain the following information:

- One year raw water data for the area;
- Surface water monitoring data for the requested area;
- Comparison of the pre and during mining data to document the impacts of the operation; and,
- Documentation that the operation does not require chemical treatment to Meet effluent limits.

The State can order resumption of the water monitoring program upon notice if the operation begins to chemically treat water and/or is adversely impacting the area.

E. Subject: Surface and Groundwater Monitoring
Date: February 27, 1992

In accordance with 3.22(g) and (h) of the Regulations, all permits shall contain a surface and groundwater monitoring plan. These plans shall identify monitoring site locations, quantity and quality parameters, and sampling frequency. Monitoring parameters shall include but are not limited to: total dissolved solids or specific conductance corrected at 25 degrees Celsius, total suspended solids, flow measurements, pH, acidity, alkalinity, total iron, total manganese and sulfates.

These parameters differ from the NPDES requirements for instream monitoring in that all of the parameters required by Article 3 are usually not required by the NPDES permit. The routine instream parameters for NPDES are flow, pH, Iron and Manganese.

The inspectors should inform their operators that they have to begin sampling and analyzing for the above listed parameters as soon as possible but no later than March 15, 1992. The sampling frequency should be detailed in the Surface Water Monitoring Plan contained in the Article 3 permit. If there is no plan in the permit, the sampling frequency must be at least quarterly. These reports should be submitted to the local inspector on a calendar quarterly basis.

After the inspector has reviewed the reports, they should be placed in the Regional file.

Also, if groundwater monitoring has not been waived, the operators must be sampling, analyzing, and reporting according to their groundwater monitoring plan contained in the Article 3 permit.

F. Subject: Guidance for Delineation of Ephemeral/Intermittent Streams

Date: October 26, 1999

1. Introduction

This guidance is being developed to conform with the Memorandum Opinion and Order of October 20, 1999 pertaining to buffer zones and water quality standards for intermittent/perennial streams.

2. Definitions

The Federal SMCRA definition of **ephemeral stream** which means "a stream which flows only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow and ice, and which has a channel bottom that is always above the local water table" and **wet weather streams** defined in 46CSR1-2.22 "as streams that flow only in direct response to precipitation or whose channels are at all times above the water table" are synonymous.

Intermittent streams are defined in part, in 38CSR2-2.69, as "a stream or reach of a stream that is below the local water table for at least some part of the year, and obtains its flow from both surface runoff and groundwater discharge".

Intermittent streams are defined in 46CSR1-2.9 as those streams which have no flow during sustained periods of no precipitation and which do not support life whose life history requires residence in flowing waters for a continuous period of at least six (6) months.

Ordinary high water mark as defined in 33 CFR 329.11 is the line on the stream bank established by the fluctuation of water levels and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in soil characteristics, destruction or limits of terrestrial vegetation, and the presence of litter and debris.

3. Rationale

If a buffer zone waiver was requested in the application, the presumption is that the proposed fills, refuse facilities, sediment control facilities and ponds ("structures") are in intermittent or perennial streams, unless clearly documented in the application.

The procedure below applies to structures for both pending applications and issued permits. It will be utilized to determine the local water table in order to delineate the point between ephemeral and intermittent stream segments. The applicant must demonstrate, to the satisfaction of the Secretary, that each structure is not located in an intermittent / perennial stream.

4. Procedure

Step 1. The applicant may utilize information contained in the application to demonstrate that the structure is not in the intermittent stream. If the data in the application shows stream flow (**not direct response to precipitation)** within the footprint of the structure, then it is in intermittent reaches of the stream. However, if the data in the application contains no documentation that the stream channel within the footprint of the structure is ephemeral, the applicant must proceed to Step 2.

Step 2. Field Evaluation (conducted jointly by applicant and agency).

- Delineate the upper most extent of the ordinary high water for each stream channel within the footprint. Locate this point on a map and provide sufficient supporting documentation.
- Begin walking downstream, until pooled or flowing water is observed in channel within the footprint. Locate this point on a map and provide sufficient supporting documentation.

- Dig a hole, preferably 12 inches or deeper, in the streambed outside the area of the pool to see if water is entering the hole, this should be apparent within a few minutes. If not, repeat process downstream until local water table is established or outside the buffer zone area. If no consensus can be reached between applicant and agency proceed to Step 3.

Step 3. A biological survey using the "single habitat EPA Rapid Bio assessment Protocol" must be conducted for the footprint of the structure. If the footprint of the structure is void of indications of aquatic life then the area is deemed to be an ephemeral reach of the stream. However, if there is evidence of aquatic life present in the stream that requires less than six months of water flow to complete its life cycle, then the section of stream is deemed to be intermittent.

G. Subject: Stream Buffer Zone Policy
Date: March 15, 2004
Approval: F. Joe Parker, Acting Director

This document is intended to clarify the agency's interpretation of Section 5.2 of the regulations and ensure consistency among applications.

1. Natural Drainways at 38 CSR 2 § 5.1:
Section 5.1 allows overburden placement in natural drain ways provided that the sediment load is not materially increased and stream quality is not materially affected. A natural drainway is defined as any natural watercourse, which may carry water to the tributaries and rivers of the watershed.

2. Stream Channel Diversions at 38 CSR 2§ 5.3:
Section 5.3 provides for stream channel diversions as needed for safety, stability, protection against flooding and resulting damage to life and property if constructed in such a manner to avoid additional contributions of suspended solids to streams.

3. Sediment Control at 38 CSR 2 § 5.4:
Section 5.4 specifies construction of sediment ponds provided that they are as near as possible to the disturbed area and out of the perennial segments unless no other suitable location is available for the required controls and storage capacities. Such water retention structures are to be constructed in a manner so as to minimize adverse hydrologic impacts, to prevent material damage outside the permit area and assure safety of the public.

4. Habitat Restoration and Replacement in Riparian Zones at 38 CSR 2 § 8.2: Section 8.2 requires the avoidance where practicable and the restoration or replacement of riparian vegetation along streams where mining activities are unavoidable.

5. Mining through Natural Watercourses at 38 CSR 2 § 14.8:
Section 14.8 recognizes mining through natural watercourses in steep slope mining operations. When such activities occur, the backfill area must provide channels, flumes or other device to insure stability and prevent erosion.

6. Lateral Underdrains and Excess Spoil Placement at 38 CSR 2 § 14.14 and the Act at 22-3-13(b) (22) (D):
Excess spoil placement in valley fills can occur in valleys that contain either springs, natural watercourses, or wet weather seeps whereby lateral underdrains shall be constructed from said wet areas to the main underdrains in such a manner that infiltration and entrapment of water within the fill will be prevented.

7. Intermittent or Perennial Streams at 38 CSR 2 § 5.2 (Stream Buffer Zone Rule):
From the examples including but not limited to those listed above, certain stream incursions are required, recognized, allowed for or contemplated in concert with normal surface coal mining and reclamation operations. Therefore, it is the interpretation of the agency that Section 5.2 of the regulations does not apply to areas of the permit where such activities have been provided for otherwise, such as those under Sections 5.1 (natural drain ways), 5.3 (stream channel diversions and diversion ditches), 5.4 (instream pond footprints), 8.2 (stream restoration activities), and 14.14 (valley fill footprints).

However, Section 5.2 applies to the areas below or as in the example of major stream channel diversion, sometimes above the aforementioned exceptions and all other areas of the permit within 100 feet of an intermittent perennial stream. The Secretary may authorize disturbance to these areas only upon making the findings as stated below.

In this regard to Section 5.2 of the regulations, question P-1 of the surface mining application reads as follows:

> *P-1 Provide a map showing ephemeral/intermittent stream delineations in accordance with the WVDEP October 1999 Guidance Policy for all obvious channels within100 feet of the proposal area.*

Does this stream delineation indicate that a variance to disturb land within 100 feet of an intermittent or perennial stream is required?
_____ Yes _____ No

If yes, provide a narrative to show that surface mining activities will not:

- Adversely affect the water quantity of the stream;
- Adversely affect the water quality of the stream;
- Adversely affect other environmental resources of the stream (e. g. physical, biological, water uses, etc.);
- Cause or contribute to violations of applicable State or Federal Water quality standards.

Identify as Attachment P-1

If a variance has been requested the applicant will check 'Yes' and ensure that all four variance requirements (as listed A through D) under P-1 have been adequately justified in the narrative for each individual area (below valley fill toe or other ponds, roads, encroachments, etc.) within 100 feet of any stream delineated as intermittent or perennial.

If a variance has not been requested to disturb land within 100 feet of an intermittent of perennial stream, the applicant will check 'No'.

H. Subject: Constructed Outcrop Barriers
Date: May 1, 2002
Approval: Matt Crum, Director, DMR

Standard engineering practices for constructed outcrop barriers shall include the following:

1. The design of the constructed barrier shall take into consideration site conditions.

2. The construction of the outcrop barrier shall occur simultaneously with the removal of the natural barrier and be located at or near the edge of the lowest coal seam being mined. Temporary measures must be place until the barrier is constructed.

3. The recommended outslope of the constructed barrier is 2h: 1v with a static safety factor of 1.3.

4. If the proposed outslope is steeper than 2h: 1v, the constructed barrier shall be designed to have a static safety factor of 1.5.

5. If constructed barrier is part of the sediment control system (sediment ditch), the constructed barrier shall be designed to have a static safety factor of 1.5.

I. Subject: Surface Water Runoff
Date: March 3, 2004
Approval: F. Joseph Parker, Director

The new Storm Water Runoff rule at 38 CSR 2-5.6.d require all active mining operations must be consistent with the requirements of 38 CSR 2-5.6. Therefore, we are providing notice to remind you that you are required to demonstrate in writing that the operation is in compliance with 5.6 of the rules or submit a revision that is consistent with the requirements of 5.6 of the rules according to the following schedule:

1. Operations with acreage greater than 400 acres within 180 days of January 1, 2004.

2. Operations with acreage between 200 and 400 acres within 360 days of January 1, 2004.

3. Operations with acreage between 100 and less than 200 acres within 540 days of January 1, 2004.

4. Operations with acreage between 50 and less than 100 acres within 720 days of January 1, 2004.

5. Operations with acreage less than 50 acres excluding haulroads, loadouts, and ventilation facilities within 900 days of January 1, 2004. In addition, an exemption can be considered on a case-by-case basis.

Active mining operations, as defined in 5.6.d of the rules, exclude permits that have obtained at least a Phase I release and are vegetated. In addition, permits or portions of permits that meet at least Phase I standards are vegetated may be excluded on a case-by-case basis. If your permit will meet at least Phase I standards and be vegetated within the above-mentioned time frames for the particular permit acreage, a

schedule may be provided in writing documenting when the permit will meet at least Phase I standards and will be vegetated. This includes a contingency plan in the event the permit does not meet Phase I standards and is not vegetated.

For permits approved **prior to August 2003** where information was submitted consistent with the requirements of 5.6 of the rules, you are required to document in writing what submittal (SMA #, IBR #, etc.) contains this information.

J. Subject: SWROA Requirements for Existing Permits
Date: May 25 2004
Approval: F. Joseph Parker, Acting Director

The requirement to implement a surface water runoff analysis (SWROA) on active mining operations is provided by rule at 38-CSR2-5.6.d. Of the West Virginia Surface Mining Regulations. After January 1, 2004, all existing permits must comply with the SWROA requirements according the following timetable based upon permitted acreage.

Permitted acreage > 400 acres:	**SWROA due date is June 29, 2004**
Permitted acreage ≥ 200 and ≤ 400 acres:	**SWROA due date is December 26, 2004**
Permitted acreage ≥ 100 and < 200 acres:	**SWROA due date is June 24, 2005**
Permitted acreage ≥ 50 and < 100 acres:	**SWROA due date is December 21, 2005**
Permitted acreage < 50 acres:	**SWROA due date is June 19, 2006**

If a SWROA has been previously approved for an existing permit and the entire permit remains in compliance with those SWROA designs, the permittee needs only to submit a written statement, signed by a corporate official having signatory authority, to the permit supervisor. This statement needs to address that the permit is SWROA compliant and specify what approved permitting transaction contains the SWROA design, e.g., Amendment #1, Revision #5, etc. After verification, the associated ERIS entry description should be revised, if needed, to show that a SWROA compliance demonstration is included.

If a permit, or portion thereof, is not SWROA compliant, a permit revision will be required to incorporate the required designs into the permit, regardless of whether on-ground remedial construction is anticipated or not. Allowable exclusions to the SWROA requirement include permits, or portions thereof, that are vegetated and qualify for Phase I release standards. Such exclusions will require a written request to be submitted as a permit revision. Permit review should coordinate with the inspector to verify any requested SWROA exclusions on a case-by-case basis. The associated ERIS entry description should indicate that the revision contains a SWROA compliance demonstration.

If a permit will become Phase I eligible within the above-mentioned timeframes, a written schedule may be provided to the inspector by the permittee specifying when the permit will achieve these standards. The submitted schedule must also include a contingency plan for SWROA compliance in the event the permit fails to meet this stipulated timeframe. This statement needs to be signed by a corporate official having signatory authority.

SWROA submittals for “not started” permits may be postponed if the permittee provides a written statement to the inspector stating that the permit’s SWROA will be performed and submitted as a

permit revision prior to permit activation. This statement needs to be signed by a corporate official having signatory authority.

K. Subject: Surface Water Runoff Analysis (SWROA)
Date: March 27, 2006 (Revised July 10, 2006)
Approval: Lewis Halstead

This procedure shall be utilized to satisfy the SWORA requirement described in 38 CSR 2 §5.6.d.1.e for active mining operation with permitted acreage less than 50 acres.

If permit is less than 50 acres and **it is** a haulroad, loadout, or ventilation facility, the permittee does not need to do anything, as they are exempt.

Permits other than haulroad, loadouts, and ventilation facilities must do one of the following:

- Request an exemption in writing (These will be considered on a case by case basis.)
- Demonstrate in writing that the operation is in compliance; or
- Submit a Revision that includes a SWROA

The request for an exemption or the demonstration can be in a form of a letter and shall be included in an application for permit revision (MR-4-PR).

L. Subject: SWROA Modeling, Runoff Monitoring, and Data Recording
Date: November 24, 2015
Approval: Harold D. Ward, Acting Director

Surface Water Runoff Analysis (SWROA) requirements were codified in the West Virginia Surface Mining Reclamation Regulations (38-CSR2-5.6, et seq.) and became effective June 1, 2003. At its inception, SWROA was effectively applied to existing permits and became a routine design requirement for future permits. Nevertheless, some confusion still exists relating to hydrologic modeling, runoff monitoring, data collection, field reporting, and termination aspects of this rule. The purpose of this policy is to provide clarification for permits containing SWROA designs.

1. Evaluation Point Siting Requirements

Any evaluation point (EP) chosen for hydrologic modeling shall be located so that pre-mining, during-mining, and post-mining peak flow volumes can be compared at a common location. To comply with the "no-net increase" SWROA requirement, calculated during-mining and post-mining peak flow volumes cannot exceed those of the pre-mining condition. Also, EP locations must be as close as practical to the permitted acreage while being located upstream of any critical structures such as, houses, buildings, stream constrictions/encroachments, etc.

SWROA pre-mining modeling should consider existing ground cover conditions at the time of permit issuance. Hydrologic analyses for the pre-mining condition must rely on realistic curve number and hydrologic soil group (HSG) assumptions applicable to actual on-ground conditions. HSG assumptions shall be substantiated by using the United States Department of Agriculture – Natural Resources Conservation Service – Web Soil Survey, as follows: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Failure to account for available sheet flow can exaggerate peak flows from pre-mining areas and result in reduced SWROA protection. Therefore, all pre-mining flow calculations should assume

Sheet flow conditions of three hundred feet (300 ft.) at the onset of the hydraulic flow path through any component watershed, unless otherwise documented.

2. SWROA Design Storm

The minimum SWROA design storm is a 25 year/24-hour precipitation event. The SWROA design storm is based upon the design standard applied to the most immediate hydraulic structure upstream of each EP within the associated watershed area. Typically, this will result in a 25 year/24-hour event to base SWROA designs upon, but occasionally a 100 year/24 hour design standard may apply. Other instances triggering the 100 year/24 hour SWROA design requirement would be the presence of occupied dwellings or significant stream constrictions/encroachments located upstream of an EP.

3. Runoff Monitoring Plan and Data Collection (U-3)

The intent of a site-specific runoff monitoring plan for a permit is to accumulate rainfall/runoff data for precipitation events of 1 year/24 hour or greater until the permit meets phase II release requirements. The runoff monitoring location(s) chosen by the permittee should be easily accessible and be representative of component watersheds within the permit boundaries where mining disturbance is expected to result. Rainfall and flow measurement methodologies should be adequately detailed in Item U-3.

Any permit having an approved SWROA with an incomplete or missing U-3 monitoring plan that fails to fulfill the above-mentioned goals will require a permit revision to incorporate an acceptable monitoring plan.

The permittee is required to record daily precipitation and report monthly. Additionally, peak runoff resulting from any precipitation event of 1 year/24 hour or greater, must be measured at the designated location(s) identified in Item U-3 and be recorded. All recorded data, including rainfall data, shall be reported to the Secretary on a monthly basis in the format specified by Item U-3 of the approved permit.

4. Inspection of Drainage/Sediment Structures and Reporting on Integrity/Function

Any precipitation event of 1 year/24 hour or greater, based upon the permittee's designated rain gauge in Item U-3, will require the permittee to conduct a permit-wide inspection to evaluate all constructed drainage/sediment structures. Such inspection should verify that the structures remain structurally intact and can still function as intended. A report is to be submitted to the Secretary addressing such findings. Present rule language allows 48 hours before a report has to be submitted to the Secretary.

Reporting is to be in written format so that a tangible record can be included in the permit file. Reporting to the inspector via email will be deemed acceptable; a telephone call to the inspector is also acceptable provided that timely follow-up (within one week) is submitted in written form.

5. Implementation/Termination of SWROA Requirements

All permits are required to have approved SWROA designs prior to any on-ground disturbance, unless otherwise exempted. For permits less than 50 acres, SWROA may be exempted on a case-by-case basis, if adequately justified and approved in a permit revision. Further, haulroads, loadouts, and ventilation facilities are excluded from any SWROA requirements. If a SWROA exemption is granted for any permit, all aspects of the SWROA rule are waived, including U-3 rainfall/runoff monitoring.

When a permit becomes Phase II eligible and complete drainage structure removal occurs, the SWROA runoff monitoring plan (U-3) can be terminated. At this time, recording of rainfall and resulting runoff responses will no longer be required. The permittee should submit a letter to the inspector addressing proposed SWROA termination for a permit.

M. Subject: Permitting Guidance for Bioreactors
Date: December 30, 2013
Approval: Harold D. Ward, Acting Director

1. Authority
   The West Virginia Department of Environmental Protection has authority for the Guidance document as per 38 C.S.R.2.

2. Introduction
   With recent advances in research, the construction and use of bioreactors for treatment of selenium and other parameters has increased. The West Virginia Department of Environmental Protection (DEP) finds that these structures can be successful in reducing the concentrations of the pollutants for which they are designed. The DEP also finds that a procedure is required in the permitting of these bioreactors to ensure compliance with the requirements of 38 C.S.R.2.

3. Background
   A bioreactor is a structure that is designed to mimic the conditions found in a naturally occurring wetland area. Research has shown that naturally occurring microbes that digest selenium, and other parameters, currently exists within a majority of the mining operations; however, the naturally occurring conditions are not conducive to stimulate increased activity. Within a bioreactor, organic medium is installed along with a water distribution method that creates an anaerobic environment along with a readily available carbon source used by the microbes as a source of energy.

4. Permitting
   Prior to construction of a bioreactor, the permittee shall submit an application to the DEP for review and approval. The Regional Permit Supervisor will determine if the proposed activity requires submittal as a revision, modification of Incidental Boundary Revision. The application will include design drawings that accurately reflect the design flow, volume and type of organic material, and flow distribution system.

   If the structure is proposed as a “Permanent Impoundment”, the permittee must address the requirements of 38 C.S.R. 2.5.4.h.

5. Certification
   Upon completion of construction, the structure shall be certified in accordance with 38 C.S.R.2.5.4.d.

N. Subject: Determination of Precipitation Total for Design Storms
Date: February 23, 2018
Approval: Harold D. Ward, Director

1. Introduction

This policy memorandum sets forth acceptable procedures and practices for determining rainfall precipitation amounts for various frequency Design Storms that are used to perform drainage structure design calculations, Storm Water Runoff Analysis, and/or any other hydrologic calculations that may be required under the West Virginia Surface Mining Reclamation Rule, 38 CSR 2. This policy was developed to provide consistency by establishing permitting design procedures that coincide with other permitting policies, procedures, and guidance and to encourage consistency with current prudent and standard engineering practices.

Because National Oceanic and Atmospheric Administration (NOAA) precipitation frequency estimates have replaced United States Weather Bureau data, as referenced in 38 CSR 2 §2.42, NOAA Atlas 14 (or the most recent Atlas version) is to be used to determine Precipitation Frequency Estimates for all applicable Design Storms specified in the Reclamation Rule.

This policy is prospective and only applies to new permit actions submitted after the above effective date.

2. Background

Per 38 CSR 2 §2.42, "Design Storm means predicted precipitation of given intensity, frequency and duration based on United States Weather Bureau data." These design storms are utilized to determine the "Peak Runoff" used in various hydrology designs, analyses, and calculations for permit applications and certifications. Per 38 CSR 2 § 2.86, "Peak Runoff means the maximum flow in a specified geographic location resulting from a given design storm."

United States Weather Bureau precipitation data can be found in the Technical Handbook of Standards and Specifications for Mining Operations in West Virginia, 1984 (the Technical Handbook)[1]. The Technical Handbook includes tables of 24-hour precipitation totals for various storm frequencies by West Virginia county. The tables are based upon the U. S. Weather Bureau Rainfall-Frequency Atlas of the United States, Technical Paper No. 40, which was published in 1961.

In 1970, the U.S. Weather Bureau, the U.S. Coast and Geodetic Survey, and the U.S. Commission of Fish and Fisheries were brought together to establish the National Oceanic and Atmospheric Administration or NOAA. NOAA is now the federal agency responsible to estimate, maintain and update precipitation frequency data for the United States. Current precipitation frequency data is published in NOAA Atlas 14, Precipitation-Frequency Atlas of the United States, Volume 2, Version 3.0 (revised 2006). The Atlas states that:

"The Atlas is intended as the official documentation of precipitation frequency estimates and associated information for the United States... The Atlas supersedes precipitation frequency estimates contained in Technical Paper No. 40 'Rainfall frequency atlas of the United States for durations from 30 minutes to 24 hours and return periods from 1 to 100 years' (Hershfield, 1961), NWS HYDRO-35 'Five- to 60-minute precipitation frequency for the eastern and central United

[1]West Virginia Department of Natural Resources Division of Reclamation, Technical Handbook of Standards and Specifications for Erosion and Sediment Control, Excess Spoil Disposal, and Haulageways for Mining Operations in West Virginia, revised 04/84.

States' (Frederick et al., 1977) and Technical Paper No. 49 'Two- to ten-day precipitation for return periods of 2 to 100 years in the contiguous United States' (Miller et al., 1964)."

NOAA precipitation frequency data is available online from the Precipitation Frequency Data Server that was developed and published in tandem with NOAA Atlas 14 to allow delivery of the results and supporting information in multiple forms via the internet.[2]

3. Application of Policy

Precipitation frequency totals for applicable Design Storms are to be obtained from:

- NOAA Atlas 14, Precipitation-Frequency Atlas of the United States, Volume 2, Version 3.0 (or most recent Atlas version, if subsequently updated).
- The "geographic location" used in determining the Point Precipitation Frequency Estimate – based upon the judgment of the registered professional engineer or licensed land professional surveyor certifying the design calculations - shall be the coordinates for either the approximate center of the permit or the approximate center of the sub-watershed in which the drainage or runoff design calculations are being conducted.
- The Point Precipitation Frequency Estimate to be utilized as the Design Storm total shall be the 90% confidence value estimate (in inches) based on the appropriate Average Recurrence Interval (such as 10, 25, 100-year, etc) and Storm Duration (such as 6-hour, 24-hour, etc).
  - It is not intended that the upper limit of the 90% confidence interval estimate be utilized – unless the registered professional engineer or professional surveyor performing the design calculations deems a higher value should be used in order to be consistent with standard or prudent engineering practices.
- All site-specific printouts, tables, and backup data from Atlas 14 are to be included in the permit and drainage calculation documentation.
- Precipitation Frequency Estimates from the Technical Handbook may continue to be used, so long as the precipitation estimate (in inches) is no less than the corresponding 90% confidence value indicated by Atlas 14 for the same approximate location, Average Recurrence Interval, and Storm Duration.

[2]Current url: https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html

Example from NOAA Atlas 14, October 2017
Precipitation Total (inches) for a 25-year/24-hour Design Storm

NOAA Atlas 14, Volume 2, Version 3
Location name: Charleston, West Virginia, USA*
Latitude: 38.3366°, Longitude: -81.5277°
Elevation: 1015.58 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.338 (0.310-0.371)	0.402 (0.367-0.441)	0.481 (0.440-0.528)	0.540 (0.493-0.592)	0.615 (0.560-0.672)	0.672 (0.610-0.733)	0.724 (0.654-0.788)	0.776 (0.699-0.844)	0.842 (0.754-0.914)	0.890 (0.794-0.965)
10-min	0.526 (0.481-0.576)	0.627 (0.574-0.689)	0.748 (0.684-0.821)	0.834 (0.762-0.914)	0.941 (0.856-1.03)	1.02 (0.925-1.11)	1.09 (0.985-1.19)	1.16 (1.04-1.26)	1.24 (1.11-1.34)	1.30 (1.16-1.41)
15-min	0.644 (0.590-0.706)	0.767 (0.702-0.842)	0.918 (0.840-1.01)	1.03 (0.937-1.13)	1.16 (1.06-1.27)	1.26 (1.15-1.38)	1.35 (1.22-1.47)	1.44 (1.30-1.57)	1.55 (1.38-1.68)	1.62 (1.45-1.76)
30-min	0.853 (0.781-0.934)	1.03 (0.939-1.13)	1.26 (1.15-1.38)	1.42 (1.30-1.56)	1.64 (1.49-1.79)	1.80 (1.64-1.97)	1.95 (1.77-2.13)	2.10 (1.89-2.29)	2.29 (2.05-2.49)	2.43 (2.17-2.63)
60-min	1.04 (0.953-1.14)	1.26 (1.15-1.38)	1.58 (1.44-1.73)	1.81 (1.66-1.99)	2.13 (1.94-2.32)	2.37 (2.16-2.59)	2.61 (2.36-2.85)	2.85 (2.57-3.10)	3.17 (2.83-3.44)	3.41 (3.04-3.70)
2-hr	1.21 (1.10-1.31)	1.46 (1.33-1.60)	1.82 (1.66-1.99)	2.10 (1.91-2.29)	2.48 (2.25-2.69)	2.77 (2.50-3.01)	3.08 (2.77-3.33)	3.38 (3.02-3.65)	3.79 (3.37-4.09)	4.11 (3.63-4.43)
3-hr	1.27 (1.16-1.39)	1.54 (1.41-1.69)	1.92 (1.75-2.10)	2.21 (2.02-2.41)	2.61 (2.38-2.84)	2.93 (2.66-3.19)	3.26 (2.94-3.53)	3.60 (3.22-3.89)	4.05 (3.60-4.37)	4.41 (3.90-4.76)
6-hr	1.51 (1.40-1.64)	1.80 (1.67-1.97)	2.23 (2.06-2.43)	2.57 (2.36-2.79)	3.04 (2.79-3.30)	3.42 (3.12-3.70)	3.82 (3.46-4.12)	4.23 (3.82-4.55)	4.79 (4.29-5.15)	5.24 (4.65-5.61)
12-hr	1.78 (1.66-1.92)	2.12 (1.98-2.29)	2.59 (2.41-2.79)	2.97 (2.76-3.20)	3.52 (3.25-3.77)	3.96 (3.64-4.23)	4.42 (4.04-4.72)	4.91 (4.45-5.22)	5.59 (5.02-5.92)	6.14 (5.46-6.49)
24-hr	2.16 (2.03-2.31)	2.57 (2.42-2.75)	3.11 (2.92-3.33)	3.55 (3.33-3.79)	4.16 (3.89-4.44)	4.66 (4.35-4.96)	5.18 (4.81-5.50)	5.71 (5.29-6.07)	6.45 (5.95-6.84)	7.04 (6.46-7.46)
2-day	2.59 (2.43-2.75)	3.07 (2.89-3.27)	3.68 (3.46-3.91)	4.17 (3.91-4.43)	4.83 (4.53-5.13)	5.37 (5.02-5.69)	5.92 (5.51-6.27)	6.48 (6.01-6.86)	7.24 (6.69-7.66)	7.83 (7.21-8.28)
3-day	2.80 (2.64-2.97)	3.32 (3.13-3.52)	3.95 (3.73-4.20)	4.46 (4.20-4.74)	5.15 (4.84-5.46)	5.69 (5.33-6.03)	6.24 (5.83-6.61)	6.80 (6.33-7.20)	7.55 (7.00-7.98)	8.12 (7.51-8.58)
4-day	3.01 (2.84-3.19)	3.56 (3.37-3.78)	4.23 (4.00-4.49)	4.76 (4.49-5.04)	5.47 (5.14-5.79)	6.02 (5.65-6.37)	6.57 (6.15-6.95)	7.12 (6.66-7.53)	7.86 (7.31-8.30)	8.42 (7.81-8.89)
7-day	3.62 (3.42-3.84)	4.27 (4.03-4.53)	5.00 (4.72-5.31)	5.57 (5.25-5.91)	6.30 (5.94-6.68)	6.87 (6.45-7.27)	7.41 (6.96-7.85)	7.95 (7.44-8.41)	8.63 (8.07-9.14)	9.14 (8.52-9.68)
10-day	4.19 (3.97-4.42)	4.92 (4.67-5.21)	5.71 (5.41-6.04)	6.32 (5.98-6.67)	7.09 (6.70-7.48)	7.66 (7.24-8.09)	8.22 (7.75-8.67)	8.75 (8.24-9.23)	9.42 (8.85-9.94)	9.91 (9.29-10.5)
20-day	5.86 (5.58-6.16)	6.86 (6.53-7.22)	7.85 (7.47-8.26)	8.59 (8.16-9.03)	9.51 (9.03-10.0)	10.2 (9.67-10.7)	10.8 (10.3-11.4)	11.4 (10.8-12.0)	12.1 (11.5-12.8)	12.7 (11.9-13.3)
30-day	7.37 (7.03-7.75)	8.62 (8.22-9.04)	9.74 (9.28-10.2)	10.6 (10.1-11.1)	11.6 (11.0-12.2)	12.4 (11.7-13.0)	13.0 (12.4-13.7)	13.7 (13.0-14.3)	14.4 (13.6-15.1)	14.9 (14.1-15.7)
45-day	9.42 (9.01-9.87)	11.0 (10.5-11.5)	12.3 (11.7-12.8)	13.2 (12.6-13.8)	14.4 (13.7-15.1)	15.2 (14.5-15.9)	16.0 (15.2-16.7)	16.6 (15.8-17.4)	17.4 (16.6-18.2)	17.9 (17.1-18.8)
60-day	11.4 (10.9-11.9)	13.2 (12.6-13.8)	14.6 (14.0-15.3)	15.7 (15.0-16.4)	17.0 (16.2-17.7)	17.8 (17.1-18.6)	18.6 (17.8-19.5)	19.3 (18.5-20.2)	20.2 (19.2-21.1)	20.7 (19.7-21.7)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

Excess Spoil Disposal

&

AOC

Information

Durable Rock Fills
Determination of Form of Mining
AOC/Excess Spoil Guidance (3/18/99 Draft)
Final AOC Guidance Document Policy (02/19/04)

A. Subject: Durable Rock Fills
Date: November 13, 1992

The West Virginia Surface Mining Reclamation Regulations at 38-2-14.14(g) (7), for durable rock fills, state in part that "the underdrain system may be constructed simultaneously with excess spoil placement by the natural segregation of dumped materials". This construction method results in the larger dumped rocks settling on the bottom of the valley floor to form an adequate underdrain.
It has been observed during recent field visits that a few durable rock fills were being constructed using multiple side dumping points, which were located well ahead of the developing toe. However, this construction method, also known as "wing dumping, can create several types of problems.

Excessive side dumping of spoil creates increased disturbed area within the limits of the fill that results in an increased sediment load upon the sediment control structure. Additionally, when conditions arise which dictate that a durable rock fill cannot be constructed to meet its original design capacity, any spoil which had been previously side dumped ahead of the developing toe would then have to be handled again and placed within the confines of the fill. Thus, this practice can result in environmental problems and unnecessary additional disturbance.

Therefore, for durable rock fills, it shall be the policy of this agency to limit side dumping or "wing dumping" of spoil to a distance not to exceed 300 feet downstream from the developing toe, as measured horizontally. The developing toe shall be defined as that area which is clearly being formed by the dumping of materials from points located near the center of the hollow.

B. Subject: Determination of Form Mining
Date: November 13, 1992 (Revised September 1, 2016)

This document is intended to clarify the agency position of the requirements that apply to determining the form of mining for applying the correct AOC Policy.

Whether or not the site is determined to be contour or area mining for a steep slope surface mine also determines whether the AOC Final Guidance Document (AOC+) or the AOC 1999 (AOC Castle) policy applies. In making this determination, the form of mining will be decided based on which form of mining constitutes greater than 50% of the area mined.

If a permit application proposes both contour and area mining, the type of mining that constitutes greater than 50% of the surface area of mineral removal shall determine the type of mining used for determining which AOC Policy applies to the permit.

C. Subject: AOC/Excess Spoil Guidelines
Date: June 24, 1999

In order to establish a common beginning point for the AOC analysis, the applicant is to be requested to supply calculations, maps and cross-sections which are based upon the AOC/Excess Spoil Guidance of March 18, 1999. This will be in addition to the demonstration of AOC calculations contained in the mine designs and proposal maps submitted as part of the application. Other justification may be used; however, they must yield same or similar results as this agency will use this document for comparison as to whether AOC is achieved.

The foregoing information, together with information contained in the No Practical Alternatives document, will be used to evaluate valley fill size, location, and whether the backfilled area has been returned to AOC.

As always, the regulatory requirements of slope stability, drainage, etc., will apply to the review of the application. This applies to all applications which have not been approved.

MOUNTAINTOP RECLAMATION: AOC AND EXCESS SPOIL DETERMINATIONS

DRAFT

To: Michael Miano, Director
From: AOC/Excess Spoil Guidance Team (WVDEP-David Dancy, Jim Pierce, Joe Ross, Ken Stollings, Ed Wojtowicz; OSM-Michael Superfesky, Michael Castle)
Subject: **DRAFT - AOC/Excess Spoil Guidance**
Date: March 18, 1999

Executive Summary

This guidance document, through the implementing regulations of the West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA), provides an objective and systematic process for achieving approximate original contour (AOC) on steep-slope surface mine operations while providing a means for determining excess spoil quantities. Using this process maximizes the amount of mine spoil returned to the mined area while minimizing the amount of mine spoil placed in excess spoil disposal sites, i.e., valley fills. This, in turn, minimizes impacts to aquatic and terrestrial habitats through ensuring compliance with environmental performance standards imposed by WVSCMRA.

The definition of approximate original contour, as found in the Surface Mining and Coal Reclamation Act of 1977 (SMCRA) and WVSCMRA, requires that the final surface configuration, after backfilling and grading, closely resemble the general surface configuration of the land prior to mining while maintaining the necessary flexibility to accommodate site-specific conditions. A detailed analysis of the terms in the definition of AOC, along with additional reclamation requirements in the environmental performance standards of WVSCMRA and the promulgated rules serve to constrain what post-mining configuration is feasible. That is, a surface coal mining operation must meet not only AOC standards, but satisfy numerous other requirements including stability, access, and environmental provisions such as drainage, erosion and sediment control that influence the determination of AOC. Other factors that affect configuration are the diversity of the terrain, climate, biological, chemical and other physical conditions in the area and their impacts on fish, wildlife, and related environmental values.

The key variables found in the AOC definition, influencing AOC determination are: *configuration, backfilling and grading, disturbed area (mined area in SMCRA), terracing or access roads, closely resembles, and drainage patterns.* These variables, for analysis purposes, can be logically grouped into three focus areas: (A) configuration, (B) stability, and (C) drainage.

These focus areas are addressed through a formula-like model that portrays these variables in an objective yet flexible process for determining what post-mining surface configuration meets the AOC definition. Applying this process during mine planning will determine the amount of total spoil material that must be retained in the mined-out area. The resultant post mining configuration should closely resemble the premining topography, thus satisfying not only the access, drainage control, sediment, and stability performance standards of WVSCMRA, but achieving approximate original contour as well. These same performance standards, applied in a similar formula-like model, determine the quantity of excess spoil that must be placed in excess spoil disposal site(s).

Using the AOC model in conjunction with the excess spoil model not only ensures compliance with the environmental performance standards of WVSCMRA, but provides an objective and feasible means for determining what constitutes compliance with the approximate original contour definition.

I. Applicable Provisions of State Law

Surface Mining Control and Reclamation Act of 1977 (SMCRA)

- 30 USC 1291 Section 701(2)

West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA)

- 22-3-3(e)
- 22-3-13(d) (3)
- 22-3-13(b) (4)
- 22-3-13(b) (10) (B), (C), (F), (G)

West Virginia Surface Mining Reclamation Regulations (WVSMRR)

- 38 CSR 2-2.47
- 38 CSR 2-2.63
- 38 CSR 2-5.2, 5.3, 5.4
- 38 CSR 2-8, 8.a
- 38 CSR 2-14.5
- 38 CSR 2-14.8.a
- 38 CSR 2-14.14
- 38 CSR 2-14.15.a

II Objectives

This guidance document has been developed to accomplish the following objectives:

- Provide an objective process for achieving AOC while ensuring stability of backfill material and minimization of sedimentation to streams.
- Provide an objective process for minimizing the quantity of excess spoil that can be placed in excess spoil disposal sites such as valley fills.
- Minimize watershed impacts by ensuring compliance with environmental performance standards imposed by WVSCMRA.
- Minimize impacts to aquatic and terrestrial habitats.
- Provide an objective process for use in permit reviews as well as field inspections during mining and reclamation phases.
- Maintain the flexibility necessary for addressing site-specific mining and reclamation conditions that require discretion by the regulatory authority as intended by WVSCMRA and Congress.

The West Virginia Division of Environmental Protection's (WVDEP) Office of Mining and Reclamation (OMR) recognizes the need for guidance on how the various performance standards of the West Virginia Surface Mining Control and Reclamation Act (WVSCMRA) and implementing regulations, West Virginia Surface Mining Reclamation Regulations (WVSMRR), Title 38, Series 2, influence the final land configuration following coal mining and reclamation. The following guidance document delineates the amount of excavated broken rock (also called mine spoil or overburden) that WVSCMRA considers "backfill," i.e., spoil placed in the mine area to restore the approximate original contour. Further, this document determines the amount of overburden or "excess" spoil that may be placed in excess spoil

disposal sites outside the mining area or "pit." In so doing, this document provides guidance, as needed for WVSCMRA program administration in steep slope terrain, for determining whether the WVSCMRA provision of "approximate original contour," or AOC, has been attained.

Chapter 22, Article 3-13(b)(3) of WVSCMRA, as well as State and Federal regulations, requires all mining operations to return the mined areas to AOC, unless an appropriate variance is granted by the appropriate regulatory authority. Chapter 22, Article 3-3(e) of WVSCMRA defines AOC to mean,

> *"that surface configuration achieved by the backfilling and grading of the disturbed areas so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain, with all highwalls and spoil piles eliminated: Provided, That water impoundments may be permitted pursuant to subdivision (8), subsection (b), section thirteen of this article: Provided, however, That minor deviations may be permitted in order to minimize erosion and sedimentation, retain moisture to assist revegetation, or to direct surface runoff."*

Section 701(2) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) uses the term *mined area* instead of *disturbed area.* SMCRA requires that the mined area be reclaimed so that the area closely resembles the general surface mining configuration of the land prior to mining. Section 14.15 of WVSMRR requires, "Spoil returned to the mined-out area shall be backfilled and graded to the approximate original contour with all highwalls eliminated." Section 2.89 of WVSMRR defines "pit" to mean "that part of the surface mining operation from which the mineral is being actively removed or where the mineral has been removed and the area has not been backfilled." Section 2.47 of the WVSMRR regulations defines excess spoil as "overburden material disposed of in a location other than the pit."

III. Elements of AOC Definition

In order to determine whether approximate original contour has been attained, processes must be developed to objectively assess what surface configuration *closely resembles the general surface configuration of the land prior to mining,* while maintaining the flexibility required to accommodate the *diversity in terrain, climate, biologic, chemical and other physical conditions in areas subject to mining operations,* as intended by Congress in Public Law 95-87 (SMCRA). To accomplish this, it is necessary to determine, and address, the variables that influence the postmining surface configuration. A detailed analysis of the terms in the definition of AOC, and additional reclamation requirements in the performance standards of WVSCMRA and the promulgated rules serve to constrain what post-mining configuration is feasible. That is, a surface coal mining operation must meet not only the AOC standards, but satisfy numerous other requirements, including stability, access, and environmental provisions such as drainage, erosion, and sediment control that influence the determination of AOC. Focusing on the collective requirements of WVSCMRA leads to an objective process for obtaining AOC.

The key variables found in the AOC definition, influencing AOC determination are: *configuration, backfilling and grading, disturbed area (mined area in SMCRA), terracing or access roads, closely resembles, and drainage patterns.* These variables logically group into the following three focus areas: (A) configuration, (B) stability, and (C) drainage.

A. Configuration: Configuration relates to the shape of regraded or reclaimed area after the reclamation phase. This shape should *closely resemble* the general pre-mining shape or surface configuration. However, final configuration, including elevation, is restricted or

affected by the requirement to comply with performance standards found in WVSCMRA, such as ensuring stability, controlling drainage, and preventing stream sedimentation.

B. Stability: The second focus area, stability, concentrates on ensuring that the reclaimed configuration is stable. Section 22-3-13(b)(4) of WVSCMRA requires the mining operation, at a minimum, to "Stabilize and protect all surface areas, including spoil piles, affected by the surface mining operation to effectively control erosion and attendant air and water pollution." The WVSMRR also requires that spoil returned to the mined-out area to be backfilled and graded to achieve AOC (see 38 CSR-2-14.15.a.). The backfilling process places the spoil material in the mined-out area, while the grading process shapes and helps compact the material in a manner that ensures that the material is stable.

State regulations, *(see* 38 CSR-2-14.8.a. and 14.15.a) require the backfilled material to be placed in a manner that achieves a postmining slope necessary to achieve a minimum long-term static safety factor of 1.3, prevent slides, and minimize erosion. This is often obtained by using a combination of slopes and terraces (benches) as needed. Generally acceptable prudent engineering configurations are slopes of 2 horizontal to 1 vertical and terraces not to exceed 20 feet in width. The 2:1 slope is measured between the terraces. Compliance with these stability requirements, such as adding terraces and designed slopes, renders it virtually impossible to replicate the configuration of the land prior to mining. However, if backfilling and grading utilizes 2:1 slopes with terraces, the mine site will be reclaimed to a shape that closely resembles the pre-mining configuration.

C. Drainage: The third focus area, drainage, as referred to in the AOC definition, requires the postmining surface configuration to complement the drainage pattern of the surrounding terrain. WVSCMRA, *see* Section 22-3-13(b) (10) (B), (C), (F), and (G). WVSCMRA also requires the proposed operation "minimize the disturbances to the prevailing hydrologic balance at the mine-site and in associated offsite areas and to the quality and quantity of water in surface and groundwater systems both during and after surface mining operations and during reclamation..." Among these requirements are the prevention of stream sedimentation, construction of certified sediment structures prior to disturbance, restoration of recharge capacity of the mined area to approximate pre-mining conditions, and any other actions that the regulatory authority may require.

The State regulations, (*see* 38 CSR 2-2.63), define hydrologic balance to mean:

> *"The relationship between the quality and quantity of water inflow to, water outflow from a hydrologic unit including water stored in the unit. It encompasses the dynamic relationships among precipitation, runoff, evaporation, and changes in ground and surface water levels and storage capacity."*

Specific requirements for the protection of the hydrologic balance are found in 38 CSR 2-14.5; 38 CSR 2-5.2, 5.3 and 5.4. These performance measures require the minimization of disturbance to the hydrologic balance within the permit and adjacent areas as well as preventing material damage outside the permit area. The regulations provide appropriate measures for complying with these requirements through the use of designed diversions channels and appurtenant drainage conveyance structures, designed sediment control structures, and measures, such as minimizing erosion, disturbing the smallest practical area at any one time, stabilizing the backfill, and retaining sediment within the disturbed area. As with stability, compliance with these drainage control requirements makes it virtually impossible to replicate the configuration of the land prior to mining.

Other performance standards that affect the reclamation configuration of the mine site must also be taken into account. If access to the reclaimed area is necessary, the placement of a road will obviously factor into the possible post-mining landform. The flatter areas cut into backfill slopes or placed on the mined bench at the toe of backfill, the more difficult it becomes to create a reclamation "template" that parallels the land configuration prior to mining. It is an absolute necessity to provide some combinations of these flat areas in a reclaimed mine backfill for access, as well as drainage and erosion control (sediment ditches, terraces, diversion channels), to conform to the environmental performance standards.

Another consideration in designing the post-mining configuration is minimizing the adverse impacts on fish, wildlife, and related environmental values (*see* 38 CSR 2-8). While seemingly general, when put into context with the requirements of the Fish and Wildlife Coordination Act and Clean Water Act, the provisions combine to limit mine site spoil disposal disturbances to stream channels and terrestrial habitats. This results in the requirement that excess spoil disposal should be confined to the smallest practicable site. Minimizing spoil disposal fill sizes means maximizing the amount of spoil backfill on the mining bench. Maximizing backfilling on the mine bench does not circumvent the need for stable backfill slopes, adequate drainage control, access roads (where necessary), and erosion/sediment control. However, it is feasible to configure a reclaimed area to satisfy configuration, stability, drainage control and also closely resemble the land surface that existed before mining. The planning process utilized in developing a surface coal mining permit application, while complex, can and must simultaneously satisfy all of these competing performance standards.

IV AOC and Excess Spoil Determination

This guidance document applies to steep-slope surface mining operations (*see* 38 CSR 2-14.8.a), including area mines and contour mines, that remove all or a large portion of the coal seam or seams running through the upper fractions of a mountain and propose to return the site to AOC. As described in the previous sections, many variables, such as stability requirements, drainage requirements, and sediment control requirements, affect or determine what the post-mining surface configuration, or shape, of the land will be at a steep slope surface coal mining operation proposing to return the site to AOC. Incorporating compliance with these performance standards into the proposed permit application requires the applicant to carefully plan the mining and reclamation phases of the proposed surface coal mining operation. This process requires, among other requirements, plans showing: post-mining contour maps, cross-sections, and profiles; spoil volume calculations; drainage structure designs; sediment control structure designs; access road designs (if justified); spoil placement sequences; and excess spoil determinations and calculations. When these findings are integrated, the resulting surface configuration of the land should satisfy the Congressional intent, as presented in SMCRA, the Legislative intent as presented in WVSCMRA, and related regulations, of returning the land to AOC.

A. AOC Model: Portraying these performance standards as variables in a model or formula provides an objective, yet flexible, process for determining what post-mining surface configuration meets the AOC definition, while complying with the other performance standards in WVSCMRA. The following terms were developed and defined for use in the formula:

OC- Pre-mining configuration, or volume of backfill material required to replicate the original contours of the undisturbed area proposed to be mined.

SR- Backfill volume displaced due to compliance with stability requirements.

DR Backfill volume displaced due to compliance with drainage control requirements.

SCR- Backfill volume displaced due to compliance with sediment control requirements.

AR- Backfill volume displaced due to compliance with access/maintenance requirements.

AOC- Volume of backfilled spoil required to satisfy the Congressional intent of SMCRA for approximate original contour.

This document uses the above acronyms for illustrative purposes only and are not intended to represent standard engineering terminology. Instead, they illustrate the AOC model process, rather than quantifying each term in the formula. While the terms can be quantified individually, this is not required by the AOC model process. Use of the model results in a reclamation configuration that can be quantified into a cumulative volume, accounting for the overall effect of the individual reclamation components which are performance standards in WVSCMRA. Volume calculations, however, are an integral requirement in order to satisfy the model.

The term "backfill volume displaced" refers not to specific volumes, but to the concept that, if not for complying with these performance standards, additional spoil or backfill material volumes could theoretically be placed in the location where these structures or slopes are proposed. (See Figure 1). In practice, however, placing additional spoil in these locations will violate other performance standards.

Details of Backfill Volume Displaced When Complying with Performance Standards

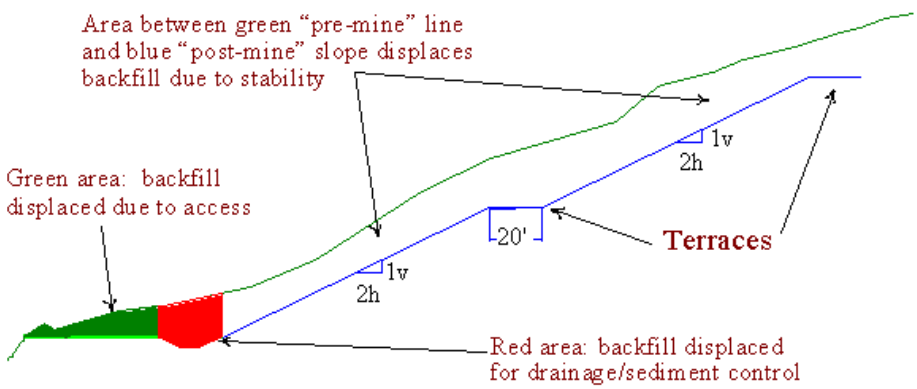


Figure 1

Based on the terms and illustrations used above, the following formula determines the amount of backfill which must be returned to the mined area to satisfy AOC.

OC - SR - DR - SCR - AR = AOC

Several of the terms must be further quantified to be used consistently in the AOC model:

Total Spoil Material (TSM) - Total spoil material is all of the overburden that must be handled as a result of the proposed mining operation. **TSM** will either be placed in the mined area or in excess spoil disposal sites (valley fill or pre-existing benches). This value is determined by combining the overburden (**OB**) volume over the uppermost coal seam to be excavated with the interburden (**IB**) volumes between the remaining lower coal seams. These values are typically expressed as bank cubic yards (bcy).

TSM volumes are determined by using standard engineering practice, such as average-end area, stage-volume calculations, or 3-dimensional (3-D) grid subtraction methods. The regulatory authority must have adequate information submitted by the applicant to properly evaluate **TSM** calculations. If the applicant utilizes an average-end area method, cross-sections must be supplied for a base line or lines, at an interval no less than every 500 feet–or more frequently, if the shape of the pre-mined area is highly variable between the 500-foot intervals. If the applicant utilizes a stage-storage method, areas measured with a polar planimeter should also be determined on a contour interval (CI) that is representative and reflects any significant changes in slope (20' CI or less recommended). If a 3-D model is used, the pre-mining contour map and, if possible, a 3-D model graphic should be provided. The grid node spacing used in generating volumetric calculations should be identified. If digital data is utilized by the applicant, it should be in a format and on a media acceptable to the regulatory authority.

TSM is determined by calculating the in-situ overburden and interburden volume, multiplied by a "bulking" factor **(BF)**. Bulking factors are calculated by a two-step process: 1) "swell" volume is determined from the amount of expected expansion of in-situ material through the incorporation of air-filled void spaces; 2) "shrink" volume can be calculated from the amount the swelled material compacts during placement (reducing the void spaces and, consequently, the volume). Thus, the bulking factor is the swell factor minus the shrink factor, which varies based on the overburden lithology (e.g., sandstone swells more and shrinks less than shales). **TSM** is reported in cubic yards (cy). Permit applications should contain a justification of the weighted bulking factor utilized-based not only on the weighting of individual swell factors calculated for each major rock type to be excavated that will be placed in the backfill, but on the shrinkage or compaction factor due to spoil placement methods as well. In equation form:

$$(OB + IB) \times BF = TSM$$

Spoil Placement Areas - There are only two areas that **TSM** can be placed: 1) disturbed area (mined area in SMCRA) or backfill (**BFA**); and, 2) excess spoil disposal areas (**ESD**), i.e. valley fills.

BFA - the backfill area, referred to as the mine area, is generally thought of as the area between, if viewed from a cross-section, the outcrop boundaries of the lowest coal seam being mined. (See Figure 2)

ESD - excess spoil disposal sites are areas **outside of the mined area** used for placement of excess spoil. (See Figure 2)

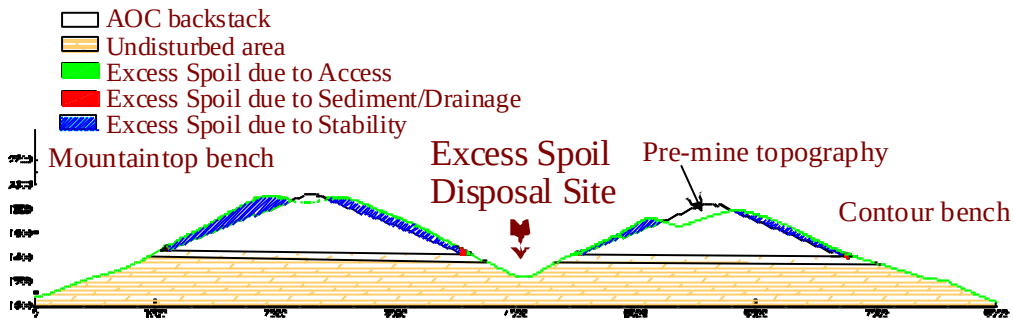
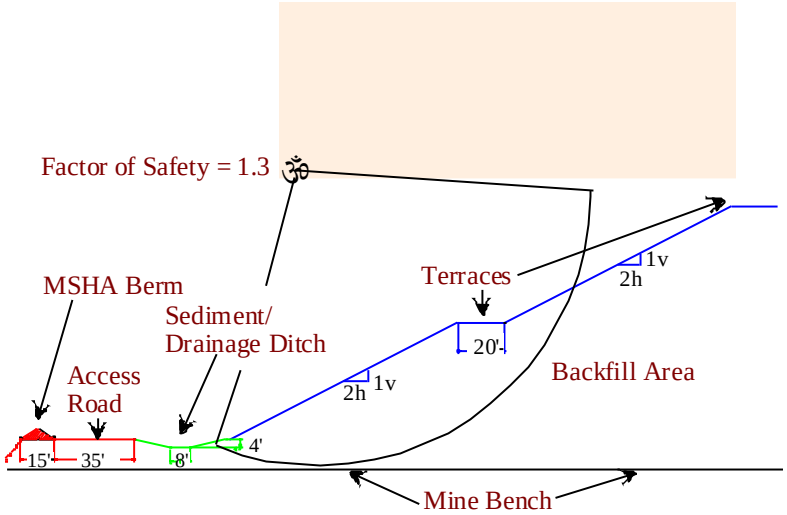


Figure 2

Original Contour (OC) - The original configuration of the mine area is determined from topographic maps of the proposed permit area. This configuration is developed through the use of appropriate cross-sections, slope measurements, and standard engineering procedures. Sufficiently detailed topographic maps, adequate numbers of cross-sections, or labeled 3-D model grids/graphics should be submitted that illustrate the representative pre-mine topography and slopes. Digital data should be submitted with the application in a format and on a media acceptable to the regulatory authority.

Stability Requirements (SR) - The concept of stability, in this model, focuses on the stability of the slopes of the spoil material placed in the backfill areas or excess spoil disposal sites. The spoil material must be placed in such a manner as to prevent slides or sudden failures of the slopes. State regulations require that slopes be designed to prevent slides and achieve a minimum, long-term static safety factor of 1.3. This safety factor should be the result of a worst-case stability analysis. There are standard engineering analytical procedures that use unique shear strength and pore water pressure factors of the spoil material, for performing slope stability analyses. Therefore, it is the spoil strength characteristics and the water level anticipated within the backfill that determine the slope to which material can be placed and satisfy the safety factor requirement of the Federal and state counterpart regulations.

A generally acceptable practice, unless it results in a safety factor of less than 1.3, includes grading the backfill slopes (between the terraces) on a 2 horizontal to a 1 vertical ratio (2H: 1V, or a 50 feet rise in 100 foot of slope length) and placing terraces where appropriate or required to control erosion or surface water runoff diversion (See Figure 3). It may be theoretically possible to place spoil on slopes steeper than 2:1, but other performance requirements may not recommend exceeding 2:1 slopes. For example, the Mine Safety and Health Administration recommends that slopes not be greater (steeper) than 2:1, because that is the maximum safe slope for operation of tracked-equipment.



Values, except 2h:1v slope, are for example only (e.g., width/depth)

Figure 3

Slopes shallower or less than 2:1, with appropriate terraces, would result in more excess spoil material and would not closely resemble pre-mining configuration. Thus, the basis for these slopes would have to be documented based on engineering practices and approved by the regulatory authority. For example, if overburden and interburden were predominantly weak shales that cannot attain a 1.3 factor of safety at 2:1 slopes, more gentle slopes could be justified. The 2:1 backfill slope, and associated terraces or drainage conveyances will determine the ultimate backfill height for the mined area. This final elevation may be lower than the pre-mining elevation, approximate the pre-mining elevation, or exceed the pre-mining elevation.

However, as can be seen in Figure 4, this reclamation technique results in a configuration or shape that closely resembles the premining configuration, when defining the "approximate original contour."

Drainage Control Requirements (DR) - Drainage structures are used to divert or convey surface runoff away from the disturbed area, after complying with effluent standards. These structures must be properly designed to adequately pass the designed flow. These structures are designed using standard engineering practices and theory. The purpose of these structures is to minimize the adverse impacts to the hydrologic balance (e.g., erosion, sedimentation, infiltration and contact with acid/toxic materials, etc.) within the permit area and adjacent areas, as well as prevent material damage outside the permit area while ensuring the safety of the public. The size and location of these structures vary throughout the permit area depending on factors, such as travel time, time of concentration, degree of slope, design peak runoff curve, and depth, length, and width of drainage structures. The size and location of these structures necessarily reduce backfill spoil volume because of the flat area required to properly construct effective structures and meet drainage requirements.

Sediment Control Requirements (SCR) - Sediment control structures, like drainage control structures, are used to minimize the adverse impacts to the hydrologic balance within the permit area and adjacent areas, as well as prevent material damage to areas outside the permit area while ensuring the safety of the public. Their primary purpose is to prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area. Oftentimes, drainage control structures and sediment control structures are combined into a single dual-purpose structure, i.e., the sediment control structure

discharges from the disturbed area. These structures must be properly designed to accommodate the required sedimentation storage capacity and are designed using standard engineering practices and theory. As with drainage structures, the size and location of these structures dictate the amount of flat area that will, consequently, displace backfill spoil storage. When reviewing the size and placement of these structures for adequacy in meeting effluent and drainage control requirements, the regulatory authority will also assess the design plans to assure the structures are no larger/wider than needed for proper design.

Access/Maintenance Roads (AR) - these structures are often necessary to gain access to sediment control structures for cleaning and maintenance. They may also serve to provide principal access to the mining operation and reclamation areas. The size and location of these roads or benches will vary throughout the mine site and should be based on documented need. This distinction is important, because the larger the road, the more backfill material displaced which will increase the size of the excess spoil disposal sites. The regulatory authority permit review should evaluate the necessity for roads in the final reclamation configuration and approve only those widths suited for the road purpose and equipment size.

The top of the backfill should be no wider/flatter than is necessary for safely negotiating the largest reclamation equipment utilized for the mine site (see Figure 4). Areas larger than necessary to work this equipment would need to be documented and approved by the regulatory authority. The final configuration of the top of the backfill should be graded in a manner to facilitate drainage and prevent saturation.

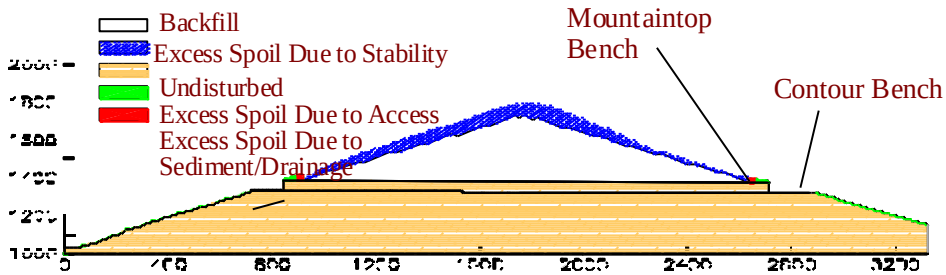


Figure 4a-results in lower elevation than pre-mining

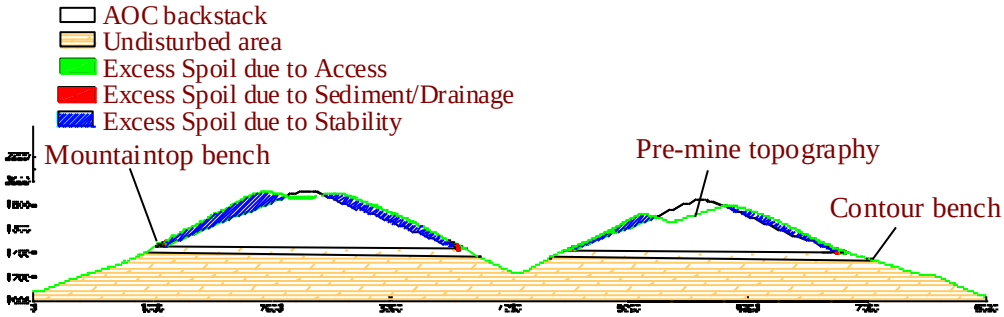


Figure 4b- results in approximately pre-mining elevation

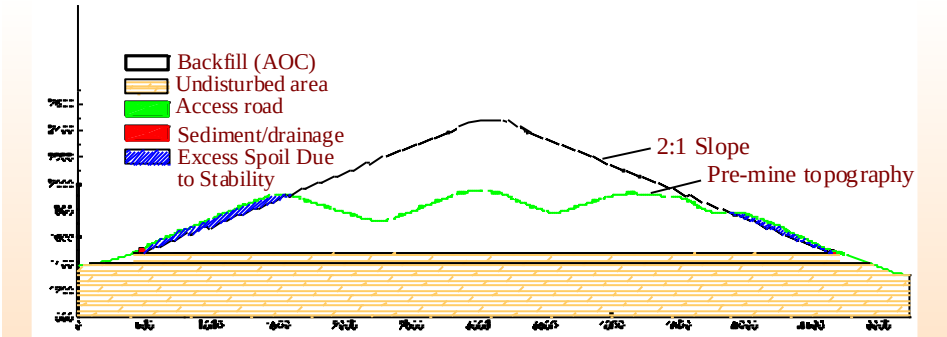


Figure 4c-results in higher elevation than pre-mining

Figure 4. Restoring contours and meeting performance standards

B. AOC Process Determination

Applying these performance requirements in the mine planning process will determine the amount of total spoil material which must be retained in the mined-out area. The backfill material that will be placed within the mined-out area can be backfilled in a flexible configuration, in accordance with a practical mine sequencing and haul back operation. Consequently, the resultant post-mining configuration should closely resemble the pre-mining topography, thus satisfying not only the access, drainage, sediment, and stability performance standards of WVSCMRA, but AOC in addition (See Figure 4).

Summarizing the formula or process:

Formula: **OC - SR - DR - SCR - AR = AOC**

Step 1: Determine original or pre-mining configuration (Original Contour (**OC**))

Step 2: Subtract from Original Contour:

- Volume displaced due to Stability Requirements (**SR**) (based on documented plans)
- Volume displaced due to Drainage Requirements (**DR**) (based on documented plans)
- Volume displaced due to Sediment Control Requirements (**SCR**) (based on documented plans)
- Volume displaced due to Access Requirements **(AR**) (based on documented plans)

Step 3: Evaluate results. The remaining volume is what has been termed backfill (**BKF**) or spoil material placed in mined-out area. The configuration of this backfill material will be (point where 2:1 out slopes begin) dependent on the placement of roads, sediment, and drainage control structures (see Figures 1, 3 and 4)

Step 4: This is an iterative process that is linked to the placement of excess spoil in excess spoil disposal sites.

C. Excess Spoil Determination Model:

The parameters used in the formula developed for determining the quantity of backfill material also are used to develop a model or formula for determining the quantity of excess spoil. As with the backfill quantity formula, converting these variables into a model or formula provides an objective, yet flexible, process for determining the excess spoil quantity, while complying with the performance standards in WVSCMRA.

Applicable terms and concepts used in the development of the model:

- **TSM-** Total spoil material to be handled or available. This material will be classified as either backfill material (**BKF**) or excess spoil material (**ES**)
- **OC-** Pre-mining configuration, or volume of backfill material required to replicate the original contours of the undisturbed area proposed to be mined.
- **SR-** Backfill volume displaced due to compliance with stability requirements.
- **DR-** Backfill volume displaced due to compliance with drainage control requirements.
- **SCR-** Backfill volume displaced due to compliance with sediment control requirements.
- **AR-** Backfill volume displaced due to compliance with access/maintenance requirements.
- **AOC-** Volume of backfilled spoil required to satisfy the intent of WVSCMRA for approximate original contour.
- **BKF-** Volume of backfill or spoil material placed in the mined area
- **ES-** Volume of excess spoil remaining after satisfying **AOC** by backfilling and grading to meet **SR**, **DR**, **SCR**, **AR.**

The term "backfill volume displaced" refers not to specific volumes, but to the concept that, if not for complying with these performance standards, additional spoil or backfill material volumes could theoretically be placed in the location where these structures or slopes are proposed (See Figure 1). Spoil material unable to be placed in backfill area (in order to comply with all other performance standards), by default, must be excess spoil (**ES**), and placed in an approved excess spoil disposal site(s). The process for quantifying these terms is in Section IV A, above.

The **ES** quantity, as determined by the following formula, is obtained by complying with the stability (slopes) standards as well as incorporating the other performance standards such as drainage controls, sediment control, and access/maintenance requirements.

The excess spoil relationships.

- **ES = TSM - BKF**
- Since **BKF = OC - (SR + DR + SCR + AR),**

Therefore:

- **ES = TSM - (OC - (SR + DR + SCR + AR))**

The regulatory authority should carefully evaluate the spoil balance information provided in the permit application to assure that excess spoil volumes are not inflated merely for achieving cost savings from material handling costs. Inflated excess spoil volumes would most likely occur because of wider or more numerous flat areas than required for drainage, sediment, or erosion control; access roads; or top of backfill areas. Use of backfill slopes less that 2:1 would also increase the excess spoil disposal. Permits that propose to conduct steep-slope surface mining operations, but change plans due to unanticipated field conditions (e.g., mining reduced to contour strip from area mining), should submit permit revisions containing revised volumetric calculations and excess spoil designs.

Solving this formula establishes the quantity of excess spoil material (**ES**) that must be placed in an excess spoil disposal site(s) (See Figure 2). Generally, this **ES** volume, and/or mining logistics, requires more than one site. Typically, in steep-slope regions of Appalachia, excess spoil is placed in adjacent valleys. In areas where extensive "pre-law" mining (prior to passage of SMCRA, or August 3, 1977) has occurred,

pre-existing benches are commonplace. Sometimes, operations utilize adjacent pre-existing benches (without coal removal occurring) as part of the permitted area for excess spoil disposal–if in close proximity to the operation. More often, pre-existing benches are part of the mined area, and provide for storage of additional backfill material–ultimately reducing the volume of excess spoil. Performance standards for excess spoil disposal areas are found in 38 CSR 2-14.14.

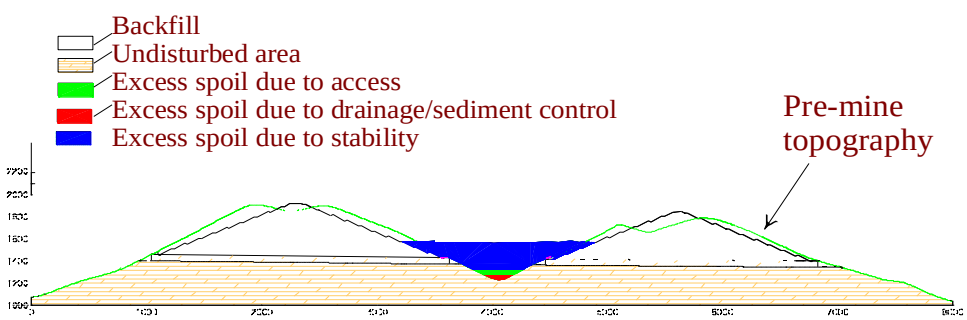
The most common site selected to place excess spoil is in the adjacent valleys. Site selection is typically made by calculating a stage-storage-volume curve for each valley adjacent to the mining operation. This stage-storage relationship changes, dependent on the point in the valley from which the downstream limits of fill is established. The permit application should contain the alternative stage-storage-volume data illustrating the various valley capacities for excess spoil storage dependent on toe location and crest elevation.

If pre-existing benches are to be used as excess spoil disposal sites, the capacity of each pre-existing bench area must be calculated. Typically these calculations utilize the average-end area method based on cross-sections representing the site configuration. After determining the capacity of these sites, the total value determined for excess spoil will be reduced by this value. The remaining quantity of excess spoil will then be placed in an adjacent valley(s), as described above.

Other factors, besides the quantity of material, that go into this **ES** site selection may include: 1) if a valley, the steepness of the valley profile (so as not to exceed 20 percent for durable rock fills or other value designated by regulatory authority relative to design changes for additional stability); 2) location in relation to mining phase; and, 3) other statutory requirements, such as the size of watershed that can be disturbed without additional permitting requirements.

Regardless of which factor(s) determine the location of the toe of the fill, the process is an iterative procedure that requires the available backfill and excess spoil material to balance, consistent with the formula developed above. After this material balance is achieved, the excess spoil disposal areas are designed to accommodate this quantity of excess spoil. If the excess spoil disposal site is a valley fill, this design will determine the height or elevation of the crest (top) of the excess spoil disposal site or fill. Once this design is complete, and top of fill elevation is determined, the next step would be to repeat or perform another iteration using the AOC model or process (See Figure 5).

If the excess spoil disposal sites are pre-existing bench areas, the sites are designed to accommodate the calculated quantity of excess spoil, while complying with the performance standards imposed by the regulatory authority's regulations.



Height of fill area determined through material balance process

Figure 5: Pre-mine topography

D. Combining AOC Model with Excess Spoil Determination Model: The excess spoil model in Section IV B establishes the quantity of material that must be placed in an excess spoil disposal site(s). Performing a material balance, comparing the excess spoil volumes with the valley storage possibilities established the height or elevation of the fills. At least a second iteration of the AOC model must be performed to establish the final reclamation configuration. Before performing a new iteration of the AOC model (as in Section IV A), another term or concept must be introduced. The new concept determines the interface between the backfill area and the excess spoil disposal area. (See Figure 2). This demarcation can be used consistently in any steep slope mining situation, and is determined using the following process:

- Locate the outcrop of the lowest seam being mined, whether contour cut only or removal of the entire seam (See Figure 6)
- Project a vertical line upward beyond the crest of the fill and backfill elevations (See Figure 2).
- The area where coal removal occurs, to one side of this line, is backfill area (BFA); and, the area on the other side of the line, including the valley bottom, is excess spoil disposal area (See Figure 2).

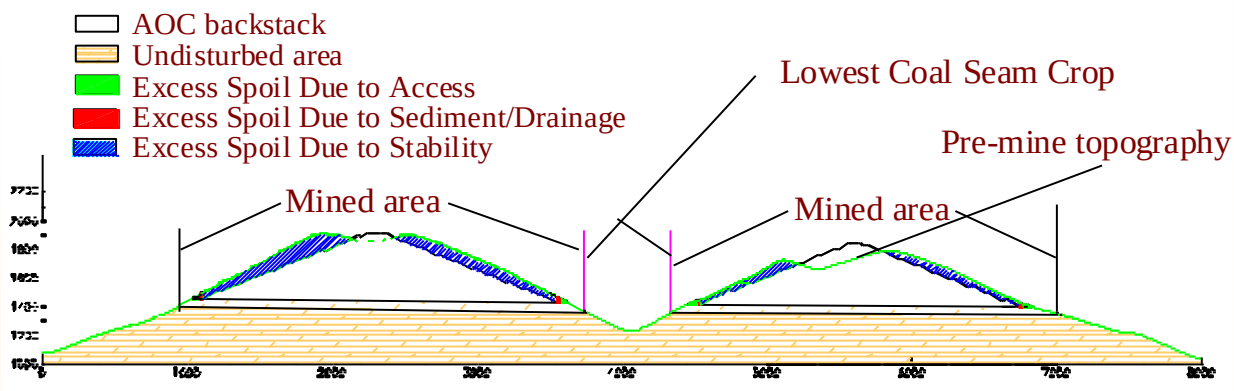


Figure 6. Lowest coal seam outcrop and mined area

Establishing this boundary between excess spoil areas and backfill areas is not arbitrary. It is the same procedure used by some regulatory authorities in determining where permanent diversion ditches must be located. Also, this boundary establishes where permanent sediment control structures may be placed without being considered a violation of the prohibition of locating a permanent impoundment on an excess spoil disposal site.

This point becomes a reference line to perform the second or additional iterations of the AOC model used in Section IV A. That is, the road access, stability, drainage, sediment control analysis is applied to establish where backfilling at a 2:1 slope begins. The additional material placed on the mined area as a result of the iteration process creates the need to perform another material balance exercise, as describe above in Section IV B. This readjustment of the material balance may result in a reduction of excess spoil volume. In either case, the elevation of the fills would not be lowered, but instead the material balance would result in a reduction of length of the fills or possibly the elimination of some proposed fills (See Figures 7 and 8).

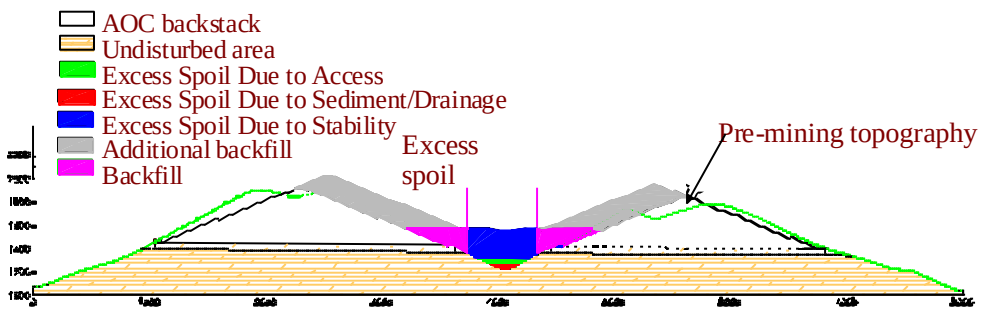


Figure 7

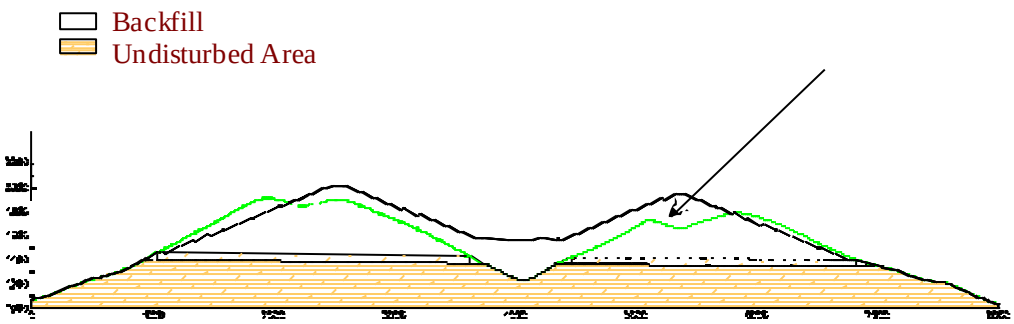


Figure 8

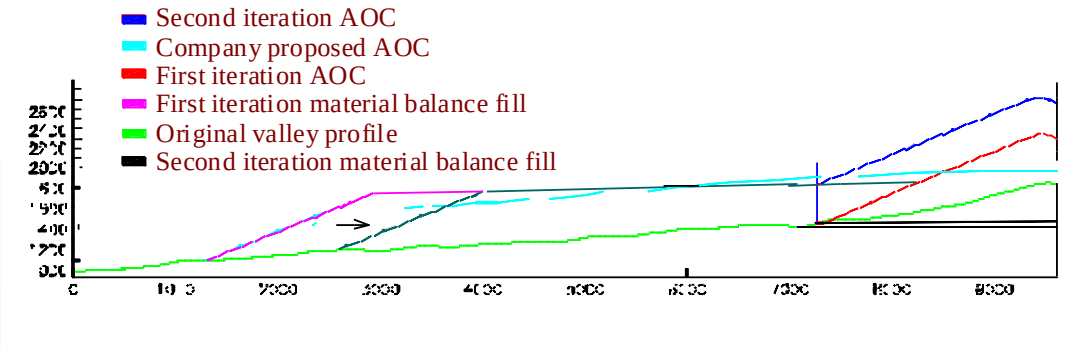


Figure 9. How the AOC process affects fill length

Reevaluation of fill designs using this second iteration becomes an important component of the permit design. Reduction in fill lengths could result in the toe of the fill being placed upon too steep of a slope–requiring additional material excavation for a keyway cut, or additional material placement for a stabilizing toe buttress.

However, this process may still result in large flat areas at the fill crest that could be used to store additional backfill. This provides the further option of storing additional excess spoil in the crest area–reducing excess spoil fill length. This option would further minimize terrestrial and aquatic impacts in the excess spoil disposal area because the toe of the fill would move upstream (See Figure 9).

E. Contour Mining Operations: Contour mining excavates only part of the mountainside, leaving undisturbed areas above and below the excavation (see Figure 10). The mining phase of a contour mine creates a cliff-like highwall and shelf-like bench on the hillside that must be restored to approximate original contour, with the highwall completely eliminated, in the reclamation phase. The AOC/excess spoil determination models, described in IV A-C, are used to achieve AOC and determine excess spoil volumes for this type of surface mining operation as well.

For example, a contour mine typically takes one (1) contour "cut" (see Figure 10) and progresses around the coal outcrop, leaving a highwall and bench after the coal is removed. Reclaiming the site, utilizing the AOC process, would require documentation showing drainage structure designs, access road requirements, and properly designed sediment structures. The application would also require documentation demonstrating the stability of the outslope of the material placed in the backfill area. Regulations require that slopes be designed to prevent slides and achieve a minimum long-term static safety factor of 1.3. A generally acceptable practice, unless it results in a static safety factor of less than 1.3, includes grading the backfill slopes (between terraces where required) on a 2 horizontal to a 1 vertical ratio (2H:1V) (See Section IV A for details). If compliance with the other performance standards, i.e., drainage, access, and sediment control, result in backfill out-slopes being steeper than 2:1, the application should contain adequate documentation that the backfill configuration meets a 1.3 static safety factor (see Figure 10). Documentation described in Section IV A would be required if slopes flatter than 2:1 are proposed.

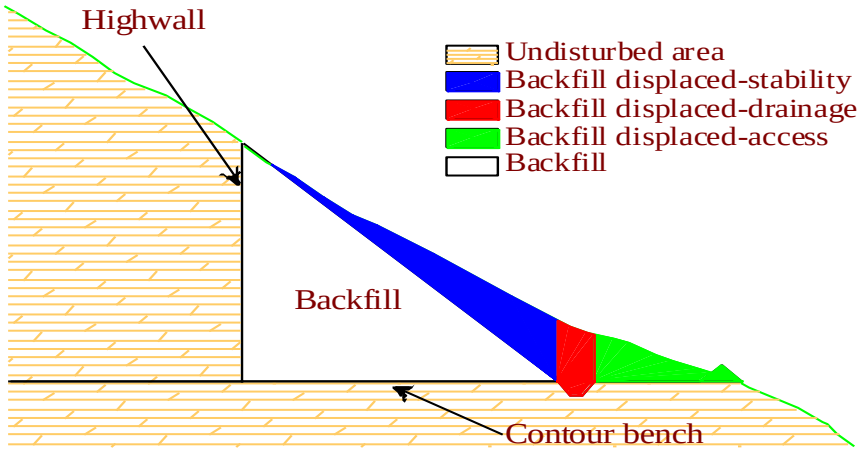


Figure 10

Oftentimes, contour mining operations encounter long, narrow ridges or points that require more than one cut to recover the coal seam(s). Although the mining phase utilizes both the contour and area mining methods when this occurs, the AOC/excess spoil determination models are used in the same way for determining AOC and excess spoil volumes. The same principles and performance standards apply–

drainage, sediment control, and access requirements must be designed and documented. Also, compliance with the stability requirements for the outslopes of the backfill must be achieved and documented.

However, in order to comply with these requirements and achieve AOC, the reclamation phase of these sites must integrate two perspectives when utilizing the AOC model:

- Elimination of the highwall (perpendicular to the ridge line);
- Returning all spoil material that is not excess spoil to the mined area(s) (the area between the highwall and the end of the ridge line). Combining the two perspectives results in a postmining configuration that closely resembles the general configuration of the ridge or point prior to mining, while still complying with the performance standards discussed earlier in Section IV A-D

END OF DOCUMENT

D. Subject: Final AOC Guidance Document Policy
Date: February 19, 2004
Approval: F. Joe Parker, Acting Director

All surface mine applications submitted after March 24, 2000, must have the Final AOC Guidance Document Policy used to determine the adequacy of the AOC design and fill placement.

This Policy updates the June 5, 2000 Director Michael C. Castle, Final AOC Guidance Document Policy without substantive change to its contents. As mutually agreed by the Coal Permitting Quality Assurance/Quality Control (QA/QC) Advisory Panel at its February 19, 2004 session; acknowledge errata have been corrected, minor editing was performed and illustrative figures have been inserted.

It is important to note that the Final AOC Guidance Document Policy does not apply to contour mines. Contour mining applications (regardless of date of receipt) will be reviewed using the existing AOC/Excess Spoil Guidelines document (1999), which does apply to contour operations.

FINAL AOC GUIDANCE DOCUMENT

WITH

ERRATA CORRECTIONS THROUGH FEBRUARY 19, 2004

ORIGINAL DOCUMENT DRAFTED JANUARY 27, 2000
ORIGINAL DOCUMENT EFFECTIVE MARCH 24, 2000

1. INTRODUCTION AND BACKGROUND
1.1 APPLICABLE PROVISIONS OF STATE LAW
1.2 PURPOSE, OBJECTIVES AND APPLICABILITY
1.3 ACRONYM DEFINITIONS

2. AOC AND EXCESS SPOIL QUANTITY RELATIONSHIP
2.1 ELEMENTS OF AOC DEFINITION
2.2 INTRODUCTION OF AOC MODEL CONCEPT
2.3 DEFINITION OF CONFIGURATION
2.3.1 *Introduction*
2.3.2 *Total Spoil Material (**TSM**)*
2.3.3 *Original Contour (**OC**)*
2.4 EFFECT OF PERFORMANCE STANDARDS ON BACKFILL VOLUME
2.4.1 *Introduction*
2.4.2 *Stability Requirements (**SR**)*
2.4.3 *Drainage Control Requirements (**DR**)*
2.4.4 *Sediment Control Requirements (**SCR**)*
2.4.5 *Access/Maintenance Roads (**AR**)*
2.4.6 *Maximum Backfill Requirements (**MBR**)*

3. AOC DETERMINATION (MOUNTAINTOP MINING)
3.1 INTRODUCTION
3.2 BACKFILL SPOIL DETERMINATION MODEL
3.3 EXCESS SPOIL DETERMINATION
3.4 ADJUSTMENT TO ES AND BKF TO REFLECT OFF SITE DISPOSAL
3.5 ADDITIONAL BACKFILL CAPACITY REQUIRED BY AOC MODEL
3.6 SUMMARY OF VOLUME ALLOCATIONS
3.7 ISOLATED COAL SEAMS

4. EXCESS SPOIL DISPOSAL AREA DEFINITION
4.1 INTRODUCTION
4.2 EQUIVALENT SWELL HEIGHT
4.3 TARGET FILL ELEVATION

5. EXCESS SPOIL DISPOSAL OPTIMIZATION (MOUNTAINTOP MINING)
5.1 INTRODUCTION
5.2 SPOIL DISPOSAL PLAN APPROVAL
5.3 PRESUMED CRITERIA TEST
5.4 “ESDA BANK” ANALYSIS

6. AOC DETERMINATION (CONTOUR MINING)

7. EXCESS SPOIL DISPOSAL OPTIMIZATION (CONTOUR MININIG)

8. AOC/FILL OPTIMIZATION PANEL

9. AOC COMPLIANCE/AOC VARIANCE REQUESTS
9.1 AOC COMPLIANCE DETERMINATION
9.2 AOC VARIANCE REQUEST EVALUATION

10. REPORTING REQUIRMENTS, PERMIT REVISIONS, AND AMENDMENTS
10.1 REPORTING
10.2 REQUIREMENTS FOR PERMIT REVISIONS
10.3 PERMIT AMENDMENTS TO ADD MINERAL EXTRACTION
10.4 ADJACENT PERMITS OR PERMIT AMENDMENTS

1. INTRODUCTION AND BACKGROUND

1.1 Applicable Provisions of State Law

Surface Mining Control and Reclamation Act of 1977 (SMCRA)

- 30 USC 1291 Section 701(2)

West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA)

- 22-3-3(e)
- 22-3-13(d) (3)
- 22-3-13(b) (4)
- 22-3-13(b) (10) (B), (C), (F), (G)

West Virginia Surface Mining Reclamation Regulations (WVSMRR)

- 38 CSR 2-2.47
- 38 CSR 2-2.63
- 38 CSR 2-5.2, 5.3, 5.4
- 38 CSR 2-8, 8.a
- 38 CSR 2-14.5
- 38 CSR 2-14.8.a
- 38 CSR 2-14.14
- 38 CSR 2-14.15.a

1.2 Purpose, Objectives and Applicability

An objective and well-defined method for determining post-mining land configuration is necessary to assure compliance with applicable laws, provide an opportunity for early coordinated regulatory review, and allow for meaningful and timely public input and transparent decision-making.

This method is referred to as the "AOC Process" throughout this document.

The AOC Process outlined in this document shall be undertaken for all proposed steep slope surface coal mining applications. Steep slope operations are all operations where the natural slope of the land within the permit area exceeds an average of twenty (20) degrees, as measured from the horizontal. The AOC Process shall be completed before the issuance of a Surface Mining Application (SMA) number by WVDEP.

Nothing in this AOC Process shall be construed to regulate the surface activity solely associated with underground mining or coal refuse facilities.

This guidance document has been developed to accomplish the following objectives:

- Provide an objective process for achieving AOC while ensuring stability of backfill material and minimization of sedimentation to streams.
- Provide an objective process for determining the quantity of excess spoil that may be placed in excess spoil disposal sites such as valley fills.
- Optimize the placement of spoil to reduce watershed impacts.

- Provide an objective process for use in permit reviews as well as field inspections during mining and reclamation phases.
    - Maintain the flexibility necessary for the operator to address site-specific mining and reclamation conditions.

1.3 Acronym Definitions

The following acronyms are used throughout the AOC Process:

- **OC –** Volume of material required to replicate the **O**riginal **C**ontours of the undisturbed area.
- **TSM – T**otal **S**poil **M**aterial to be handled or available.
- **SR –** Backfill volume displaced due to compliance with **S**tability **R**equirements.
- **DR –** Backfill volume displaced due to compliance with **D**rainage control **R**equirements.
- **SCR –** Backfill volume displaced due to compliance with **S**ediment **C**ontrol **R**equirements.
- **AR –** Backfill volume displaced due to compliance with **A**ccess/maintenance **R**equirements.
- **MBR –** Backfill volume displaced due to compliance with the reduction of peak backfill elevation to meet **M**aximum **B**ackfill **R**equirements.
- **AOC –** Volume of backfilled spoil and configuration required to satisfy the definition of **A**pproximate **O**riginal **C**ontour.
- **OB –** Volume of material in the **O**ver**b**urden.
- **IB –** Volume of material in the **I**nter**b**urden.
- **BF – B**ulking **F**actor. The result of the swell factor minus the shrinking factor associated with a certain material.
- **BFA – B**ack Fill **A**rea. The area inside the outcrop of the lowest isolated coal seam mined.
- **ESDA – E**xcess **S**poil **D**isposal **A**rea. The area outside of the mined area used for placement of excess spoil.
- **OSDA – O**ff-**S**ite **D**isposal **A**rea.
- **IBKF – I**nitial **B**ac**k F**ill volume. The spoil material placed in the mined area prior to the placement of any excess spoil areas.
- **ES –** The volume of **E**xcess **S**poil remaining after satisfying AOC by backfilling and grading to meet SR, DR, SCR, AR, and MBR.
- **OSDV –** The quantity of material in **O**ff-**S**ite **D**isposal **V**olume.
- **ABKF –** The volume of **A**dditional **B**ac**k F**ill created by revising the location of the toe of the backfill slope as required by the AOC process.
- **ESDV – E**xcess **S**poil **D**isposal **V**olume. The volume of excess spoil remaining after deducting the total backfill volume that shall be placed in an excess volume disposal facility.
- **IES – I**nitial **E**xcess **S**poil. The volume of total spoil produced from mining less the volume that can be backfilled in the mined area.
- **ESH – E**quivalent **S**well **H**eight. The height calculated by dividing the sum of OB and IB by BFA, and multiplying this ratio by the bulking factor, BF.
- **TFE – T**arget **F**ill **E**levation. The sum of the average elevation of the outcrop of the primary mountaintop seam with each valley selected for fill placement, plus ESH.

- **BKF – B**ac**K F**ill volume. The volume of spoil material to be returned to the mined area.

2. AOC AND EXCESS SPOIL QUANTITY RELATIONSHIP

2.1 Elements of AOC Definition

The following terms are necessary for development of the AOC Process:

A. Configuration: - Configuration relates to the shape of the regraded or reclaimed area. In addition to complying with the definition of AOC the reclaimed configuration must comply with performance standards found in WVSCMRA, such as ensuring stability, controlling drainage, and preventing stream sedimentation.

B. Stability: - Stability relates to the placement of material in the regraded or reclaimed area. State regulations (see 38 CSR-2-14.8.a. and 14.15.a) require material to be placed in a manner that achieves a minimum long-term static safety factor, prevents slides, and minimizes erosion.

C. Drainage: - Drainage relates to moving water from and within the regraded or reclaimed area. Reclaimed drainage configurations must comply with performance standards found in WVSCMRA, such as minimizing sedimentation, and restoring water quality and quantity.

2.2 Introduction of AOC Model Concept

The AOC Process includes the development a volumetric model referred to as the AOC Model. This volumetric model provides a definitive and reproducible means to calculate the volumes of material that can be backfilled or placed in excess spoil disposal areas. The volumes obtained from the AOC Model are used as a volumetric basis for the actual mine configuration. The proposed final regrade configuration of the Mine Plan may vary from the AOC Model except as described below.

Portraying these performance standards as variables in a model or formula provides an objective process for determining what post-mining surface configuration meets the AOC definition, while complying with the other performance standards in WVSCMRA. The following terms were developed and defined for use in the AOC Model:

Configuration

- **OC-** Volume of material required to replicate the original contours of the undisturbed area proposed to be mined. **OC** includes overburden (**OB**), interburden (**IB**), and coal in their undisturbed pre-mining state.
- **TSM-** Total spoil material to be handled or available. This material will be classified as either backfill material (**BKF**), excess spoil material (**ES**), or offsite disposal material (**OSDV**)
- **Performance Standards**
- **SR-** Backfill volume displaced due to compliance with **S**tability **R**equirements.
- **DR** Backfill volume displaced due to compliance with **D**rainage Control **R**equirements.
- **SCR-** Backfill volume displaced due to compliance with **S**ediment **C**ontrol **R**equirements.

- **AR-** Backfill volume displaced due to compliance with **A**ccess / maintenance **R**equirements.
- **MBR-** Backfill volume displaced due to compliance with the reduction of peak backfill elevation to meet **M**aximum **B**ackfill **R**equirements.
- **AOC-** Volume of backfilled spoil and configuration required to satisfy the definition of **A**pproximate **O**riginal **C**ontour.

This document uses the above acronyms for illustrative purposes only and they are not intended to represent standard engineering terminology. Instead, they illustrate the AOC Model process, rather than quantifying each term in the formula. While the terms can be quantified individually, this is not required by the AOC Model process. Use of the AOC Model results in a theoretical reclamation configuration that can be quantified.

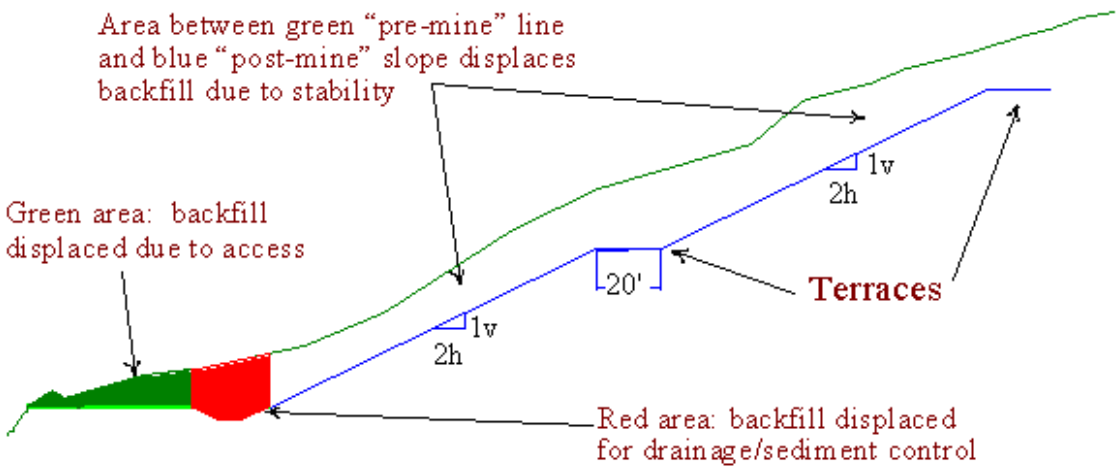


Figure 1. Typical Backfill Volume Displaced When Complying With Performance Standards

The following formula determines the amount of backfill that must be returned to the mined area to satisfy AOC.

OC – (SR + DR + SCR + AR + MBR) = AOC

2.3 Definition of configuration

2.3.1 Introduction

The following terms are used consistently in the AOC Model to define the condition of the mined area:

2.3.2 Total Spoil Material (**TSM**)

Total spoil material is all of the overburden and interburden that must be handled as a result of the proposed mining operation. **TSM** will either be placed in the mined area, in excess spoil disposal sites (valley fills), on pre-existing benches or in off-site disposal areas.

- **TSM** volumes are determined by using standard engineering practice, such as average-end area, stage-volume calculations, or 3-dimensional (3-D) grid subtraction methods. The Director must have adequate information submitted by the applicant to properly evaluate **TSM** calculations. If the applicant uses an average-end area method, cross-sections must be supplied for a base line or lines at an interval no less than every 500 feet or more frequently if the shape of the pre-mined area is highly variable between the 500-foot intervals. If the applicant uses a stage-storage method, areas measured by polar planimeter should also be determined on a contour interval (CI) that is representative and reflects any significant changes in slope (20' CI or less recommended). If a 3-D model is used, the pre-mining contour map and, if possible, a 3-D model graphic should be provided. The grid node spacing used in generating volumetric quantities should be identified. If digital data is used by the applicant, it should be in a format and on a media acceptable to the Director.

- **TSM** is determined by combining the overburden (**OB**) volume over the uppermost coal seam to be excavated with the interburden (**IB**) volumes between the remaining lower coal seams, and then multiplying this sum by a "bulking" factor (**BF**). Bulking factors are calculated by a two-step process: 1) "swell" volume is determined from the amount of expected expansion of previously undisturbed natural material through the incorporation of air-filled void spaces; 2) "shrink" volume can be calculated from the amount the swelled material compacts during placement (reducing the void spaces and, consequently, the volume). Thus, the bulking factor is the swell factor minus the shrink factor, which varies based on the overburden lithology (e.g., sandstone swells more and shrinks less than shale). The applicant shall clearly identify the value of **BF** used. Permit applications that propose a **BF** greater than 30% shall contain a justification of the weighted bulking factor utilized-based not only on the weighting of individual swell factors calculated for each major rock type to be excavated that will be placed in the backfill, but also on the shrinkage or compaction factor due to spoil placement methods. In equation form:

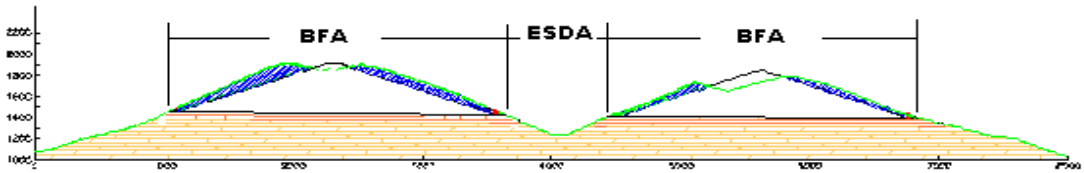
$$\mathbf{(OB + IB) \times (1 + BF) = TSM}$$

Spoil Placement Areas - There are only three areas that **TSM** may be placed:

- Backfill (**BFA**)
- Excess spoil disposal areas (**ESDA**), i.e. valley fills.
- off-site disposal areas (**OSDA**)
- **BFA** Backfill Area (mined area) is the area inside the outcrop of the lowest coal seam mined. (See Figure 2)
- **ESDA** Excess Spoil Disposal Area. The area outside of the mined area used for placement of excess spoil. (See Figure 2)
- **OSDA** Off-Site Disposal Areas include but are not limited to:
- Unreclaimed mine sites that are not subject to SMCRA and State mining reclamation laws that are permitted and bonded by the applicant for spoil disposal
- Approved AML or bond forfeiture projects that require such additional spoil to achieve final reclamation

- Existing benches in accordance with 38 CSR-2.14.14.
- Existing mined post SMCRA mined areas and excess spoil disposal areas that can accommodate additional spoil disposal that do not change the toe location. These areas shall be permitted and bonded by the applicant for spoil disposal.

The volume of spoil placed off-site shall be deducted from the spoil volumes in accordance with Section 3.4.



Note: Offsite Disposal Area is not shown.

Figure 2. Typical excess spoil site selection

2.3.3 Original Contour (**OC**)

The original configuration of the mine area is determined from topographic maps of the proposed permit area. This configuration is developed through the use of appropriate cross-sections, slope measurements, and standard engineering procedures. Sufficiently detailed topographic maps, adequate numbers of cross-sections, or labeled 3-D model grids/graphics should be submitted that illustrate the representative pre-mine topography and slopes. Digital data should be submitted with the application in a format and on a media acceptable to the regulatory authority.

2.4 Effect of Performance Standards on Backfill Volume

2.4.1 Introduction

The spoil material displaced due to the performance standards is deducted from configuration volumes. Each component occupies space in the mined area that could otherwise contain spoil material. The Director shall assure that the AOC Model design includes only necessary and justifiable deductions based on the following criteria, as depicted by Figure 3. This shall constitute the standard template for defining the backfill volume. The template only applies to the determination of backfill volumes for the AOC Process. The backfill configuration proposed in the Mine Plan need not conform to the template or the "AOC Model".

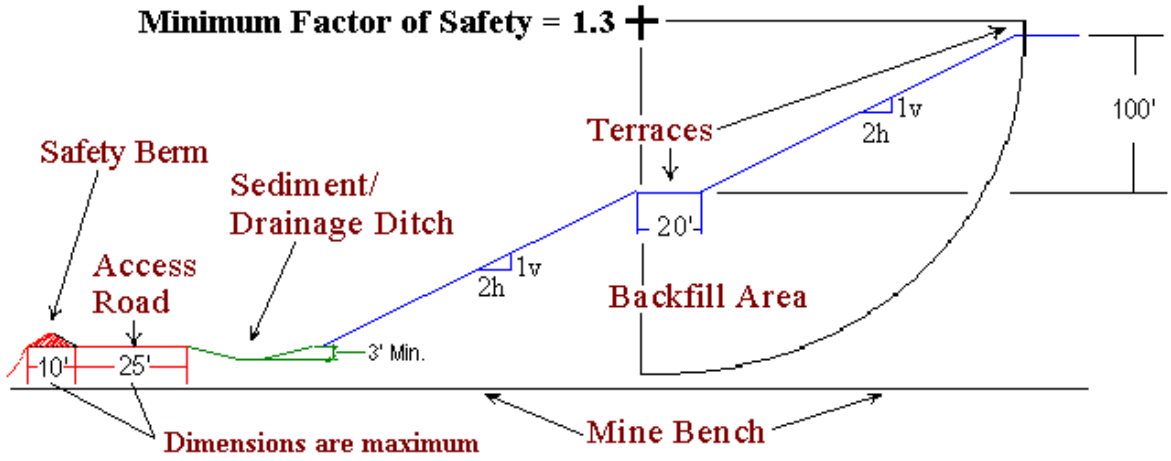


Figure 3. Template for stability, drainage, sediment control, and access control requirement.

2.4.2 Stability Requirements (**SR**)

The slopes of the spoil material placed in the backfill areas or excess spoil disposal sites must be stable. Accordingly, the spoil material shall be placed in such a manner as to prevent slides or slope failures and achieve a minimum, long-term static safety factor of 1.3 for the backfill.

For the purpose of determining the backfill volume for the AOC Model the backfill slopes shall consist of a 2 horizontal to a 1 vertical (2H:1V) slope between the terraces plus a terrace of twenty feet (20') width constructed at each one hundred feet (100') vertical rise above the toe of the backfill.

If the applicant demonstrates that the overburden and interburden cannot attain a 1.3 factor of safety at 2:1 slopes, more gentle slopes may only be justified by the submission of geotechnical test data and stability analyses to the Director.

2.4.3 Drainage Control Requirements (**DR**)

Drainage structures are used to divert or convey surface runoff. For the determination of backfill volumes for the AOC model, it is assumed that all drainage structures, except for clean water diversion ditches, are integrated with the sediment control structures.

The integration of the drainage structure with the sediment control structures only apply for the determination of backfill volumes for the AOC Model and the final design and configuration need not conform to the AOC Model.

If the applicant proposes a diversion ditch to transport discharge from undisturbed areas, or from drainage control structures, these structures must be properly designed to provide the required capacity and designed using standard engineering practices and theory. When reviewing the size and placement of these structures, the Director shall

assess the design plans to assure the structures are no larger/wider than necessary for proper design and comply with standard engineering practices.

The design of the drainage structures only apply for the determination of backfill volumes for the AOC Model and the final design and configuration need not conform to the AOC Model.

2.4.4 Sediment Control Requirements (**SCR**)

For the determination of backfill volumes for the AOC Model, the design of the sediment control structures shall include the drainage structures (except for diversion ditches). It is also assumed that the sediment control structures are located at the toe of the backfill slopes on the pavement of the primary mountaintop seam and on the seam mined for contour mining.

For the purpose of the AOC Model the design of the sediment control shall consist of continuous ditches around the perimeter of both the primary mountaintop seam and on the lowest seam mined for contour mining. These structures must have a total design depth (including freeboard) of no less than 3 feet. These structures must be properly designed to provide the required sediment storage capacity and designed using standard engineering practices and theory.

When reviewing the size and placement of these structures used in the AOC Model, the Director shall assess the design plans to assure the structures are no larger/wider than necessary for proper design and comply with standard engineering practices.

The design of the sediment control structures only applies to the determination of backfill volumes for the AOC Model. The final design and configuration need not conform to the AOC Model.

2.4.4 Access/Maintenance Roads (**AR**)

For purposes of this AOC Model, the applicant must justify, based on operation specific details, all access and maintenance road and safety berm widths. Under no circumstances may the road width exceed 25 feet plus a maximum allowance of 10 feet (horizontal) for a safety berm. An allowance for roads shall be provided for roads located on the primary mountaintop seam outcrop and along the outcrop of the lowest seam mined for contour mining, or each outcrop for Multiple Contour Operations.

The Director shall also assess the road configuration to assure the roads and safety berms are no larger/wider than necessary.

The design of the roads only applies to the determination of backfill volumes for the AOC Model. The final design and configuration need not conform to the AOC Model.

2.4.5 Maximum Backfill Requirements (**MBR**)

The crest of the backfill ridge must accommodate the mining equipment that transports and places the spoil but the crest must not be unnecessarily wide. For purposes of this

AOC Model, the backfill crest width shall not exceed 100 feet. The applicant must justify, based on operation specific details, any backfill crest width in excess of 30 feet.

The AOC Model can create an anomaly when the extent of the mined area is significantly increased due to contour mining within the perimeter of valley fills. As the total mined area expands, the potential backfill height increases. In certain instances, the AOC Model generates a peak backfill elevation that is substantially higher than the surrounding terrain. To avoid this anomaly, an applicant shall not be required to design backfill higher than the peak pre-mining elevation within the mined area for purposes of calculating backfill volume and excess spoil volume using this model.

The MBR applies only for the determination of backfill volumes for the AOC Model. The final design and configuration need not conform to the AOC Model as it does not establish a ceiling elevation above which no backfill material can or must be placed in the actual Mine Plan. Incorporating the other components of the AOC definition in the proposed final regrade configuration will prevent the development of a flat plateau in the Mine Plan.

3. AOC DETERMINATION – (Mountaintop Mining)

3.1 Introduction

Applying these performance requirements in the mine planning process will determine the amount of total spoil material that must be retained in the mined area to satisfy the objective criteria for AOC. The calculations and drawings developed through application of this plan are used to determine the volumetric components of AOC.

3.2 Backfill Spoil Determination Model

The backfill material that will be placed within the mined area can be backfilled so that the resulting post-mining configuration closely resembles the pre-mining topography, thus satisfying not only the access, drainage, sediment, and stability performance standards of SMCRA and WVSCMRA, but also providing flexibility and meeting the AOC requirements.
Restating the AOC Model from the previous section:

OC – (SR + DR + SCR + AR + MBR) = AOC

Step 1: Determine original or pre-mining configuration Original Contour (**OC**)

Step 2: Subtract from Original Contour:
Volume displaced due to Stability Requirements (**SR**)
Volume displaced due to Sediment Control Requirements (**SCR**) which include Drainage Requirements (**DR**) except for clean water diversion ditches, as defined above
Volume displaced due to Access Requirements (**AR**)
Volume displaced due to Maximum Backfill Elevation Requirements (**MBR**)

Step 3: The remaining volume is the initial backfill (**IBKF**) which is the spoil material placed in the mined area prior to the placement of any excess spoil areas.
Therefore, the relationship becomes:

IBKF = **OC** – (**SR** + **DR** + **SCR** + **AR** + **MBR**)

3.3 Excess Spoil Determination

The parameters used in the AOC Model for determining the **TSM** also are used to determine the quantity of excess spoil. This approach provides an objective process for determining what excess spoil (ES) is.

The additional terms and concepts used are:

- **IBKF-** Volume of backfill or spoil material placed in the mined area prior to the placement of any excess spoil areas
- **ES-** Volume of excess spoil remaining after satisfying AOC by backfilling and grading to meet **SR, DR, SCR, AR, MBR**.
- **OSDV-** Volume of spoil material placed in an approved off-site location

The **ES** quantity, as determined by the following formula, is obtained by complying with the stability standards and other performance standards.
The excess spoil relationships:

ES = TSM - IBKF

Therefore:

ES = TSM - (OC - (SR + DR + SCR + AR + MBR)

3.4 Adjustment to ES and BKF to reflect Off Site Disposal

Operations may use adjacent pre-existing benches (without coal removal occurring) as part of the permitted area for excess spoil disposal. If pre-existing benches are to be used as excess spoil disposal sites, the capacity of each pre-existing bench area must be calculated.

Additional off-site material disposal locations include Abandoned Mine Land (AML) sites, Bond Forfeiture sites and civil works projects approved by the Director.

Excess spoil may be placed on adjacent, post SMCRA, mine sites that have suitable locations for spoil disposal. Any such areas used for spoil disposal must be appropriately permitted and bonded.

The total quantity of off-site disposal volume (**OSDV**) shall be calculated and details shall be provided to the Director. The information submitted shall be sufficient to allow the Director to review the adequacy of calculation.

As an incentive to use previously disturbed areas, the quantity of off-site disposal **OSDV** shall be deducted from the Total Spoil Material (**TSM**), resulting in a reduction in both the

Excess Spoil (**ES**) and the Initial Backfill (**IBKF**). The allocation of this volume shall be based on the ratio of Excess Spoil (**ES**) to Total Spoil (**TSM**).

The deduction decreases the volume of Total Spoil Material; therefore, the new value for Total Spoil Material ($\mathbf{TSM_N}$) is defined as:

$$\mathbf{TSM_N = TSM - OSDV}$$

The new value for the Excess Spoil volume ($\mathbf{ES_N}$) shall be defined as:

$$\mathbf{ES_N} = \mathbf{ES} - (\mathbf{OSDV} \text{ x } (\mathbf{ES/TSM})$$

The new value for the Backfill volume ($\mathbf{IBKF_N}$) shall be defined as:

$$\mathbf{IBKF_N} = \mathbf{IBKF} - (\mathbf{OSDV} \text{ x } (1 - (\mathbf{ES/TSM})$$

If the applicant intends to use off-site disposal areas, all subsequent references in this document to **ES** and **IBKF** shall be replaced with $\mathbf{ES_N}$ and $\mathbf{IBKF_N}$**.**

3.5 Additional Backfill Capacity Required by AOC Model

The AOC Model requires that the excess spoil disposal fill is raised to an elevation above the lowest seam to be mined. The backfill slope must start at the vertical projection of the outcrop of the lowest seam being mined. The toe of the slope may be set back from the vertical projection of the lowest seam by a distance equal to the width of the sediment requirements (**SR**) plus the drainage requirements (**DR**). For the purpose of the AOC Model the access roads shall be located on the excess spoil disposal area.

This concept determines the demarcation between the backfill area **(BFA**) and the excess spoil disposal area (**ESDA**). (See Figure 2) This demarcation can be used consistently in any steep slope mining situation, and is determined using the following process:

- Locate the outcrop of the lowest seam being mined within each excess spoil disposal area, whether contour cut only or removal of the entire seam.
- Project a vertical line upward beyond the crest of the fill and backfill elevations. This is the demarcation line, or purple corner. (See Figure 4)
- The area where coal removal occurs, to one side of this line, is backfill area (**BFA**); and, the area on the other side of the line, including the valley bottom, is excess spoil disposal area (**ESDA**) (see Figure 5)

The initial volume of material placed on the mined area with no influence of any valley fills shall be referred to as the Initial Backfill (**IBKF**).

The revised location of the toe of the backfill slope to the demarcation line between **ESDA** and **BFA**, as a result of the construction of an excess spoil disposal facility, results in additional backfill volume. This is referred to as Additional Backfill (**ABKF.**)

The total volume of backfill material (**BKF**) placed in the backfill area (**BFA)** consists of the initial backfill (**IBKF**) plus the additional backfill (**ABKF)**. Therefore:

BKF = IBKF + ABKF

The volume of excess spoil remaining after deducting the total backfill volume shall be placed in an excess spoil disposal facility. This volume of material is the Excess Spoil Disposal Volume (**ESDV**).

Establishing this boundary between excess spoil areas and backfill areas is the same procedure used in determining where permanent valley fill diversion ditches must be located.

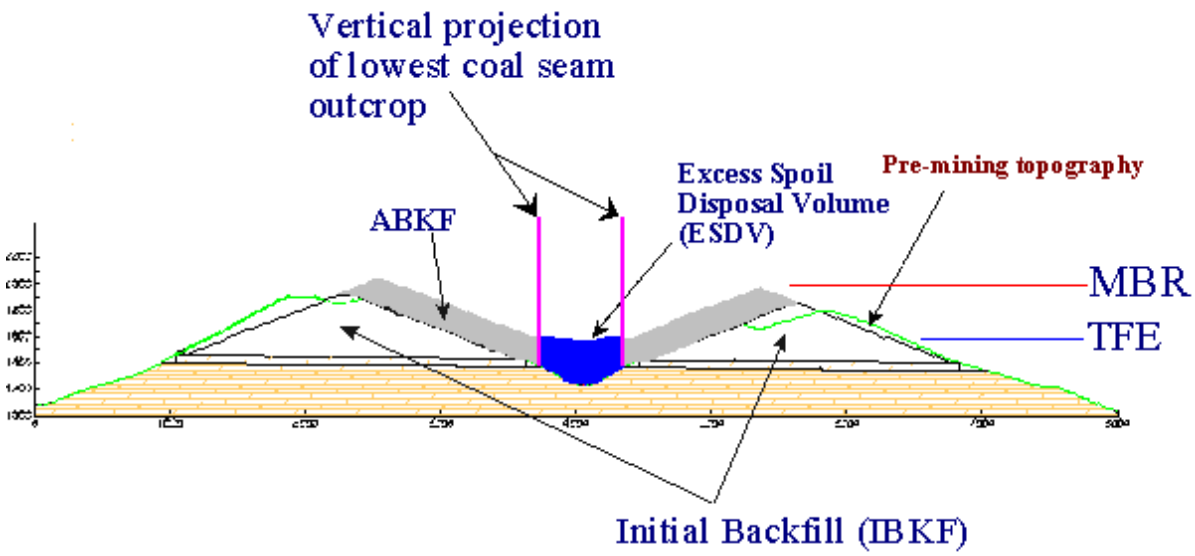


FIGURE 4. Delineate mined and excess spoil areas.

Section 5 of this guidance document contains an optimization procedure for mountaintop mining excess spoil disposal plans. Successful optimization is attained through elevating excess spoil fills to a target height above the mined area, thus converting a portion of Initial Excess Spoil **(IES**) to additional backfill volume (**ABKF**) and thereby reducing the size and impact of valley fills.

3.6 Summary of Volume Allocations

Summarizing the previous terms and relationships, excess spoil is the total spoil produced from mining the property less the amount that can be backfilled in the mined area:

IES = TSM – IBKF

Through the use of previously mined benches, AML projects, and other off-site disposal sites, the volume of both Excess Spoil and Backfill may be reduced. As a result of these reductions:

$$ES_N = TSM_N - BKF_N$$

If spoil is placed in the mined area, this volume is converted from **IES** to Additional Backfill volume (**ABKF**). The Excess Spoil Disposal Volume (**ESDV**) is the Initial Excess Spoil (**IES**) less that volume converted to backfill as **ABKF**.

IES = ABKF + ESDV
or
ESDV = IES – ABKF

Resolving the two relations defined above:

TSM – IBKF = ABKF +ESDV
or
TSM = ESDV + (IBKF + ABKF)

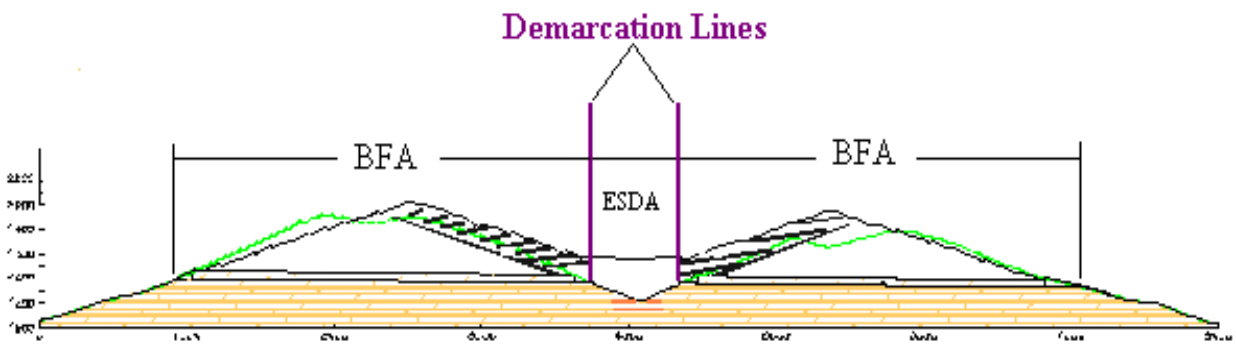


Figure 5. Demarcation between ESDA and BFA.

3.7 Isolated Coal Seams

After designing the optimized mine plan and spoil disposal plan, excess spoil disposal areas may cover coal seams that will be rendered not minable once the fill is placed. Therefore, treatment of contour mining in such seams as ordinary "mined area" under this model may create a disincentive to the recovery of that coal.

In order to allow the extraction of coal that would otherwise be lost, the applicant may submit a request to designate a contour-mined seam as "isolated". The Director may designate a contour-mined seam as an "isolated coal seam" only if:

- The "isolated coal seam" is mined only within the excess spoil disposal areas.
- That this "isolated coal seam" may not be added to the permit by revision or amendment or be included in an adjacent permit.
- No additional excess spoil disposal area may be permitted to accommodate spoil from future mining of the "isolated coal seam".

- The mineral removal area associated with the "isolated coal seam" contouring is not contiguous to the primary mountaintop seam mineral removal area or to mineral removal areas related to other contiguous contouring.
- The "isolated coal seam" area could not reasonably be extended to become contiguous to the mountaintop mined mineral removal area.

In no event shall a contour mined area where the top of the high wall extends to within 50 feet vertically of the elevation of the primary mountaintop seam be designated as an "isolated coal seam".

The Director may determine that the above criteria is satisfied and that, based on documentation provided by the applicant only if this "isolated coal seam" could not be feasibly mined as an independent or "stand-alone" operation. The mined areas of the "isolated" coal seam shall not be used to define the lowest seam mined for demarcation between the **ESDA** and **BFA**.

4. EXCESS SOIL DISPOSAL AREA DEFINITION

4.1 Introduction

A standardized approach for characterizing excess spoil disposal sites allows consistent and reproducible analysis and calculation of both the Excess Spoil Disposal Volume (**ESDV**) and the Additional Backfill (**ABKF**) volume resultant from the construction of excess spoil disposal site(s).

The calculations defined in this section are used for the excess spoil disposal optimization process discussed in of this document.

4.2 Equivalent Swell Height

The Equivalent Swell Height (**ESH**), in feet, is calculated by dividing the sum of overburden volume (**OB**) and the interburden volume (**IB**), in bank cubic feet, by the mineral extraction area, in square feet, (also termed Backfill Area **BFA**), and then multiplying that value by the determined bulking factor (**BF**) as utilized by the applicant in the AOC Model.

$$\mathbf{ESH} = [(\mathbf{OB}+\mathbf{IB})/\mathbf{BFA}] \times \mathbf{BF}$$

For example, a bulking factor of 25% shall be expressed as 0.25 in this relationship.

4.3 Target Fill Elevation

The Target Fill Elevation (**TFE**) for each valley fill is defined as the sum of the average elevation of the outcrop of the primary mountaintop seam within each valley selected for fill placement, plus the **ESH**. To simplify volume calculations and solely for calculation, each excess spoil disposal area shall be assumed to have a horizontal top surface. (See Figure 4)

5. EXCESS SPOIL DISPOSAL OPTIMIZATION (MOUNTAINTOP MINING)

5.1 Introduction

The procedure described in this section applies only to those watersheds in which mountaintop mining is proposed. If mountaintop mining is not proposed in a specific watershed but other mining types (e.g. contouring) are to be used, the excess spoil optimization procedure specific to those mining types shall be employed for any fill within that watershed.

5.2 Spoil Disposal Plan Approval

An application for a mountaintop surface mine permit shall be deemed to have an optimized spoil disposal plan only if the:

- plan satisfies the Presumed Criteria Test, or
- total non-mineral removal area affected by valley fills does not exceed the "Excess Spoil Disposal Area Bank" (**ESDA Bank**) plus the Acreage Tolerance
  Under unusual circumstances the AOC / Fill Optimization Panel may approve exceptions to fill optimization as described in Section 8 of this guidance document. Mining operations receiving such approved exceptions do not have optimized spoil placement plans. If an applicant is seeking an AOC variance, the applicant must follow the appropriate procedures described in Section 9.2 of this guidance document.

5.3 Presumed Criteria Test

The proposed excess spoil disposal plan in the AOC Model shall be presumed to be optimized if it meets the Presumed Criteria Test. The excess spoil disposal plan is optimized with regard to spoil disposal and the disturbed area associated with valley fills when **every** proposed valley fill in the AOC Model achieves the "target fill elevation." This design approach establishes the toe of each valley fill.

Calculation of the "presumed criteria" valley fill toes shall comply with the following steps:

Step 1 Select the valleys to be considered or qualified for excess spoil disposal.
Step 2 Determine the maximum downstream toe location to be considered for each valley fill. Environmental factors, statute, rules, property rights, operational issues, and other factors will influence this location.
Step 3 Define the value for Excess Spoil (**ES**) based on backfilling with no valley fills. The initial backfill volume (**IBKF**) will be determined using the AOC Model.
Step 4 Define the "equivalent swell height" (**ESH**).
Step 5 Define the average elevation of the primary mountaintop seam, upstream of the maximum downstream toe (as defined in Step 2) in each valley selected for the placement of excess spoil.
Step 6 Determine the Target Fill Elevation (**TFE**) for the top of each excess spoil disposal structure. The **TFE** is the average elevation of the primary mountaintop seam plus the equivalent swell height as defined in Step 4.

Step 7 Determine the volume of **ES** to be allocated to each fill. For the combination of the **ESDV** and **ABKF** required to contain the **ES** volume, establish the toe location for each fill.

Step 8 Document compliance with the above criteria by preparing and submitting as part of the surface mine application details of each valley fill model developed in Step 7. Each model shall include a plan view and profile view at a scale of 1"=200' (or as otherwise approved) and appropriate engineering calculations.

Step 9 Design the final regrade configuration and excess disposal areas of the Mine Plan in any sequence or configuration as long as the toe located in Step 7 does not move downstream and the design complies with Section 9.1 of this document.

Positive Determination — If the proposed toe location for each valley fill is maintained at or upstream of the toe location established for each valley fill in accordance with the above AOC Model procedure, the Director shall find that the Excess Spoil Disposal Area ("**ESDA**") has been optimized.

Negative Determination - If any of the proposed valley fills have a toe location that does not permit the fill to meet the Presumed Criteria Test as described, the Director shall notify the applicant that it must submit calculations to define the **ESDA Bank**.

5.4 "ESDA Bank" Analysis

If the proposed excess spoil disposal plan does not achieve a positive determination under the Presumed Criteria Test, the excess spoil disposal plan will be evaluated using the **ESDA Bank** analysis. This analysis employs the procedures defined in the preceding sections of the AOC Model except that the crest elevation of each fill is fixed to calculate the **ESDA Bank**.

This procedure provides a standardized means of comparing and rating available excess spoil disposal sites to achieve the most efficient placement of the excess spoil. Each fill is evaluated to determine its spoil disposal capacity per specified length of valley. The total volume of excess spoil is then assigned to the fills in descending order based on each fill's relative "efficiency." The result will be the optimum placement of spoil in terms of cubic yards per acre of **ESDA**.

Calculation of the **ESDA Bank** shall comply with the following steps:

Step 1 Define the primary mountaintop mining seam. This is the lowest seam within each proposed valley fill site that is being mountaintop mined

Step 2 Select the valleys to be considered or qualified for excess spoil disposal

Step 3 Determine the maximum downstream toe location to be considered for each valley fill. Environmental factors, statutes, rules, property rights, operational issues, and other factors will influence this location

Step 4 Define the value for Excess Spoil (**ES**) based on backfilling with no valley fills. The backfill volume (**IBKF**) will be determined using the AOC Model

Step 5 Define the "equivalent swell height."(**ESH**)

Step 6 Determine the Target Fill Elevation (**TFE**) for each excess spoil disposal structure. The TFE is the average elevation of the primary mountaintop seam plus the equivalent swell height as defined in Step 5

Step 7 Construct a straight baseline from the logical toe to the top of backfill (**IBKF**) generally along the centerline of each valley to be filled. The baselines should be oriented

perpendicular to the face of the anticipated valley fills at their logical toe. Draw a profile along the baseline for each valley to be filled from the top of the initial backfill.

Step 8 Locate the toe for the Initial Increment for each fill. The toe location for the Initial Increment shall be the lowest stratigraphically of either:

- the most upstream toe that complies with the geotechnical stability requirements defined by the regulations, or
- 50 horizontal feet downstream of the outcrop of the lowest seam to be mined

Step 9 Calculate the excess spoil disposal volume (**ESDV**) and the additional backfill volumes (**ABKF)** associated with the Initial Increment. For this optimization model only, assume a constant valley fill front face slope for all valley fills and all "slices" of 2.4h: 1v.

Step 10 Separate the remaining portions of all of the selected fills into equal length increments referred to as "slices" (these slices are perpendicular to the baseline constructed in Step 7). These "slices" shall extend from the Initial Increment all the way along the profile to the toe selected in Step 2. The slice length along the profile shall be selected by the applicant but may be no greater than 500 feet. The slice length shall be consistent for all fills and all slices, except for the last slice which shall be adjusted pro-rata to the ES volume required.

Step 11 Calculate the excess spoil disposal volume (**ESDV**) and the additional backfill volume (**ABKF)** associated with each "slice". As in Step 9, these volumes include the additional backfill volumes defined by the AOC Process.

Step 12 Develop a matrix indicating the volume of excess spoil disposal volume (**ESDV**) and additional backfill volume (**ABKF**) for each Initial Increment plus each of the "slices" for each valley fill under consideration.

Step 13 Calculate the optimum configuration of fill "slices." This optimization shall be based on the sequential inclusion of each Initial Increment for the valley fills under consideration. The selection process shall continue until the excess spoil volume (including additional backfill volume) equals the Excess Spoil (**ES**). If the sum of all the initial increments equals or exceeds the ES volume proceed to Step 16.

Step 14 If the volume of all of the Initial Increments does not meet the ES volume, sequentially include the increment with the greatest volume (excess spoil disposal volume (**ESDV**) plus additional backfill volume (**ABKF**)). Continue to select the "slice" with the next highest volume (naturally each fill must be selected in logical order). The selection process shall continue until the excess spoil volume (including additional backfill volume) equals the Excess Spoil (**ES**).

Step 15 If sufficient disposal volume is not available within the defined logical toes, the elevation of the valley fill surface shall be increased, and the iterations run again, thus creating further **ESDV** and A**BKF**.

Step 16 For the combination of the "Initial Increments" and "slices" required to contain the **ES** volume, determine the total area used for excess spoil. This area is referred to as the **ESDA Bank**. The **ESDA Bank** shall be the area determined by utilizing a polar planimeter in the calculations of the excess spoil disposal area portion of the valley fill. (I.e. the area outside the mined area but contained by the fill between the toe and the outcrop of the lowest seam mined.)

Step 17 Develop the final regrade configuration and excess disposal areas of the Mine Plan in any sequence or configuration as long as the area used for excess spoil disposal does not exceed the **ESDA Bank** plus the specified acreage tolerance. The only limitation on the design is that it must comply with Section 9.1.

Step 18 After the applicant has defined the excess spoil disposal areas for the Mine Plan, the total area utilized for excess spoil under this configuration (Proposed Excess Spoil

Disposal Area) shall be compared to the optimum excess spoil disposal area (**ESDA Bank.**)

Acreage Tolerance: An acreage tolerance factor shall be applied to the **ESDA Bank**. The Acreage Tolerance shall be ten percent (10%) of the area below the outcrop of the primary mountaintop seam but contained within the valley fill footprints.

Positive Determination - The Director shall find that the Proposed Excess Spoil Disposal Area has been optimized and permit review may proceed if the proposed excess spoil disposal area for the entire permit area does not exceed the **ESDA Bank** plus the Acreage Tolerance.

Negative Determination - If the application does not meet the above criteria, the Director shall issue a written "notice of negative excess spoil optimization" to the applicant and the permit application shall be submitted to an independent AOC / Fill Optimization Panel for consideration. Mining operations that receive a negative determination do not have an optimized spoil disposal plan.

6. AOC DETERMINATION (COUNTOUR MINING)

This document does not apply to contour mining.

7. EXCESS SPOIL DISPOSAL OPTIMIZATION (CONTOUR MINING)

This document does not apply to contour mining.

8. AOC / FILL OPTIMIZATION PANEL

In accordance with procedures described in Section 5 of this AOC Model, the Director shall promptly notify an applicant when an application does not comply with the spoil optimization guidelines. Upon receipt of a "notice of negative excess spoil optimization" the applicant may:

- Withdraw the permit application
- Revise the permit application to request an AOC variance
- Revise the permit configuration in order to meet the excess spoil optimization criteria, or
- Submit the excess spoil handling plan to the "AOC / Fill Optimization Practices Advisory Panel" (the "Panel") for evaluation.

If the applicant submits the excess spoil handling plan to the Panel for evaluation, the Director shall convene the Panel.

Following submittal of the excess spoil handling plan to the Panel, the applicant shall provide detailed plans and calculations clearly stating why it believes the proposed permit configuration cannot be optimized. Throughout the process, the burden of proof will remain on the applicant to justify its proposal.

The Panel shall be comprised of, an appointee of Mountain State Justice, Inc. or its assigns, an appointee jointly made by the West Virginia Coal Association and West Virginia Mining and

Reclamation Association, or its assigns, and a neutral member jointly selected by those panel members. The State will pay reasonable hourly rates and expenses for panel members within the 60 calendar days of submission of invoice.

The appointees must have a degree in Mining Engineering or Civil Engineering. The members need not be registered professional engineers. The appointees may have no interest, financial or otherwise, in the surface mining permit under review. If a conflict of interest arises, the panel member with the conflict shall be replaced by an alternate appointed by the appropriate party.

A Panel meeting shall be scheduled and convened within twenty-one (21) days of the submittal of the required information to WVDEP, as determined by the Director. The Panel shall hear the applicant's argument in support of its plan. Following the meeting of the Panel, the Panel shall issue a written recommendation within fifteen (15) days of the completion of the hearing. An exception to optimization may be recommended only after the Panel makes specific and detailed findings that there is no reasonable alternative to the exception. A majority vote of the Panel shall constitute a decision.

The "ESDA Limit" is the sum of **ESDA Bank** and the Acreage Tolerance, as established in Section 5.4.

For Mountaintop Mining the Panel may recommend by majority vote an exception of up to 10% greater than the "ESDA Limit". When this occurs the fill placement is not optimized.

The Director shall not be bound by the recommendation of the Panel. However, if the Director does not follow the recommendation of the Panel, the Director shall make written findings justifying his decision. In no event however may The Director approve an AOC compliant plan for Mountaintop Mining that is more than 10% greater than the "ESDA Limit."

9. AOC COMPLIANCE / AOC VARIANCE REQUESTS

9.1 AOC Compliance Determination

This AOC Process provides an objective means of assessing compliance with AOC specifically for steep-slope mining applications.

The "AOC Model" determined by the application of design components generates a volumetric determination of AOC. The AOC Process does not require that the Mine Plan matches the configuration of the "volumetric AOC Model".

The applicant shall submit detailed plans, cross sections and calculations as part of the permit application to define the final regrade configuration proposed in the Mine Plan. This documentation shall provide a clear indication to the Director relating to compliance with the tests detailed below. In addition, the documentation shall include the final reclamation plan, which clearly indicates the proposed post mining configuration.

The Director has the authority to determine that the final reclamation plan is not compliant with the AOC, even if is compliant with the volumetric requirements of the AOC Process (e.g. that it does not satisfy the aesthetic components of AOC). In addition, the Director shall assure that the final reclamation plan conforms to the following tests.

- **Backfill Volume**: The quantity of spoil material to be returned to the mined area (**BKF**) (or $\mathbf{BKF_N}$ if applicable) is calculated in Section 3.5. The final spoil balance and regrade design must demonstrate that **at a minimum** this volume of spoil to be placed as backfill in the Mine Plan.
- **Valley Fill Design**: The spoil optimization procedures in this AOC Process establish the maximum downstream toe location for each valley fill. Those maximum downstream locations must not be exceeded in the final Mine Plan.
- **Backfill Configuration**: Strict adherence to the "volumetric AOC Model" will often result in a reclaimed site that appears rigidly uniform and artificial. Therefore, applicants shall develop and submit as part of the permit application regrade plans that address aesthetic values along with engineering issues. This can be accomplished through the incorporation of landforms and other creative types of landscaping. However, the applicant must comply with certain objective configuration criteria that are established by this AOC Process.
- **Watershed Pattern**: The final "volumetric AOC Model" will create a readily identifiable ridge system separating the regraded site into discrete watersheds. This general watershed pattern must be maintained in the final Mine Plan. In those areas where the **MBR** constraint affects the AOC Model, a series of sub watersheds that reflect the pre-mining watershed system are to be established in the Mine Plan
- **Backfill Inflection Points**: A boundary is established in the AOC Model between the backfill slopes and the generally level or moderately sloped areas used for access, drainage features, and sediment control. This boundary is the demarcation between the Backfill Area (**BFA**) and the Excess Spoil Disposal Area (**ESDA**). To maintain the general configuration generated by the "volumetric AOC Model", this boundary is to be preserved in its approximate location in the final mine plan. Approximate is defined as being within 100 feet of the location of the **BFA / ESDA** boundary as defined in this AOC Process. Variations in elevation are allowable to promote drainage and to provide flexibility in shaping the final regraded configuration as defined in the Mine Plan.
- **Final Pit**: It is recognized that it is not practical to fully restore the final pit area to the configuration developed by the AOC Model. The inability to meet the ideal configuration shall not require an AOC variance, if the applicant can demonstrate in the Mine Plan that it has adequately addressed the issue of final pit reclamation through measures such as downsizing the active pit as mining draws to a close. However, the final pit regrade shall conform to the watershed pattern requirement and shall not result in any change to the quantity of **BKF** placed in the mined area (**BFA**).

These criteria will provide the regulatory authority with an objective, quantifiable means of assessing the Mine Plan's compliance with the approximate original contour requirements. For purposes of incorporating environmental enhancements into the final reclaimed configuration, the Director may allow an adjustment to the Backfill Volume test so that up to ten percent (10%) of **BKF** may be converted to **ESDV**, provided that the toe of each optimized valley fill shall not be moved downstream.

This adjustment is granted to encourage stream restoration projects, wetlands development, and similar aquatic habitat projects. The applicant is encouraged to restore streams by configuring the fills so that there is a positive grade from one side

of the fill to the other so that the lower side of the fill intercepts the down dip pavement of the primary mining seam.

9.2 AOC Variance Request Evaluation

When an applicant applies for an AOC variance for a mountaintop surface mine, the applicant shall include a complete excess spoil-handling plan that includes excess spoil optimization in compliance with the AOC Process. This plan shall be based on returning the mined area fully to AOC and shall include all calculations and other details needed to establish the **ESDA Bank (AOC)** without the AOC variance.

The **ESDA Bank** procedure shall be repeated using the proposed alternate post-mining configuration instead of the AOC configuration to determine the corresponding **Alternate ESDA Bank** acreage. The applicant shall present both analyses in a clear and organized manner, complete with all supporting documentation. All variance requests shall indicate the additional excess spoil disposal area in excess of that required to achieve AOC. This additional area is the difference between the **Alternate ESDA Bank** and the **ESDA Bank** (AOC).

This procedure will provide the Director a quantifiable means of evaluating the impact of the alternate post-mining configuration versus the projected impacts if the site were returned to AOC by providing a specific additional acreage resulting from that variance request.

Any spoil disposal plan for which the **Alternate ESDA Bank** is greater than the **ESDA Bank (AOC)** shall not be considered optimized.

10. REPORTING REQUIREMENTS, PERMIT REVISIONS AND AMENDMENTS

10.1 Reporting

The optimization of the excess spoil disposal area, as defined in Section 5, for a particular permit remains valid only if the operation is in compliance with its approved mine plan.

For all operations found AOC compliant as defined in section 9.1 of this guidance document, the operator shall submit to the Director a semi-annual report certified by a Professional Engineer registered in West Virginia, that the operation is in compliance with its spoil handling plan and that the operation can maintain the excess spoil optimization plan as included in the permit.

10.2 Requirements for Permit Revisions

For all operations found AOC compliant as defined in section 9.1 of this guidance document, the Director shall require a permit revision prior to the operator implementing any material changes in the mine operation and mine plan. The operator must justify in the semi-annual report why any changes are necessary. A material change is defined as any change that is greater than 5%. Changes include:

- The volume of overburden generated.
- The areal extent of coal to be mined.
- The spoil balance.
- Change the final regrade configuration so it does not comply with Section 9.1.
- Increase the **ESDV.**
- Move the toe of any valley fill downstream.
- Impact the approved excess spoil optimization plan.
- An operator who places spoil under a non-compliant spoil handling plan shall be deemed to be in serious violation of its permit. The Director shall deem this as significant imminent environmental harm to land and water resources and a cessation order shall be issued pursuant to 38 C.S.R. 2-20.3.a.1.

The permit revision shall include the following:

- A description of the proposed change to the mine plan.
- A revised and updated material balance.
- The status of each valley fill, particularly those completed or in progress.
- An updated AOC Process.
- A revised excess spoil optimization evaluation.

If using the **ESDA Bank** method, the volume of spoil already placed in any valley fill must be addressed prior to completing the optimization process for any permit revision. This shall be done by determining the minimum configuration of each fill that can accommodate the volume of material already placed, then deducting the corresponding existing excess spoil disposal area from the calculated optimum before the remaining area is reallocated.

10.2 Requirements for Permit Revisions

For all operations found AOC compliant as defined in section 9.1 of this guidance document, the Director shall require a permit revision prior to the operator implementing any material changes in the mine operation and mine plan. The operator must justify in the semi-annual report why any changes are necessary. A material change is defined as any change that is greater than 5%. Changes include:

- The volume of overburden generated
- The areal extent of coal to be mined
- The spoil balance.
- Change the final regrade configuration so it does not comply with Section 9.1.
- Increase the **ESDV.**
- Move the toe of any valley fill downstream.
- Impact the approved excess spoil optimization plan.
- An operator who places spoil under a non-compliant spoil handling plan shall be deemed to be in serious violation of its permit. The Director shall deem this as significant imminent environmental harm to land and water resources and a cessation order shall be issued pursuant to 38 C.S.R. 2-20.3.a.1.

The permit revision shall include the following:

- A description of the proposed change to the mine plan
- A revised and updated material balance
- The status of each valley fill, particularly those completed or in progress
- An updated AOC Process
- A revised excess spoil optimization evaluation

If using the **ESDA Bank** method, the volume of spoil already placed in any valley fill must be addressed prior to completing the optimization process for any permit revision. This shall be done by determining the minimum configuration of each fill that can accommodate the volume of material already placed, then deducting the corresponding existing excess spoil disposal area from the calculated optimum before the remaining area is reallocated.

10.4 Adjacent Permits or Permit Amendments

The objective of this section is to ensure that segmented permitting actions such as a "string of pearls" are not used to evade the intent of spoil optimization.

If an application for a permit by an operator is adjacent to or contiguous with another active permit or permits controlled or operated by that operator, then the Director shall consider the operation as a "total operation" if:

- Excess spoil disposal areas on the permit under consideration receive spoil from more than one permit, or
- The post mining contours at the boundary between the permits are different from the pre-mining contours. This means that if the regrade at the permit boundary continues between the two permits and is continuous and different from the pre-mining elevation
- The operation does not have total independent utility, including sediment control structures and access roads.

If a permit is part of a "total operation" then the application shall meet the requirements of the AOC Model for the "total operation" including the new permit under consideration. The AOC Model shall consider the total volumes in the operation and shall either:

- Ensure that all fills meet the presumed criteria test, or
- Use the **ESDA Bank** analysis. In using the **ESDA Bank** any existing fills on the "total operation" shall be deducted from the **ESDA Bank** before reallocation of any residual **ESDA**.

Nothing in this section shall be construed to limit Off Site Disposal Areas (**OSDA**).

END OF DOCUMENT

D. Subject: Clarification of the Applicability and Certification for Operations Designed Using Final AOC guidance Document (Steep Slope Operations Only)
Date: August 1, 2011 (Revised September 1, 2016)

This procedure shall be utilized for the clarification of the applicability and certification for operations designed using the Final AOC Guidance Document.

Policy/Procedures:

The West Virginia Surface Mining Reclamation Regulations provide for objective and well-defined methods for determining Approximate Original Contour (AOC) and to assure compliance. The Final AOC Guidance Document applies to steep-slope surface mining applications submitted after March 24, 2000. This Guidance Document is commonly referred to as (AOC-Plus) and is located within Section 29 of the Permit Handbook.

The Final AOC Guidance Document does not apply to underground, refuse, contour or non-steep slope surface mining facilities.

Section 10.1 and 10.2 of the Final AOC Guidance Document provides criteria and guidance for Semi-Annual Certifications of AOC by a Registered Professional Engineer (RPE). The purpose of the Semi-Annual AOC Certification is to determine if the operation is in compliance with its spoil handling plan which was developed as part of the AOC Final Guidance Document and if the operation can maintain the excess spoil optimization plan as included in the approved permit. To ensure compliance, at a minimum, the following information shall be included in the semi–annual submission:

- Certification of Compliance with Final AOC Guidance Document
- Volumetric Table
  - Comparison to Spoil Balance in approved Permit,
- Progress Map
- Cross-section information for any areas backfilled to final regrade
  - Current cross-sections of the backfill area shall be compared with regrade plan and cross-sections in the approved Permit

The Certification criteria are as follows:

1. The operation is in compliance with its spoil handling plan which was developed as part of the AOC Final Guidance Document;

2. The operation can maintain the excess spoil optimization plan as included in the approved permit; and

3. There have been no material changes in, or are any material changes anticipated (defined as greater than 5%), in the following:

a. The volume of overburden generated
b. The areal extent of coal to be mined
c. The spoil balance

d. The final regrade configuration, so it does not comply with section 9.1 of the Final AOC Guidance Document
e. Increases in the Excess Spoil Disposal Volume (ESDV)
f. Moving the toe of any valley fill downstream, or
g. Other changes that impact the approved excess spoil optimization plan, such as changes in mining method or equipment.

4. If any changes have occurred or are anticipated in the above, the operator must justify in the semi-annual report why the changes have occurred.

5. Should the answer be "yes" to any part of Paragraph 3 above (Question 3 on the Certification Form), the permittee shall submit a permit revision implementing any material changes in the mine operation and mine plan.

6. The required certifications should be submitted by the 15th day of January and July for the preceding (July 1 and December 31) and (January 1 and June 30) periods, respectively.

7. The Certification requirement described herein applies to both AOC and AOC Variance permits, which are designed in accordance with the Final AOC Guidance Document.

8. Since August, 2011, an AOC certification form (MR-29) has been available to perform the semi-annual AOC certifications. This form insures that all necessary information is being captured and appropriately addressed for each certification.

Fish & Wildlife Information

Applicability of State (WVDNR) Wildlife Resources Lands Inquiries
Guidelines for Applying for a **State (WVDNR)** Wildlife Resources Lands Inquiry
Guidelines and Applicability for Endangered Species Consultation

A. Subject: Applicability of State (WVDNR) Wildlife Resources Lands Inquiries
Date: March 1, 1997

1. The following types of applications require a **Lands Inquiry Response** be included in the application:

- MR-4 - Surface Mine Application
- MR-3 - Notice of Intent to Prospect
- MR-21- Reprocessing
- MR-4PR- Incidental Boundary Revision
- MR-17*- Permit Renewal

2. An **existing Lands Inquiry Response** may be utilized if the following conditions are met:

- The date of the existing response may not exceed two (2) years prior to the date of approval of the application;
- The existing response must be within 2,500 feet of the new submittal;
- Future permits entirely within a permitted area, including sufficient bond on file with DMR, shall not require a new Lands Inquiry Response regardless of the two (2) year limitation;
- The name on the Lands Inquiry Response does not in any way have to be connected with the applicant.

*The two (2) year limitation does not apply to permit renewals on permits that have been started. An existing Lands Inquiry Response for a started permit can be utilized in a permit renewal application. If the permit has not been started at the time of permit renewal, then a new Land Inquiry Response is required.

It is the applicant's responsibility to obtain and include a copy of the signed and dated Lands Inquiry Response in the appropriate applications.

B. Subject: Guidelines For Applying For A State (WVDNR) Wildlife Resources Lands Inquiry*
Date: June 1, 1999

These guidelines were determined by the West Virginia Department of Environmental Protection to prevent inconsistencies in the review process. Applications to the Division of Natural Resources must include the following:

1. Estimate of the total acreage to be permitted.

2. Limits of the proposed operation clearly shown on all maps.

3. Two (2) copies of the Proposal/Drainage map(s), minimum scale of 1" =500', with water discharge points and stream crossings clearly shown.

4. Two (2) copies of a topographic map (1" =2000') with the proposed operation site clearly shown.

5. A location map, such as a county road map, with the site clearly shown.
6. Latitude and longitude for operation clearly shown.
7. Receiving streams clearly shown on all maps.
8. A check for $150.00 made out to the WV Division of Natural Resources.

• **If the application is for a prospect** you may send two (2) copies of the proposal/drainage map and one copy of the location map, or two (2) copies of the topographic map. Please be sure to include the above guidelines. Be site-specific when giving the limits of your operation by showing drill holes, and give a centrally located latitude/longitude.

Incomplete application packets will be returned. If you have any questions, please contact Barbara Sargent at 304-637-0245 or barbara.d.sargent@wv.gov

Note: For this analysis, WVDNR reviews an area within a 2-mile radius and six miles downstream.

* Send completed application packages to WV Division of Natural Resources, P.O. Box 67, Elkins, WV 26241 Attention: Barbara Sargent/Coal Related Lands Inquiry.

C. Subject: Guidelines and Applicability For Endangered Species Consultation*
Date: September – 2004
Updated – January 2007 & January 2010

This guidance was developed to provide a consistent approach to endangered species consultation in conformance with the national programmatic 1996 Biological Opinion between the OSM and the U. S. Fish & Wildlife Service for approved state coal programs.

Regardless of acreage, all Surface Mining Applications and Amendments (Form MR-4) and Permit Renewals (Form MR-17) of Not Started permits require consultation.

Consultation is also required for all Incidental Boundary Revisions (IBR's) (Form MR-4PR) please contact Headquarters staff listed below concerning IBR's.

For Notices of Intent to Prospect (Form MR-3) and Incidental Coal Removal (Form MR-4C), Headquarters staff listed below should be contacted if the associated WVDNR Wildlife Lands Inquiry is check-marked for rare, threatened or endangered species.

* Submit consultation materials by email only on Form MR-27 entitled "Request for Endangered Species Consultations" to End.Species.Coal@wv.gov. This form is available on our WVDEP web page under Division of Mining and Reclamation.

If you have any questions, please contact Head Quarters Biology Endangered Species Specialists at (304) 926-0499.

FOIA PROCESSING

DMR

FOIA PROCESSING

1. FOIA requests can be received via:
    - Phone call to HQ or Regional office.
    - Email to **depfoia@wv.gov**, HQ staff or Regional office staff.
    - Letter to HQ or Regional office.
    - Citizen visit to HQ or Regional office.
    - Direct request made to DMR staff in the field.

2. Be sure to obtain requester contact information.
    - Mailing address, email address, phone number

3. The HQ DMR FOIA coordinator should be notified of all requests not received through the WVDEP website. The HQ DMR FOIA coordinator will maintain a status report for all DMR FOIA requests received to insure proper processing.

4. FOIA requests forwarded to the HQ DMR FOIA coordinator will be relayed to the appropriate regional office for processing. The DMR regional administrator and regional permitting supervisor will be the point of contact for FOIA request and responsible for insuring that FOIA requests are processed properly.

5. All DMR FOIA requests are to be handled in accordance with WVDEP Communication Policy: Information Requests 06/24/15. The policy can be found at DEP Intranet - Policies and Administrative Rule folder.

6. If information requested is known **not to be maintained by DMR** but by another division within DEP, email **depfoia@wv.gov** indicating the request should be handled by another DEP division. DMR responsibility is complete at this point.

7. All FOIA requests for DMR information should be forwarded to **depfoia@wv.gov** for FOIA number assignment. Include requester contact information and description of information that is being requested.

    - All HQ and Regional staff related to processing the FOIA request should be copied on all emails to DEP FOIA office and the requester.
    - HQ and Regional staff will assist in completing FOIA request by providing input regarding location of requested information if necessary.
    - DMR information is **currently** maintained in the following locations:
        - WVDEP – Document Warehouse
        - ApplicationXtender (AX)
        - ERIS
        - eSS
    - Respond to FOIA requester within five (5) days of receiving request and provide the following as applicable:
    - That upon further review it was determined that the information is not available within DMR files.

    - Email DEP FOIA office and the requester indicating that DMR does not maintain requested information. If information requested is maintained by another division within DEP, include in email to DEP FOIA office and the requester that the request should be handled by another DEP division. DMR responsibility is complete at this point.
- That information is available online at the WVDEP Public Query e-Permitting Application Search and online at the WVDEP Document Management Web Access.
- That information is readily available to be mailed, emailed, or picked up at HQ or Regional office.
    - What form is the information requested?
    - Paper hard copy, CD, email attachment
    - Inform requester of cost associated with providing information
- That information will be available at a later date (provide estimated date) to be mailed, emailed, or picked up at HQ or Regional office.
    - What form is the information requested?
    - Paper hard copy, CD, email attachment
    - Inform requester of cost associated with providing information.

8. Email **depfoia@wv.gov** upon completing FOIA information request.
- Provide description of information provided.
- Include date that information delivery was executed.
- Attach FOIA billing invoice.
- Copy HQ DMR FOIA coordinator and all HQ and Regional office staff related to the FOIA request.

Hydrologic Information

CHIA Writing Guidelines
CHIA Guidance and Monitoring Requirements
Selenium Implementation Guidance
Post Mining Limits under 47 CSR 30

A. Subject: CHIA Writing Guidelines
Date: April 14, 1999 Revised: May 13, 1999

1. Procedure for delineating the Cumulative Impact Area (CIA)

- Define the maximum upstream and downstream extent of CIA.
- Discuss criteria used to evaluate significance of anticipated mining operations.
- Delineate watershed area between these points on suitable map.
- Identify all anticipated mining operations in the CIA on a map.
- Discuss process of delineating surface water CIA.
- Discuss process of delineating ground water CIA.
- Depict the composite (working) CIA on a suitable map.

2. Hydrologic baseline conditions in the CIA

- Determine the adequacy of available hydrologic data.
  - Surface water data.
  - Ground water data.

- Characterize the surface water hydrologic system.
  - Describe the surface water system.
  - Discuss the surface water flow data, including flooding.
  - Quantify surface water quality data (statistics).
  - Determine surface water usage, usage location and quality and quantity.

- Characterize the ground water hydrologic system.
  - Describe the ground water system.
  - Quantify ground water movement, recharge, and static levels in wells.
  - Quantify significant ground water resources quality data (statistics).
  - Inventory of ground water usage and quality, PSD location(s) and other ground water users.
  - Identify significant ground water resources topographically controlled (alluvial and shallow bedrock) and below-drainage regional water tables from abandoned deep mines.

3. Hydrologic concerns and associated indicator parameters.

- Surface water concerns
  - Identify concerns (quantity, quality, flooding, etc.).
    - Discuss rationale for exclusion of each concern.
  - Identify Indicator parameters used to evaluate surface water concerns (sulfate, TDS, TSS, metals, acidity).
  - Discuss reasons for selection of specific parameters.
  - Selection, establishment, and discussion of Threshold impact assessment monitoring sites within and outside the CIA.

- Ground water concerns (shallow and deep ground water).
  - Identify concerns
    - Discuss rationale for exclusion of each concern.

- Indicator parameters used to evaluate ground water concerns (sulfate, TDS, TSS, metals, etc.).
- Discuss reasons for selection of specific parameters).
- Selection, establishment, and discussion of Threshold impact sites (wells) where impacts are to be assessed within and outside the CIA.

4. Material damage criteria

- Existing State stream water quality standards
  - Site-specific material damage criteria based on pre-determined stream quality and effluent standards, and use categories **47CSR2**
  - Threshold limits based on stream water use categories.

- List of criteria for each parameter at each site.

- Existing State stream water quantity standards.
  - Site-specific material damage criteria based on pre-determined stream quality and effluent standards, and use categories water which may be affected by changes in water quantity.
  - Threshold limits based on stream water use categories.

- List of criteria for each parameter at each site.
  - Site-specific material damage criteria.
  - List of criteria for each parameter at each site.

- Baseline data ranges for significant ground water resources.

5. Assessment of cumulative impacts of mining on indicator parameters

- Mining methods used within the CIA.
  - Describe the mining methods being used.
  - Discuss effects of various mining methods on hydrology of the CIA.

- Surface water
  - Predictive methods used: data and/or modeling.
    - Discuss reasons for using these methods.
  - Discuss assumptions of the methods.
  - Projected values of indicator parameters at identified surface water monitoring sites to determine the impact of the proposed operation on the hydrologic balance on and off the permit areas.
    - Quantity parameters at monitoring sites.
    - Quality parameters at monitoring sites.
    - Quality, quantity parameters at Threshold impact sites.

- Ground water
  - Predictive methods used: data and/or modeling.
  - Discuss reasons for using these methods.
  - Discuss assumptions of the methods.

- Projected values of indicator parameters at identified ground water impact sites to determine the impact of the proposed operation on the hydrologic balance on and off the permit areas.
  - Quantity parameters at monitoring sites.
  - Quality parameters at monitoring sites.
  - Quality, quantity parameters at Threshold impact sites (if different).

6. Determination and statement of findings

- Determination of material damage potential to surface water resources.
  - Comparison of projected values with material damage criteria.
  - Potential for material damage to the surface water system.
  - Determination that the proposed operation will minimize disturbance to the hydrologic balance within the permit area and adjacent area.
  - Determination that the proposed operation will prevent material damage to the hydrologic balance (surface water) outside the permit area.

- Determination of material damage potential to significant ground water resources.
  - Comparison of projected values with material damage criteria to significant ground water resources.
  - Potential for material damage to significant ground water aquifers.
  - Determination that the proposed operation will minimize disturbance to the hydrologic balance within the permit area and adjacent area.
  - Determination that the proposed operation will prevent material damage to the hydrologic balance (ground water) outside the permit area.

7. Statement of findings

- Summary of findings (Facts and Findings statement).
  - Discuss what is proposed by the Company to minimize concerns stated in the CHIA (PHC and HRP).

- Discussion
  - Reasons for these findings.

B. WVDEP CHIA Writing Guidelines
Date: 4/14/99 Revised 5/13/99

1. Procedure for delineating the CIA

Phase I. Define maximum upstream and downstream extent of CIA.

Step 1. Develop criteria to test the impact significance from mining operations that are spatially and hydrologically distant to the proposed operation:

a. Compare the prevailing water data that reflects impacts from mining such as acidity, alkalinity, TDS, TSS, sulfate, metals.

b. Identify the areas of downstream dilution as a basis for exclusion of additional downstream operations.

Step 2. Apply the criteria in Step 1 to locate maximum extent of the surface water CIA, both upstream and downstream from the proposed operation.

Step 3. Discuss the rationale for the basis for the extent of the CIA.

Phase II. Delineate working CIA within area defined in Phase I.

Step 1. Identify all anticipated mining operations within the area defined in Phase I.

Step 2. Identify the downstream and upstream limits of the surface water CIA.

a. Identify on a receiving stream common to two or more anticipated mining operations, a point downstream from all tributary stream channels whose flows are likely to be affected by the mining, including flooding. Consider this point as the downstream limit of the surface water CIA on that stream. Include all other receiving streams, as necessary.

b. Identify a point on a receiving stream where the upstream flows are not likely to be affected by anticipated mining. The upstream surface water CIA boundary extends along the watershed drainage boundaries which completely encompass all the impact areas of the mining operations downstream to the point identified in Step 2A.

Step 3. Identify the Downdip and Updip Limits of the Ground Water CIA.

a. Identify all geologic strata updip and downdip of the proposed operation and anticipated mining operations likely to be affected by mining. Identify recharge and discharge areas for the significant aquifers.

b. Delineate area over which ground water quality and quantity may be affected by the identified anticipated mining.

(1) Delineate area of ground water impact caused by each operation in each significant aquifer.

(2) For each significant aquifer, delineate areas that ground water contaminant plume from each operation would pass through in moving from the mine to probable discharge points.

(3) Identify probable stream reaches that discharge into or receive discharge from significant ground water aquifers affected by the identified mining operations.

(4) Discuss the rationale for the basis of the extent of the CIA.

Step 4. Delineate Working CIA.

a. Surface Water CIA.

(1) Delineate the surface water CIA boundary along watershed drainage boundaries, which completely encompass all the impact areas of the operations, identified in Step 2.A and B.

b. Ground Water CIA.

(1) Delineate ground water CIA boundary to encompass the maximum extent of contaminant plumes and areas of drawdown.

(2) The groundwater CIA encompasses all drawdown cones and contaminant plumes that affects or discharges to common surface streams or alluvial aquifers.

c. The composite of the surface and ground water CIA's is the working CIA for the proposed operation.

2. Procedures to Determine the Baseline Conditions in the CIA

Phase III. Define Hydrologic Baseline Condition in the extent of the CIA.

Step 1. Determine the adequacy of available hydrologic data

a. Occurrence and Distribution of Data

(1) Low stream flow water quality related to stream standards, and surface water user needs.

(2) Annual low flows and period of occurrence. Compare low flows to normal base, mean annual, high flows relate to rainfall data

(3) Significant aquifer production and ground water resources providing needs for domestic use, biota, and the protection of the hydrologic balance as relates to use.

b. Water Quality Characteristics

(1) Baseline data including pH, alkalinity, acidity, SO4, conductance, TSS, TDS, Fe, Mn, Al, and temperature.

(2) Sampling frequency of six months' data of PHC baseline parameter and 16 Parameters one-time sample; refer to CHIA guidance memo for applicability.

(3) Surface flows, static levels and pump test for wells.

Step. 2 Characterize the Surface Water Hydrologic System in Relation to Runoff.

a. Characterize the Surface Water in the Watersheds of the Working CIA.

(1) Description of basin in total area, topographic relief, basin length, and average basin slope.

(2) Type of streams (perennial, intermittent, and/or ephemeral).

- Streamflow data collected and tabulated to describe mean annual and mean monthly discharges.
- Streamflow related to frequency and duration of floods to include:
- Flooding potential of 10, 25, 50, and 100 storms (if applicable).
- Flows of different frequency and duration.
- Precipitation records that include monthly or seasonal data for snow pack accumulation and rainfall.
- Geologic characteristics that affect runoff or streamflow.
- Chemical and physical properties of the overburden.
- Soil characteristics from soil surveys with respect to infiltration, runoff, and erosion.
- Summaries of vegetation types and land use.
- Define and quantify existing and projected water uses related to:
  - Available surface water supply.
  - The quality of surface water in the basin.

Step 3. Characterize the Ground Water in the Watersheds of the Working CIA.

a. Characterize the Ground Water in the Watersheds of the Working CIA.

(1) Available ground water supply.

(2) Physical description of aquifer (or aquifers) in relation to the proposed mining.

(3) General description of aquifer units in relation to other stratigraphic units.

(4) Physical descriptions of aquifer types and associated confining beds as indicated from test holes, drillers' logs, and geologic maps to include:

- a. stratigraphy,
  b. thickness,
  c. lithology,
  d. structure,
  e. acid-base account data,
  e. stratigraphic cross sections.

(5) The quality and yields of significant ground water aquifers in the watershed(s) of the CIA.

b. Hydrologic Description of Aquifers.

(1) Description of aquifers: topographically controlled alluvial and shallow bedrock aquifers and below drainage mine pools; identify water wells and water use.

(2) Description of confined or unconfined significant aquifer conditions.

(3) Definition of water table or potentiometric surface as determined from test holes and observation wells.

(4) Delineation of saturated thicknesses, direction of water movement, and areas of recharge and discharge.

(5) Determine gain or loss of base flow in streams in relation of associated ground water.

(6) Water movement between significant aquifer units and between the aquifer and streams.

(7) Properties of significant aquifers that determine porosity, permeability, hydraulic conductivity, transmissivity, specific yield, and storage coefficient.

c. Chemical Properties of Water from Significant Aquifers.

(1) Baseline data including pH, alkalinity, acidity, SO4, conductance, TSS, TDS, Fe, Mn, Al, and 16 Parameters one-time sample; refer to CHIA guidance memo for applicability.

(2) Sampling frequency of six months' data for PHC data.

(3) Static water, levels, pump tests for wells, and potential aquifer drawdowns.

3. Hydrologic concerns and associated Indicator parameters in the CIA.

Phase III. Hydrologic concerns in the extent of the CIA.

Step 1. Determine the Surface Water Concerns

a. Define the Concerns in the Watershed that are Related to Sediment Discharge:

(1) The quality, quantity of stream flows, including flooding (if applicable).

(2) Description of basin in terms of area, length, slope, etc.

(3) Describe channel conditions prior to mining (bedrock bottom, stream sediments, siltation, bank conditions, riparian, etc.).

(4) Describe such stream channel characteristics as width, depth, gradient, sinuosity, etc.

(5) Obtain samples of suspended sediment and bed load related to a broad range of stream discharges.

(6) Nature of frequency and duration of low flows related to water use.

b. Determine Erosion and Sediment Potential in Mined Areas:

(1) Describe probable effects of erosion and sediment yield during the mining and reclamation phases of the operation.

(2) Estimate flow and sediment yield from 10, 25, 50, and 100-year storms.

(3) Relate proposed drainage design to geomorphic stability of mined areas after reclamation.

c. Assessment Monitoring Sites in the Selection, Establishment and Discussion of Threshold Impact CIA.

(1) Discuss selection of Threshold Monitory sites where impacts are assessed.
- Within the CIA
- Outside the CIA

(2) Low-flow water quality related to stream standards and water user needs.

(3) Locates sites on map of CIA

Step 2. Determine the Ground Water Concerns

a. Identify concerns and discuss rationale for inclusion of each concern addressing significant ground water resource and /or PSD wells.

b. Potential chemical constituents from the disturbed overburden that may affect the water quality (acidity, alkalinity, TSS, TDS, sulfate and metals).

c. Indicator parameters used to evaluate significant ground water concerns (sulfate, TDS, metals, storativity, and recharge)

d. Discuss the potential for dewatering of alluvial aquifers due to underground mining, especially longwall mining.

e. Discuss the potential for dewatering significant aquifers due to underground mining, especially longwall mining.

f. Selection, establishment and discussion of Threshold impact assessment-monitoring sites in the CIA.

(1) Discuss selection of Threshold impact sites where impacts are to be assessed.
- Within the CIA
- Outside the CIA

(2) Low-flow water quality related to stream standards and water use needs.

(3) Locate sites on map of CIA.

4. Procedures for defining Material Damage criteria

Step 1. Assemble Existing State, Federal, and Local Standards Which Apply to the Expressed Hydrologic Concerns in the PHC

a. Water Quality Standards

(1) Existing State stream water quality standards.

(2) Stream quality and effluent standards, and stream water use categories (refer to Title 46-1-6 and Appendix E).

(3) List of criteria for each monitoring parameter at each site.

(4) Consider standards used by surrounding states.

(5) Consider quality needs for present and potential uses.

- Refer to EPA (1976) and McKee and Wolf (1963) for suggested limits of specific constituents relative to use.

(6) Threshold limits based on stream water use categories, and ground water limits based on available baseline data.

b. Water Quantity

(1) Existing stream water quantity standards.

(2) The material damage limits assigned to significant ground water resources will be based on the prevailing baseline ground water data.

(3) Consider needs of probable uses.

(4) Identify stream reaches and significant aquifers that will dewatered by subsidence.

(5) Consider possible channel stability problems resulting from discharge changes.

Step 2. Develop Material Damage Criteria

(1) List of site-specific material damage criteria for each Indicator parameter related to mining.

(2) Site-specific material damage criteria based on pre-determined stream quality (Threshold limits), stream water use categories Title 46-1-6, and effluent standards.

(3) Geomorphology
- Watershed characteristics related to sediment
- Stream characteristics related to sediment discharge

- Channel and hillside erosion in mined areas
- Flooding potential in mined areas (if applicable)

Step 3. Develop any Additional Criteria Considered Necessary for an Adequate Assessment of Material Damage

a. Need for incremental change (or time rate of change) limits.

(1) Establish a site-specific set of material damage criteria for each Threshold Monitoring site.
- Within the CIA, ground water and surface water
- Outside the CIA, ground water and surface water

(2) Describe existing and potential hydrologic problems related to concerns for the proposed operation:

- Water-quality problems that could be created by the geochemistry of the overburden:
  - Special handling plan, alkaline amendment.
  - Encapsulation cells.
  - Roof/floor rock associated with deep mines.
- Effects of changed discharge regimes on channel stability and increase in peak discharges that may create a flooding potential.
- Longwall mining effects upon streamflow and aquifers.
- Subsidence fractures on surface lands (affected areas).
- Concerns identified in previous CHIA studies.
- Problems identified in regional studies by State and/or Federal agencies.

Step 4. Select representative Indicator Parameters for Quantifying Hydrologic Concerns to Evaluate Changes and Assess Impacts on the Hydrologic Balance.

List of criteria for each Indicator parameter at each Threshold Monitoring site.
- Within the CIA
- Outside the CIA

(1) Site-specific material damage criteria.

(2) List of criteria for each parameter at each site.

(3) Baseline data ranges for significant ground water resources.

5. Procedures for Assessing the Cumulative Impacts of Mining on Indicator Parameters

Step 1. Analysis of Cumulative Hydrologic Impacts

a. Mining methods used within the CIA

b. Assessment of cumulative impacts on the surface and ground water

(1) Analysis of the hydrologic system that will undergo additional stress with the addition of the proposed operation to all anticipated mining in the CIA.
(2) Utilize the baseline surface water and NPDES DMR data, and PHC baseline ground water data from Anticipated Mining permits.

Step 2. Estimate Values of Indicator Parameters that Reflect Mining in the CIA.

a. Prediction (estimation) of cumulative impacts from mining.

b. Estimation of the magnitude of changes to each parameter value that can be expected because of mining on surface and ground water.

c. Analyses of cumulative impacts can be accomplished by:

(1) Qualitative methods and/or solute mass balance equation.

(2) Empirical equations and statistical analysis.

(3) Computer modeling.

Step 3. Analysis Techniques for Predicting the Impacts of Mining

a. Qualitative methods.

(1) Systematic evaluation of qualitative and quantitative data with an estimation of indicator parameters that could be anticipated because of mining; including streamflow loss from deep mining.

b. Empirical equations; relationships

(1) Solute mass balance equation

(2) Theis equation

(3) Universal soil loss equation

(4) Rationale equation

(5) Muskingum flow routing equation

(6) Statistical analysis, including univariate and multivariate techniques

c. Mathematical/numerical computer modeling.

(1) WCMS (Watershed Characteristics Modeling System)/ArcView

(2) Boss-Watershed, HEC/HMS, RAS

(3) Modflow-GMS

(4) EarthVision

6. Procedures for Determining Material Damage Potential to Surface and Ground Water Resources

Step. 1 Comparison of Anticipated Values with Prevailing Values

a. Determine Potential for Material Damage from Indicator Parameters that Reflect the Effects of Mining.

(1) Quantify the Indicator parameters and compare the values to the material damage criteria at Threshold Monitoring sites. Ranges may be used for Indicator parameters, rather than precise, single values.
- Ranges may be used for indicators, rather than precise, single values.

(2) Determine the magnitude of the Indicator parameters and compare the values to the material damage criteria.
- Ranges may be used for indicators, rather than precise, single values.

(3) Comparisons of projected values (or ranges) for the Indicator parameters that indicate mining.
- Rationale for decisions.

7. Statement of Findings.

Step 1. Summary of Findings that Determines the Potential for Material Damage to the Hydrologic Balance Outside the Permit Area.

a. Determination whether the hydrologic assessment of the CIA indicates that the addition of the proposed operation to all probable cumulative impacts of all anticipated mining may cause more than minimal disturbance to the hydrologic balance within the permit area and adjacent areas, or may cause material damage to the hydrologic balance outside the permit area.

b. Determinations may be based on Threshold monitoring site evaluations of quality and quantity of surface and ground water.

c. Discuss what is proposed by the applicant to minimize concerns stated in the PHC and HRP.

- Discussion of preventative and/or remedial measures.

Step 2. Write a statement of findings with all supporting evidence and rationale for decisions.

a. Utilize best professional judgement in evaluating all available qualitative and quantitative data and arrive at material damage determinations. Discuss rationale.

C. Subject: CHIA Guidance and Monitoring Requirements
Date: May 18, 1999

The CHIA guidance document previously sent out is intended to provide the building blocks for enhancing the overall CHIA process. It is further intended to provide the CHIA writer with a template to assist in developing the CHIA document and to ensure that PHC's are able to provide adequate data to complete the CHIA. Because this is a guidance document developed primarily from existing guidelines not all elements will apply to all permits all the time. Rather the writer must use the document to fit the proposed operation into a framework of anticipated mining and the Cumulative Impact Area (CIA).

It is intended that this guidance will enable this process to be enhanced on a logical and progressive basis. It is not possible to raise the bar to the next level overnight. The previous guidance was provided in an expedited fashion so we could begin the thought process on what will be required and gain feedback on establishment of the assessment process. This will lead us to a position from which we can fully implement the guidance on newly submitted permits.

Because of the complexity of the issue and the questions and concerns evidenced the following additional clarification and guidance is being provided:

1. Permits under review where PHC's are complete and CHIA's under development:

a. PHC – contains at least six months' baseline groundwater and surface water data and groundwater inventory.

In addition to the SMCRA baseline parameters to be monitored in accordance with Title 38, Series 2, Sections 3.22.b.2 and 3.22.c.2 for the PHC, aluminum and temperature shall also be sampled monthly and quarterly during mining.
Be aware that both temperature and field pH shall be in accordance with approved methods.

At least one month's sample if warranted, based on stream use, type of mining activity and proximity of water intakes, from each PHC surface water monitoring station shall be analyzed for the following parameters in Table 4-C:

1. Antimony
2. Arsenic
3. Beryllium
4. Cadmium

5. Chromium
6. Copper
7. Lead
8. Mercury
9. Nickel
10. Selenium
11. Silver
12. Thallium
13. Zinc
14. Cyanide
15. Phenols
16. Nitrates

If determined necessary samples must be obtained prior to mining.

b. CHIA's

1. Identify CIA – describe and discuss rationale.
2. Identify threshold limits (at minimum those contained in regulations)
3. Discuss mitigation of material damage and intent of monitoring plan.

2. Newly submitted permits:

a. Should be reviewed with the entire guideline document in mind.

b. CHIA should contain applicable portions of the guidance document.

3. NPDES Table 4-C (16 parameters as referenced above)

a. NPDES Table 4-C for permits in A will only be required where warranted or refuse and flyash are involved and be (1) baseline sample for each SWMP and GWMP.

b. NPDES Table 4-C for permits in B will be required for all permits and require one baseline sample for each SWMP and GWMP.

c. The absence of, or non-compliance of the parameters of NPDES Table 4-C will be used to detail monitoring plans.

It is anticipated that the enhanced process will be fully developed and integrated with NPDES and NEPA where applicable for all new SMA's, Revisions, and IBR's, etc.

D. Subject: Selenium Implementation Guidance
Date: November 13, 2007

1. Introduction:

The West Virginia Department of Environmental Protection (DEP) has statewide effluent data and instream water-quality data indicating selenium concentrations in certain locations exceed the current water quality criteria (WQC) for aquatic life. This memorandum documents permitting procedures that will be implemented to reduce the potential for new mining activities to cause or contribute to selenium WQC violations. [1]

[1] This document reflects the current state of knowledge in Selenium regulation/prevention. As more facilities

As such, the Probable Hydrologic Consequences (PHC) Statement in applications for new Surface Coal Mining and Reclamation Act (SCMRA) permits or permit amendments, submitted after January 1, 2008, shall address the potential for mining activities to cause or contribute to selenium exceeding the current WQC by providing information as described herein. DEP will attempt to process currently pending applications and applications submitted during the interim period (before January 1, 2008) with readily available information, but may require additional information if necessary to determine operational requirements for the control of selenium in permitted discharges.

Mining activities initially deemed to have the potential to cause or contribute to selenium violations will be required to provide information, as set forth below in Section 1.

Those activities determined to have reasonable potential to violate selenium WQC will be required to develop an effective mechanism for preventing/minimizing the weathering of and leaching of selenium as set forth in Section 2. SMCRA and NPDES permits issued for such activities will contain operating requirements for the control of selenium, require baseline water quality monitoring, contains selenium effluent limitations and self-monitoring requirements, as appropriate.

Applicants not wishing to implement the described procedures must provide additional testing of materials, alternative handling procedures, historical water quality or other data that demonstrates there is no reasonable potential to violate the selenium WQC.

2. Section 1

A proposed activity will initially be deemed to have a potential to cause or contribute to selenium WQC violations if:

a. The proposed mining is in the Winifrede to Upper No.5 Block coal seam interval. (Seam nomenclature as defined by the West Virginia Geologic and Economic Survey) or;

b. Site-specific or adjacent water quality data (associated with mining in the same geologic strata) shows concentrations equal to or more than 5 ug/l. This water data may include, but is not limited to, application water quality data (e.g. PHC, anti-degradation BWQ sampling), effluent data from adjacent mining operations (e.g. NPDES Table 2 IV C analysis) and instream monitoring data from DEP Trend Stations, DMRs, and DEP Stream Assessments or;

c. This provision is met if the receiving stream for a proposed discharge is listed on the operable Section 303(d) List for use impairment related to selenium, or;

d. There is an approved selenium Total Maximum Daily Load for the receiving stream or downstream waters that mandates regulation of selenium in the discharges from the activity.

permitted under this guidance are constructed, DEP will review the effectiveness of the controls set forth herein.

4. Section 2

Surface and deep mining operations initially deemed to have potential to cause or contribute to selenium water quality criteria violations may be required to perform overburden sampling, as follows:

Overburden Sampling Plan

The recommended spacing of sample sites will be on approximately 2000-foot spacing [1], or other spacing approved by the geologist reviewing the surface mining application. The holes will be located on the uppermost part of the strata to be mined and drilled down to 10 feet below the lowest coal seam to be mined for surface mines and strata a minimum of 50 feet above and 10 feet below the seam to be mined for deep mines. This will help ensure that all the overburden to be disturbed is sampled. Detailed geologic logs of the drill holes, to include chroma as per Munsell's chart, are required[2].

All overburden**,** including the coal seam(s)**,** will be sampled for selenium according to U.S. EPA-600/2-78-054 *Field and Laboratory Methods Applicable to Overburdens and Minesoils*, Chapter2. This method generally requires sampling every 5 feet for sandstones, 3 feet for shale
or other soft rock including coal seams, or each time the strata or chroma changes. The core should be split longitudinally along its length**,** and a composite analysis shall be done for each stratum. (Stratum sub-sampling is not acceptable.)

Each sample will be analyzed for total selenium by the 3050B (for Acid Digestion of Solids) method. The laboratory performing the test must have a valid DEP Laboratory Certification Program approval to perform metals analysis.

If the total selenium concentration of any strata is equal to or greater than 1 mg/kg, then the activity will be deemed to have reasonable potential to violate selenium WQC and the applicant shall implement a selenium encapsulation plan or alternatives, as described in Section 3. If all of the tested materials exhibit selenium concentrations less than 1 mg/kg, then the activity will be deemed not to have reasonable potential to cause or contribute to selenium water quality criteria violations.

4. Section 3

Surface Mine and Deep Mine Face-up Operations

Selenium Encapsulation Plan

Surface mine and deep mine face-up operations determined to have reasonable potential to violate selenium WQC shall encapsulate the following materials:

a. All black/dark grey coal pit materials (Munsell Soil Color Chart of 2.5 or less) that are visibly differentiated in the field. Mining companies typically term this material "pit cleanings."

[1] Geologic Handbook, Pages 29 to 33, published by the DEP in September 2005 for further guidance.
[2] Geologic Handbook, Pages 23 to 25, published by the DEP in September 2005 for further guidance

b. Any overburden stratum greater than 12 inches in thickness with selenium concentrations greater than 1 mg/kg or Munsell Soil Color Chart of 2.5 or less. The reviewing geologist may also require encapsulation of strata that are individually less than 12 inches in thickness, if they meet the selenium or Munsell conditions and are proximate to strata of similar characteristics.

c. The floor shall be removed and encapsulated if the selenium concentration is equal to or greater than 1 mg/kg to avoid contact with the water/rock interface.

Encapsulation shall be accomplished as follows:

a. The material shall be encapsulated promptly to minimize weathering and leaching of selenium.

b. The material shall be encapsulated in an area of the job that is high and dry, away from watercourse, and under no circumstance shall any of this material be put in a valley fill.

c. The material shall be put on a free draining pad of at least 10 feet of coarse non-toxic material and the selenium laden material shall be encapsulated covered with at least 4 feet of the most impervious material on the surface mine job.

d. The encapsulation cells need to be certified by a registered professional engineer or licensed land surveyor that they were constructed to the permit application specifications and located geographically (GPS) on the progress maps.

Deep Mining / Augering

Deep mining and augering operations initially deemed to have potential to cause or contribute to selenium water quality criteria violations will be required to provide the following requirements or meet the following conditions.

The location of openings in coal seams, with potential to cause or contribute to selenium exceeding the current WQC, will be placed in such a manner to prevent a gravity discharge. During active mining operations with pumped discharges, the applicant shall demonstrate, in their Hydrologic Reclamation Plan (Section J-11) and NPDES application (Modules 7 and 8), the methodologies that will be utilized to ensure compliance with applicable water quality based effluent limitations.

5. Section 4

WV/NPDES Permit Considerations

The WV/NPDES Permit for any activity determined to have reasonable potential to cause or contribute to selenium exceeding the current WQC will include selenium effluent limitations and self-monitoring requirements. For Tier 1 anti-degradation implementation, effluent limitations will require the achievement of selenium water quality criteria end-of-pipe for outlets associated with instream treatment structures and all other outlets where no dilution is available in the immediate receiving stream. For outlets with available receiving stream dilution, effluent limitation development will

incorporate dilution, but only to the extent that assures compliance with applicable water quality standards. For Tier 2 and higher waters, anti-degradation implementation may result in selenium effluent limitations more stringent than those described herein.

WV/NPDES permits for activities that are determined to not have reasonable potential to cause or contribute to selenium water quality criteria violations shall not contain selenium effluent limitations. However, those permits may contain selenium self-monitoring requirements to confirm that the activity is not adversely impacting water quality.

D. Subject: Selenium Implementation Guidance
Date: November 13, 2007
Revised: December 30, 2013

This policy DOES NOT supersede the November 13, 2007 policy.

1. The West Virginia Department of Environmental Protection (DEP) has statewide effluent data and in-stream water-quality data indicating selenium concentrations in certain locations exceed the current water quality criteria (WQC) for aquatic life. This memorandum documents permitting procedures that will be implemented to reduce the potential for new mining activities to cause or contribute to selenium WQC violations.

This document reflects the current state of knowledge in selenium regulation and prevention. As more facilities permitted under this guidance are constructed, the DEP will review the effectiveness of the controls set forth herein. Limited situations may arise that are not addressed by this guidance. In those situations, discretion may be exercised by the permit review staff after consultation with DEP headquarters.

As such, if selenium is initially identified as a "Parameter of Concern" (POC), the Probable Hydrologic Consequences (PHC) Statement in application for new Surface Coal Mining and Reclamation Act (SMRCA) permits or permit amendments, submitted after January 1, 2008, shall address whether or not selenium is a POC by providing information as described herein.

Mining activities where selenium has initially been identified as a "POC" as outlined in Section 1 of this document will be required to perform overburden sampling for selenium as set forth in Section 2.

Applicants not wishing to implement the described procedures must provide additional testing of materials, alternative handling procedures, historical water quality or other data that demonstrates selenium is not a "POC" or does not have a reasonable potential to violate the selenium WQC.

A proposed activity will initially be deemed to have selenium as a "POC" if:

- The proposed mining is in the Winifrede to Upper No.5 Block coal seam interval. (Seam nomenclature as defined by the West Virginia Geologic and Economic Survey) or;
- Site-specific or adjacent water quality data (associated with mining in the same geologic strata) shows concentrations equal to or more than 5 µg/l. This water

data may include, but is not limited to, application water quality data (e.g. PHC, anti-degradation BWQ sampling), effluent data from adjacent mining operations (e.g. NPDES Table 2 IV C analysis) and in-stream monitoring data from DEP Trend Stations, DMRs, and DEP Stream Assessments or;

- If the immediate receiving stream for a proposed discharge is listed on the operable Section 303(d) List for use impairment related to selenium, or;
- There is an approved selenium Total Maximum Daily Load for the receiving stream or downstream waters that mandates regulation of selenium in the discharges from the activity.

2. Section 2 – Surface and deep mining operations initially deemed to have selenium as a POC shall be required to perform overburden sampling, as follows:

Overburden Sampling Plan

The recommended spacing of sample sites will be on approximately 2000 foot spacing[1], or other spacing approved by the geologist reviewing the surface mining application. The holes will be located on the uppermost part of the strata to be mined and drilled down to 10 feet below the lowest seam to be mined for surface mines and strata a minimum of 50 feet above and 10 feet below the seam to be mined for deep mines. This will help ensure that all the overburden to be disturbed is sampled. The reviewing geologist may require supplemental sampling locations, if deemed necessary. Detailed geologic logs of the drill holes, to include chroma as per Munsell's chart, are required[2].

All strata**,** including the coal seam(s) will be sampled for selenium according to U.S. EPA- 600/2-78-054 *Field and Laboratory Methods Applicable to Overburdens and Minesoils*, Chapter 2. This method generally requires sampling every 5 feet for sandstones, 3 feet for shale or other soft rock including coal seams, or each times the strata or chroma changes. The core should be split longitudinally along its length**,** and a composite analysis shall be done for each stratum. (Stratum sub-sampling is not acceptable.)

Each sample will be analyzed for total selenium by the 3050B (for Acid Digestion of Solids) method. The laboratory performing the test must have a valid DEP Laboratory Certification Program approval to perform metals analysis.

If the total selenium concentration of any strata is equal to or greater than 1 mg/kg, the applicant shall implement a selenium isolation plan or alternatives, as described in Section 3. If all of the tested materials exhibit selenium concentrations less than 1 mg/kg, then the activity will be deemed not to have reasonable potential to cause or contribute to selenium water quality criteria violations.

3. Surface Mine and Deep Mine Face-up Operations

Selenium Isolation Plan

Surface mine and deep mine face-up operations with the total selenium concentration of any strata is equal to or greater than 1 mg/kg, shall isolate the following materials:

[1] Geologic Handbook, pages 29 to 33, published by the DEP in September 2005 for further guidance.
[2] Geologic Handbook, pages 23 to 25, published by the DEP in September 2005 for further guidance.

a. All black/dark grey coal pit materials (Munsell Soil Color Chart of 2.5 or less) that are visibly differentiated in the field. Mining companies typically term this material "pit cleanings."
b. Any overburden stratum greater than 12 inches in thickness with selenium concentrations greater than 1 mg/kg or Munsell Soil Color Chart of 2.5 or less. The reviewing geologist shall also require isolation of strata that are individually less than 12 inches in thickness, if they meet the selenium or Munsell conditions and are proximate to strata of similar characteristics. Provided that where the permit specifically demonstrates that this material has a selenium concentration less than 1mg/kg, isolation of the material will not be required.
c. The pavement floor shall be removed and isolated if the selenium concentration is equal to or greater than 1 mg/kg to avoid contact with the water/rock interface. Pavement is defined as the pit floor associated with the lowest seam to be mined within any a specific area of the operation and as identified in Item 6 below.

Isolation shall be accomplished as follows:

a. The material shall be isolated promptly to minimize weathering and leaching of selenium
b. The material shall be isolated in an area of the operation that is high and dry, away from watercourse, and under no circumstance shall any of this material be put in a valley fill.
c. The material shall be put on a free draining pad of at least 10 feet of coarse non-toxic material and the selenium laden material shall be covered with at least 4 feet of the most impervious material available on the surface mining operation.
d. Provided that DEP shall require revision to this plan, where it is demonstrated as necessary to meet performance standards.
e. The isolation cells are to be certified by a registered professional engineer or licensed land surveyor that they were constructed as per permit specifications and located geographically (GPS) on the progress maps.
f. For applications proposing excavated in-stream sediment control structures; any coal seam or dark carbonaceous shale encountered during the excavation of the structure shall be removed, handled, and disposed of in accordance with the procedures specified herein or other appropriate method approved by the Director.

Deep Mining/Augering

Deep mining and augering operations with total selenium concentration of the coal seam being mined, immediate roof, or pavement equal to or greater than 1 mg/kg, will be required to provide the following requirements or meet the following conditions.

The location of openings in coal seams, with total selenium concentration of the coal seam being mined, immediate roof, or pavement equal to or greater than 1 mg/kg, will be situated in such a manner to prevent a gravity discharge, unless the applicant can demonstrate by other methods that the anticipated discharge will not cause or contribute to a violation of the WQS for selenium. During active mining operations with pumped discharges, the applicant shall demonstrate, in their Hydrologic Reclamation Plan (Section J-11) and NPDES application (Modules 7 and 8), the methodologies that will be utilized to ensure compliance with applicable water quality based effluent limitations.

4. WV/NPDES Permit Considerations

The WV/NPDES Permit for all operations located in the Kanawha formation, Winifrede to Upper No.5 Block coal seam, shall contain selenium report only requirements. The WV/NPDES Permit for any activity determined to have reasonable potential to cause or contribute to selenium exceeding the current WQC will include selenium effluent limitations and self-monitoring requirements.

For Tier 1 anti-degradation implementation, effluent limitations will require the achievement of selenium water quality criteria end-of-pipe for outlets associated with in-stream treatment structures and all other outlets where no dilution is available in the immediate receiving stream. For outlets with available receiving stream dilution, effluent limitation development will incorporate dilution, but only to the extent that assures compliance with applicable water quality standards. For Tier 2 and higher waters, anti-degradation implementation may result in selenium effluent limitations more stringent than those described herein.

WV/NPDES permits for activities that are determined to not have reasonable potential to cause or contribute to selenium water quality criteria violations shall not contain selenium effluent limitations. Operations that demonstrate the ability to achieve compliance with the WQC for selenium through implementation of procedures described in Section 3 may be determined to not have the potential to cause or contribute to a violation of the WQC for selenium. However, those permits shall contain selenium report only requirements to confirm that the activity is not adversely impacting water quality.

E. Subject: Post Mining Limits under 47 CSR 30
Date: January 3, 2014
Revised: October 5, 2017

INTRODUCTION

This memorandum supersedes the previous guidance concerning post-mining limits issued by the agency on February 28, 1995. In the eighteen years since the last guidance was issued, significant changes have occurred to the procedures for preparing effluent limitation for mining permits. The purpose of this guidance is to ensure that evaluations of effluent limits for Post-Mining Areas are processed in a consistent manner with full consideration of the type of outlet, the applicable effluent limitations, and the protection of the receiving stream. This guidance provides a uniform method for the review and assignment of both technology-based effluent limitations (TBELs) and water quality-based effluent limits (WQBELs) for post-mining areas.

DISCUSSION

Effluent limits are separated into two categories – technology-based effluent limits (TBELs) and water quality-based effluent limits (WQBELs)… TBELs are established to require "a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through WQBELs." *NPDES Permit Writers' Manual*, p. 5-1.

TBELs for coal mining facilities are set forth in the effluent limitation guidelines ("ELGs") in 40 CFR 434. This regulation sets forth categories applicable to different types and stages of mining activities. WQBELs are based on the water quality standards set forth in 47 CSR 2. Whereas TBELs are specified by regulation, WQBELs are calculated, when appropriate to protect receiving water quality, based upon the procedures set forth in EPA's *Technical Support Document for Water-Quality-Based Toxics Control* (the "TSD").

This document sets for the procedure for assigning effluent limitations for facilities that are classified as a "Post Mining Area" under 40 CFR § 434.11(k). This document also explains the requirements for water quality data for applications to revise effluent limitations for Post Mining Areas.

PROCEDURE

TBELs

Under 40 CFR § 434.11(k), the following operations are classified as a Post Mining Areas:

1. A reclamation area, which is the surface area of a coal mine which has been returned to required contour and on which revegetation (specifically, seeding or planting) work has commenced, or

2. The underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

Neither of these are based upon a requirement for raw water quality, unlike the requirement for classification as "alkaline mine drainage." This is logical, because TBELs are not related to receiving water quality. Instead, this role is served by WQBELs set to protect West Virginia's water quality standards.

The determination for classification as a Post Mining Area is based on three factors: (1) mining in the area is completed; (2) the surface area has been returned to contour; and (3) revegetation has commenced. This determination is made on an outlet-by-outlet basis. The drainage area associated with each outlet will be assessed individually to determine whether each of the three factors is satisfied. It is possible for one or more outlet to be classified as a Post-Mining Area, while other outlets do not qualify for reclassification.

Once an outlet qualifies as a Post Mining Area, manganese effluent limitations may be re-evaluated immediately. If the permit contains WQBELs for manganese that are necessary to protect a public water supply intake, then the manganese effluent limitations must remain. If the permit does not contain WQBELs for manganese for an outlet, then the manganese effluent limitations may be removed for any outlet that discharges from an area classified as a "reclamation area" under 40 CFR § 434.11(k).

Past versions of DEP guidance precluded deep mine discharges, pump discharge, and instream ponds located in intermittent or perennial streams from classification as Post-Mining Areas. This contradicts Federal regulations set forth in 40 CFR 434. **However, as a practical matter, classification as a Post Mining Area does not change the effluent limitations for a discharge from the underground workings of an underground mine, since the applicable TBELs for underground workings of underground mines are the same for active mining areas and post-mining areas.** *See* 40 CFR § 434.55(b) and 40 CFR § 434.35. As with active mining areas, manganese can be removed if the discharge from an underground working of an underground mine at a Post-Mining Area can meet the criteria for classification as "alkaline mine drainage."

WQBELs

While TBELs apply to all outlets, the majority of outlets have also been assigned WQBELs. Therefore, both types of effluent limitations must be evaluated when reviewing an application for post mining limits. Likewise, the review process for precipitation-induced outlets is different than the process for non-precipitation induced discharges. Importantly, the classification of an outlet as a Post Mining Area **does not affect any WQBELs** assigned to the outlet. Because WQBELs are assigned based on reasonable potential to cause or contribute to a violation of water quality criteria in the receiving stream, WQBELs can only be removed from an outlet by following the procedure set forth in the following paragraphs. [1]

[1] Limited situations may arise that are not addressed by this guidance. In those situations, discretion may be exercised by the permit writer, after consultant with DEP headquarters. In addition, this policy does not affect the requirements for pond removal under SMCRA.

Precipitation-induced outlets. Prior to applying for post-mining limits, the permittee must provide one of the following data sets for each outlet:

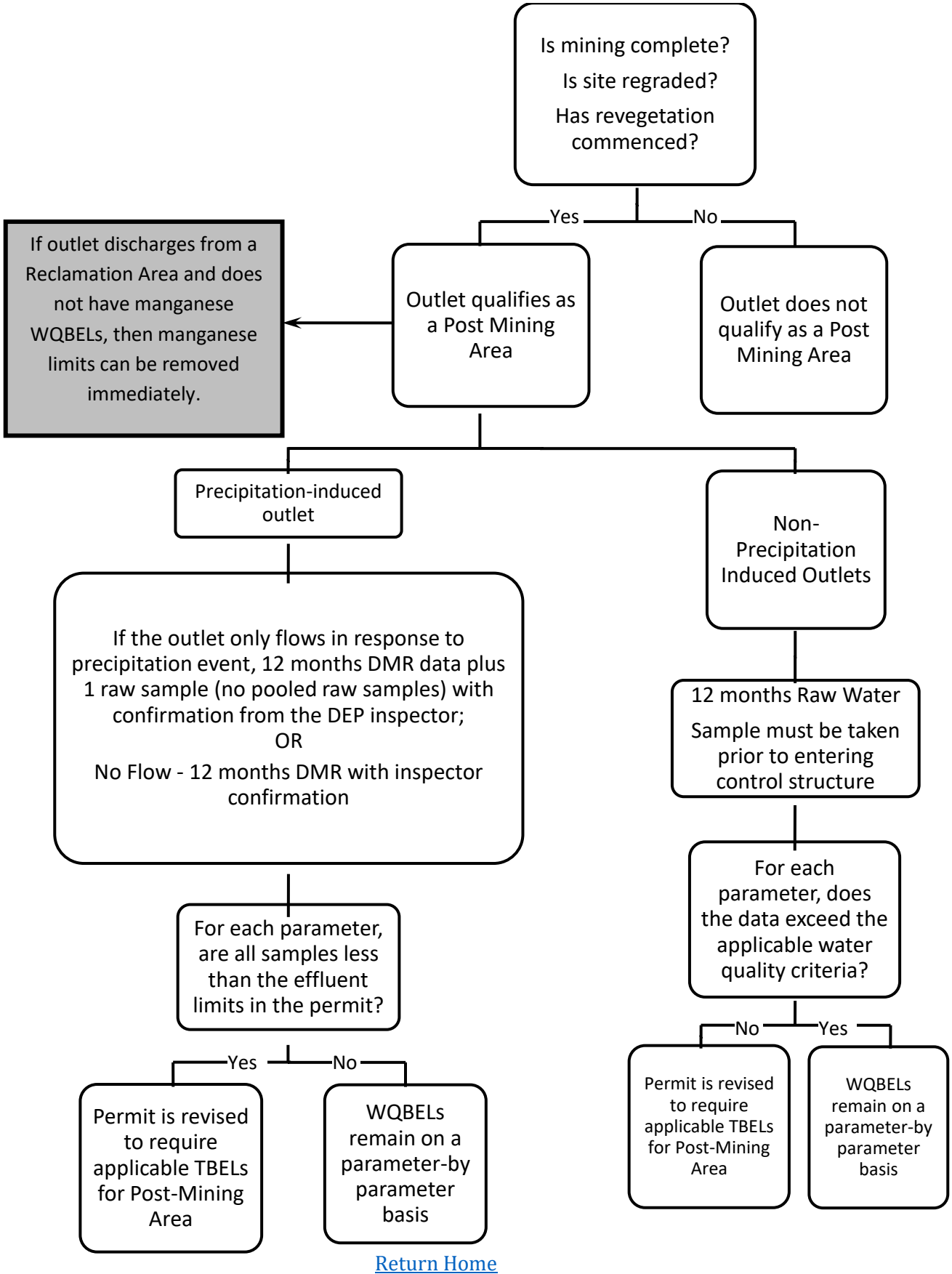
- If the outlet only flows in response to precipitation event, 12 months DMR data plus 1 raw sample (no pooled raw samples) with confirmation from the DEP inspector; OR
- If the outlet does not discharge, 12 months of DMR demonstrating no flow with confirmation from the DEP inspector.

The data will be compared to the corresponding outlet's effluent limitations. If the data meets all WQBELs in the permit, then the outlet will be assigned the appropriate TBELs for a Post-Mining Area specified in 40 CFR 434. WQBELs will remain in the permit for any parameter that does not meet the effluent limitations set forth in the NPDES permit.

Non-precipitation induced outlets. Prior to applying for post-mining limits, the permittee must provide 12 months raw water data for each outlet, prior to any treatment (chemical or physical). This sample needs to be taken prior to the water entering the associated control structure. All observed sources of flow, i.e. valley fill toes, deep mine discharge seals, must be sampled individually at the point of flow origin, even if they have a common outlet (same as required by sediment control structure removal guidance).

The agency will compare the data to the applicable water quality criteria. If the data does not exceed the corresponding water quality criteria, then the outlet will be assigned the appropriate TBELs for a Post-Mining Area specified in 40 CFR 434. WQBELs will remain in the permit for any parameter that exceeds the applicable water quality criteria in the receiving stream.

The agency has developed the following flow diagram to represent the procedure for revising both WQBELs and TBELs for Post-Mining Areas:


Is mining complete?
Is site regraded?
Has revegetation commenced?
Yes
No
Outlet qualifies as a Post Mining Area
Outlet does not qualify as a Post Mining Area
If outlet discharges from a Reclamation Area and does not have manganese WQBELs, then manganese limits can be removed immediately.
Precipitation-induced outlet
Non-Precipitation Induced Outlets
If the outlet only flows in response to precipitation event, 12 months DMR data plus 1 raw sample (no pooled raw samples) with confirmation from the DEP inspector;
OR
No Flow - 12 months DMR with inspector confirmation
12 months Raw Water
Sample must be taken prior to entering control structure
For each parameter, are all samples less than the effluent limits in the permit?
For each parameter, does the data exceed the applicable water quality criteria?
Yes
No
Permit is revised to require applicable TBELs for Post-Mining Area
WQBELs remain on a parameter-by parameter basis
No
Yes
Permit is revised to require applicable TBELs for Post-Mining Area
WQBELs remain on a parameter-by parameter basis

CONCLUSION

Most outlets have both TBELs and WQBELs assigned to them. TBELs are based solely on regulation and are independent of water quality of the outlet and receiving stream. WQBELs, on the other hand, are designed specifically to protect water quality in the receiving stream. The evaluation for post mining limits must evaluate both the relevant TBELs for that category as well as the need for WQBELs to assure protection of instream water quality.

Informal Conference Process

Procedure Overview
Standard Operating Procedure

INFORMAL CONFERENCE PROCEDURE OVERVIEW

FOR

ARTICLE 3 APPLICATIONS

- Initiated by Citizen Request **22-3-20(B)**
    - To Be Scheduled Within 21 Days Following Application End of Comment Date
        - Send Citizen Acknowledgement of Request Receipt
        - Notify Applicant of Request
        - Notify Staff of Request

- Secure Informal Conference Location **22-3-20(B)**

- Advertise Informal Conference **22-3-20(B)**
    - Must Be Published At Least Two Weeks Prior To Informal Conference

- Notify Requesters and Applicant of Informal Conference Date & Location
    - Must Occur Two Weeks Prior To Informal Conference
        - Notify Staff of Location and Date

- Informal Conference Preparation
    - Equipment & Information Needed
    - Signage Needed
    - Staff Needed
    - Security Needed

- Informal Conference Conducted
    - Set Up Stations
        - Participant Sign in Station
        - Information Station/Stations
        - Participant Comment Reception Station/Stations
            - Verbal/Written/Video
    - Closing Statement

- Informal Conference Completed
    - Informal Conference Records Maintained with Application Findings
        - Record Retention to Comply with Current Agency Policy

Informal Conference

A. SCOPE AND APPLICABILITY

The purpose of this document is to provide a procedure for scheduling and conducting an informal conference for surface coal mining operations. Any person having an interest which is or may be adversely affected, or the officer or head of any federal, state or local governmental agency, may request an informal conference on a surface mining application (SMA), amendment, significant revision, IBR, or renewal application. The Permit Supervisor *(or another appointed employee)* shall act as authorized agent of the Secretary and coordinate all informal conferences.

§22-3-20. Public notice; written objections; public hearings; informal conferences.

§22-3-21. Decision of director on permit application; hearing thereon.

B. SUMMARY OF METHOD

This SOP is being developed to standardize the informal conference proceedings.

C. DEFINITIONS

- SMA- Surface Mine Application
- REV- Permit Revision
- IBR- Incidental Boundary Revision
- ESS- Electronic Submission System (E-Permitting)
- WVDEP- West Virginia Department of Environmental Protection
- DMR – Division of Mining and Reclamation

D. HEALTH & SAFETY WARNINGS

Contact local authorities prior to the conference about potential security issues. It may be necessary to have state or local police force on hand for more controversial informal conferences. Have the local police and/or emergency services contact information available.

E. CAUTIONS

Remember that there is a likelihood of cameras and other recording devices being used by those participating in the conference, so all staff should present themselves in a professional manner and limit answers to factual information as presented in the permit application, DEP rules, and regulations. Do not make assumptions or guesses when answering questions and do not engage in argumentative situations.

F. PERSONNEL QUALIFICATIONS/RESPONSIBILITIES

The Permit Supervisor will determine the number of staff needed for each informal conference. Staffing needs will vary for different application types. The typical surface mine application (SMA) may utilize a staff geologist, engineer, environmental resource specialist, blasting

specialist, and inspector/inspector supervisor. An informal conference for a renewal may only utilize the Inspection and Enforcement staff, Office of Explosives and Blasting (OEB) staff, and an environmental resource specialist.

G. EQUIPMENT AND SUPPLIES

Sign-In Station (Station A)

Informal Conference Sign-In sheet. Applicant/Permittee, Application/Permit Number, Application Type & Sequence Number, Date, Time, and Location of Conference should be filled out at the top of each page. **(APPENDIX)**

1. Folding table and chairs as needed.
2. Pens
3. Rules of Conduct - placed in table top easel **(APPENDIX)**
4. Request for copy of informal conference recording forms **(APPENDIX)**
5. Signage for conference
6. Duct tape/scotch tape for sign placement
7. Easels for large poster boards
8. Laptop computer
9. Printer
10. Extension cords
11. Station A sign

Information Stations (Stations B)

1. Application/permit maps & drawings
2. CD copy of the permit application
3. Laptop computer
4. Projector and connector cables
5. Projector screen
6. Easels for large poster boards
7. Copy of Act and Rules
8. Extension cords
9. Station B sign/signs

Recording Station for Public Comments (Station C)

1. Microphones and table top microphone stands (At least 1 set per recording station).
2. Digital mp3 recorder (At least 2).
3. Portable folding table and chairs as needed.
4. Signage with permittee/permit number – placed in table top easel **(APPENDIX)**
5. Rules for comments – placed in table top easel **(APPENDIX)**
6. Pen and paper for taking notes during comments
7. Sign in sheet to keep track of commenters **(APPENDIX)**
8. Person taking comments may want to have water.
9. Extension cord for each recorder.
10. Copy of Act and Rules
11. Folder to collect written comments
12. Video recorder
13. Backup digital recorder
14. Station C sign

H. PROCESS

When a request for an informal conference is received within the appropriate comment period and subsequently granted, the conference should be scheduled within three weeks of the end of comment date for the pending application. A notification to the requestor(s), applicant, and applicant's consulting firm is sent out by certified mail two weeks prior to the scheduled conference date advising the date, time, and location of the informal conference. A legal advertisement must be published in a newspaper of general circulation around the proposed mining activity at least two weeks prior to the informal conference. Most newspapers have strict deadlines for legal advertisements, usually several days in advance of publication.

The Permit Supervisor shall notify the review staff, inspector and inspector supervisor, OEB staff, Public Information Office (PIO) and Environmental Advocates Office of the date, time, and location of the informal conference. PIO may provide additional staff for controversial conferences or when members of the press are expected. DEP staff should be made aware of specific concerns provided during the application comment period in order to prepare for the informal conference.

Selection of the facility to hold the conference should begin as soon as the request for the conference is granted to ensure deadlines are adhered to. If the request for an informal conference is also accompanied by a request for an information-gathering site visit, the Permit Supervisor should make every effort to accommodate the site visit, if granted, prior to the Informal Conference. In all cases the informal conference must meet the statutory deadlines and not be held up due to scheduling a site visit. Local DMR inspectors should be consulted about what facilities are available to hold an informal conference. The DMR PIO staff may also be of assistance in securing a location for the informal conference.

A suitable location should be found within the locality of the proposed mining activity. Schools or community centers provide the best opportunity to handle potentially large crowds and give adequate space for crowd control and conference set-up. WVDEP offices, churches, hotel meeting rooms, and parks have all been used to hold conferences in the past. It is best to have a large capacity facility even if small crowds are expected. Informal Conferences are often covered by local news media, and also spread over social media, so even if the initial response is only a few letters of protest, the crowds can be large.

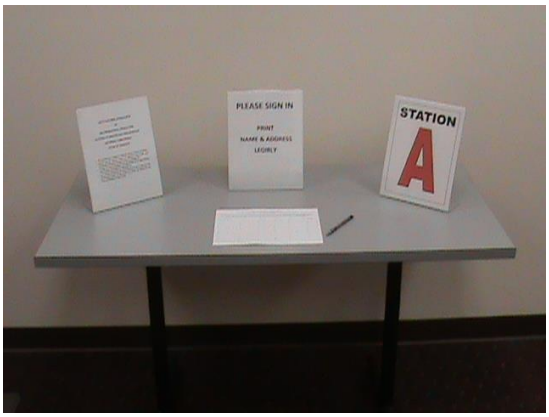
Scheduling public school buildings usually involves going through the county Board of Education and may require board approval. Be sure to confirm with the facility prior to the conference to ensure the building will be open when the staff arrives.

If rental fees are needed, an email should be sent to WVDEP administrative services manager with a WV-15 Request for Temporary Space and a WV-96 Agreement Addendum for the facility. Some facilities may also require a certificate of liability insurance, which can also be obtained by contacting WVDEP administrative services manager.

Signage should be placed at the building entrance of the informal conference site with WVDEP logo, purpose of the informal conference, and date and start time of the informal conference.

If the informal conference is held in a building with a hallway leading to the room designated for the informal conference, signage such as directional arrows should be used to direct participants to the sign-in station.

Sign-In Station (Station A)

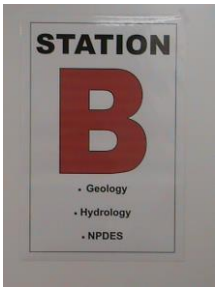


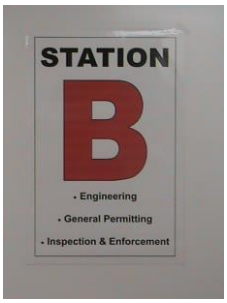
The sign-in station should be at the entrance to the room designated for the informal conference. Designate an employee (usually clerical staff) to oversee participants signing in and to inform participants of the informal conference process.

This station should include a sign-in sheet (bring multiple sheets). An example of the sign-in sheet is included in the Appendix and an electronic version is available on the DMR Shared Drive Informal Conference Folder. Rules of Conduct signs should be placed near the entrance and on the Station A sign-in table. The staff member assigned to this table should direct participants to the Rules of Conduct and explain the informal conference layout. Multiple staff members and sign-in sheets may be needed for large crowds to expedite the process. Participants wanting to provide comments must provide legible name and contact information on the sign-in sheet. Have the Request for copy of Informal Conference Recording sheets available for those interested.

Participants requesting notification of the application decision should indicate such on the sign-in sheet and provide legible name and contact information. Participants will be notified of the permit decision by the Regional WVDEP DMR office. Participants have the option to comment or not comment based on the information presented in the conference, therefore, the staff member(s) assigned to the recording station should keep track of the names and contact info of each of the commenters.

Information Stations (Station B)





Laptops and projectors can be utilized with a disc of the permit application. Do not assume internet will be available, so have all multimedia on a disc, electronic storage device or the computer and print out legible maps prior to the informal conference. Proposal/Drainage Maps, Blasting Maps and Cross-Section Maps should be printed. Common questions are the location of the project in relation to citizen's property, so a large topographic map or satellite imagery showing the general area should be available.

For Renewals and Revisions/IBRs, permit details including the permit history and violation history can be printed out and should be available to help answer questions.

Recording Station for Public Comments (Station C)

The recording station should be situated in an area that limits crowd disturbance and noise from affecting the recording of oral comments. This can be in a far corner of a large room, away from the information station and entrance, or in a separate room away from the main conference room. If a large crowd is present, multiple recording stations can be utilized, spaced out so as to not interfere with other recording stations. A staging area with seating can be set up away from the recording station for people to waiting to give comments. Crowd control near the recording station is important, therefore, other measures may be required in some instances. Comments will not be broadcast over a PA system, but remind participants that the conference record, to include oral and written comments, is public record and will be available after the conference by using the supplied request form. Commenters should be reminded to keep the comments in line with the permit application being discussed. A time limit may be placed on commenters if the crowd is large, but this limit should be posted prior to the start of the conference and strictly observed in order to ensure fairness to all commenters.

Test the recorder after setup to ensure it is properly functioning. Ensure the microphones are functioning before starting. Secure the microphone and power cords to avoid tripping or accidently unplugging the recorder. Cords may need to be taped down. The microphone should remain in the mic stand on the table during the entire conference.

Record an introduction stating the name of the person receiving comments, the agency and lead division of the conference, the location, date and time of the conference, applicant/permittee and reference information for the application. The recording can be paused in-between commenters

to avoid long gaps in the recording. The recorder display screen should indicate active recording prior to the commenter speaking. Have the commenter clearly state his or her name and organization (if applicable) before leaving a comment. The Agency representative receiving the comments is not there to answer questions, but may speak to provide clarity to certain points or direct the individual to the appropriate agency representative at the informal conference who may answer the question.

A video recorder can be placed near the comment table to serve as a backup recording device.

Ending the Conference

A prepared statement should be read over the PA system towards the end of the conference. This may be as the number of commenters decrease or due to facility closing times. Since conferences do not have a set end time, it will be the judgement of the Permit Supervisor or his or her appointee when this point is reached. There have been times when no individuals have shown up for the conference. In these situations, if no party has shown within an hour of the scheduled conference start time, the conference may be concluded and documented in the electronic recording device that no individuals have participated in the conference.

An example of the ending statement:

> Thank you all for participating in this informal conference. We will be concluding this conference shortly. If you wish to leave a written or recorded comment, please do so at this time. The comments will be forwarded to the appropriate DMR permitting staff for review and response and shall be considered in the granting or denying of the permit. The applicant and those persons who commented, either by written or verbal form, will be notified of the decision. Anyone wishing a copy of the recordings may do so by completing a Request for copy of Informal Conference Recording and mailing to the DEP regional office along with payment. The cost is $5.00 per recording.

I. CRITERIA, CHECKLISTS, OR OTHER STANDARDS

Checklist is included in the Appendix section.

J. DATA AND RECORDS MANAGEMENT

1. Forms to be used (and location), All blank forms and posters can be found on the DEP Division of Mining and Reclamation shared drive under the "Informal Conference" folder. Completed forms will be stored in the regional permit file following the division's retention policy and in Section X of the application Facts and Findings in ESS.

2. Reports to be written, and A summary of the informal conference should be written by the Permit Supervisor and include number of speakers, a discussion of the comments received, time, date and location of conference. The informal conference summary and the oral and written comments are to be forwarded to the division director for review.

3. Data and record storage information Recordings of the informal conference will be saved in MP3 format and uploaded to the Blue Book or Facts and Findings section of the

referenced permit application. All sign-in sheets and written comments should be uploaded to section X of the permit Facts and Findings.

K. RESOURCES

See Appendix for Resources

L. FREQUENCY

Upon receiving and granting an informal conference request.

M. QUALITY CONTROL AND QUALITY ASSURANCE

The Permit Supervisor will follow up each informal conference with an evaluation of whether the informal conference was conducted according to the standard operating procedure. Any issues, concerns, problems, or suggestions for improvement should be noted and shared with the Division Director. Each staff member participating in the informal conference should be consulted for input.

N. REFERENCES

N/A

O. APPENDIX

Sign-in Sheet
Request for copy of Informal Conference Recording
Informal Conference Guide Poster
Citizen Involvement in the Permitting Process Poster
Rules of Conduct Poster
Checklist

Ownership
&
Control Information

Ownership and control review of permit applications
Centralized ownership and control file (COCF)
Procedure for ownership and control in databases
Proper notification for ownership and control changes
Procedure for Secretary of State's database

A. Subject: Ownership and Control Review of Permit Application
Date: February 1, 1996
Revised: August 25, 2016

This procedure shall be utilized for the ownership and control reviews of every Surface Mining Application (MR-4), Application for Transfer, Assignment or Sale of a permit (MR-19A), Notification of Permittee Merger and/or Name Change (MR-19B), Application for Operator Assignment (MR-19), and Notification of Change of Owners, Officers, Directors or Partners (MR-19C) submitted.

1. Upon receipt of an application, the Ownership and Control ("O/C") reviewer will review the application and all other documentation for completeness and accuracy.

2. The O/C reviewer will:
- Complete the appropriate checklist to determine if applicant has submitted information required in the Surface Mining Reclamation Regulations.
- Compare the information provided in the application with information currently in the Applicant Violator System ("AVS"), the WV State System ("ERIS"), and the WV Secretary of State System ("SOS").
- Request a recommendation from the AVS to determine if applicant is permit blocked for any reason.

3. If the O/C reviewer determines that the application is not complete, if discrepancies are found, or if a permit block is found, a request for corrections will be made.

4. After the O/C reviewer receives the applicant's response to the corrections, all new information provided will be reviewed for completeness and accuracy.

5. If the O/C reviewer determines the application to be complete and accurate and no permit blocks are found, the O/C reviewer shall prepare a signoff sheet.

6. Upon completion of the O&C review, the reviewer shall upload their signoff and checklist into the Facts and Findings folder of the application.

B. Subject: Centralized Ownership and Control Files
Date: February 18, 1999
Revised: August 25, 2016

A Centralized Ownership and Control File (COCF) is the MR-20 form which identifies all the owners and controllers of permit holding companies. Approved COCF's may be referenced in MR-4, MR-19, and/or MR-19A applications. The West Virginia Surface Mining Reclamation Regulations provide for the COCF under §38.2.3.1.o.

The application is submitted in the name of the parent company (the company one level above the highest permit holding company in the chain of ownership). The first step in establishing a COCF is a meeting with personnel in the DEP headquarters. At the time of the meeting, the procedures and requirements will be fully explained and the MR-20 form given to the applicant. The MR-20 is not generally available as other DEP forms are, because the initial meeting is crucial to a timely review.

After a COCF is submitted for review, the DMR HQ COCF Specialist will review, approve and maintain the file. It is preferred that the applicant designate one person to be the COCF contact person, and that the contact person actually be a company representative, although some companies prefer to name a consultant to this position. Part of the rationale behind the use of the COCF is the facility of maintaining accurate information on the companies when only 2 individuals are involved.

After the review of the COCF has been completed and the file is approved, an applicant covered by the file may reference the COCF instead of including complete ownership and control information in each application submitted. During the comment period for any application that references an approved COCF, it is the applicant's responsibility to ensure that identical copies of the file are delivered to the appropriate courthouse(s) and regional office(s). COCF's are **NOT** to be left in courthouses or regional offices after the comment period expires.

In the event an applicant chooses to correct an application in process (i.e., one that contains complete ownership and control information and has been or is being advertised) by referencing an approved COCF, the application must be re-advertised (one time, ten-day comment period).

The Permittee must update and recertify all information, **including permit history**, in the COCF at least every 90 days after approval, or within 15 days of a change in information. When information is updated to make changes before the 90-day certification is due, the next certification will be due 90 days from the date of the most recent certification. Also, with an approved COCF, a Permittee will no longer be required to submit ownership and control update letters in applications. Accordingly, Permittees holding approved COCF's are not required to submit the MR-19C (Annual Ownership and Control Update) on a yearly basis, although this will still be required in the event of issuance of a Cessation Order.

Permittees having approved files will be required to submit a completed MR-19B (Notification of Merger or Name Change) in addition to updating the COCF to reflect such changes when appropriate. This application requires an advertisement and thirty-day comment period.

Having a COCF is a privilege. If the Permittee does not recertify the information in the COCF within a 90-day period, the Permittee will be afforded a 30-day extension. If the Permittee has not updated the COCF within the extended amount of time, the COCF will be considered null and void. If the DMR HQ COCF Specialist becomes aware of any changes and has not been notified of such pending changes, the Permittee will be contacted by certified letter giving ten (10) days from receipt of such letter to update the COCF. If nothing is submitted within the allotted time, the COCF will be considered null and void. There may be case-specific instances and extreme circumstances that warrant the DMR HQ COCF Specialist waiving this provision.

C. SUBJECT: General Procedures for Ownership and Control in ERIS and AVS
DATE: May 1, 1995
Revised: August 25, 2016

This procedure shall be utilized when discrepancies exists with the ownership and control data between:

- AVS and ERIS; or
- AVS/ERIS and the application being reviewed.

1. When an entity is listed in AVS and ERIS but not identified in the application being reviewed, the applicant shall be notified in writing of any discrepancies between the application and the AVS and ERIS.

2. Entities omitted from application shall remain as an owner/controller in AVS and ERIS until end dates are sufficiently documented. Application is corrected by:
   - Including the entities initially omitted; ***or***
   - Applicant submits documentation establishing end date(s).

3. Requests by O/C reviewers for changes in AVS and/or ERIS shall include the following and shall be forwarded to headquarters as soon as the data is verified:
   - Database Change Request;
   - Copy of documentation supporting the change; and
   - Screen print of AVS and ERIS indicating the specific changes to be made.

Database Change Requests Procedure

- All database change requests are to be emailed to DMR HQ COCF specialist.

- Email subject line should read DCR for "company name"

- Database change requests associated with a COCF will be reviewed by DMR HQ COCF specialist to confirm consistency with the COCF. DMR HQ COCF specialist will then forward confirmed changes to DMR HQ AVS specialist for database entry.

- Database change requests not associated with a COCF will be forward by DMR HQ COCF specialist to DMR HQ AVS specialist for database entry.

- O&C reviewers and DMR HQ COCF specialist will receive an email from DMR HQ AVS specialist upon database updates.

D. SUBJECT: Proper Notification of Ownership or Control Changes
DATE: July 1, 1999

An approved **operator** will complete a new MR-19 when the following has occurred in ownership and/or control (officers and/or owners):
- 50% or more of ownership change in operator or its owner
- Less than 50% change in ownership in operator or its owner but the percentage is the largest block of stock owned (i.e. no one with 50% or more ownership)
- **All** the officers for the operator or its owner have changed
- Include changes in all levels of the organizational structure where applicable

A **permittee** will complete MR-19A (marked ownership and control changes only) when the following changes in ownership and/or control (officers and/or owners) has occurred:
- 50% or more of ownership change in permittee or its owner
- Less than 50% change in ownership in permittee or its owner but the percentage is the largest block of stock owned (i.e. no one with 50% or more ownership)
- **All** the officers for the permittee or its owner have changed
- Include changes in all levels of the organizational structure where applicable

APPROVAL: The regional office will prepare an approval letter and forward to Headquarters for final approval and signature. A MR-2 (permit face) will not be issued.

Permittee and/or operator shall complete MR-19C when the following changes in ownership or control (officers and/or owners) occurs:

- Any changes in officers and/or directors
- 10 to 49% of ownership changes

When name changes or mergers occur with the permittee, a MR-19B form must be completed.

E. SUBJECT: Procedures for Secretary of State's Database
DATE: May 15, 1995

On July 1, 1997, the West Virginia Secretary of State's (SOS) office instituted a fee of $15 to make changes to company records which are not submitted in conjunction with the Annual Corporate Return. Because of this new fee and the fact, under state law, corporations are only required to update information with the SOS once a year, we are no longer requiring companies to update SOS due to permit review discrepancies.

You should continue to check the SOS database. This is to ensure that applicants are active companies (they do not have a closed status) and registered to do business in West Virginia (unless they are sole proprietorships or general partnerships). The officers list should also be reviewed; however, only a major discrepancy in the SOS officer listing and the application listing should be questioned (i.e. if an ended officer is listed in SOS and a new officer is listed in the application, do not consider this a correction). But, if a new officer (an individual which has never been listed in AVS and/or ERIS) is listed in SOS and the list in the application does not have this individual, then this should be considered a correction.

This procedure supersedes the policy issued on February 3, 1993 and a procedure (updated), called "Questions and Answers: Standard Application, Ownership and Control Unit".

Post Mining Land Use Information

Post Mining Land Use on Mountaintop Removal and Steep Slope Mining with an AOC Variance
Durability / Topsoil Substitutes
Topsoil & Topsoil Substitute Guidance
Commercial Forestry
Productivity and Ground Cover Success Standards

A. Subject: Postmining Land Use on Mountaintop Removal & Steep Slope Mining with an AOC Variance
Date: May 20, 1999
Revised: August 25, 2016

To comply with the WVDEP/OSM Action Plan for resolving mountaintop mining and steep slope issues, the Surface Mining Application (MR-4) form is being revised. Any permit application with an AOC variance that is pending or submitted, must have the following information. The applicant should be provided with the revised section of the SMA form which is available on the Intranet.

Mountaintop Removal AOC Variance Criteria

The changes regarding mountaintop removal mining operations with variances from AOC are reflected in Section O, question O-5.C and will require the applicant to address the following pursuant to WV Surface Coal Mining Act 22-3-13(c) (3).

A mountaintop removal AOC variance may only be granted if the applicant proposes to remove the entire coal seam or seams running through the upper fraction of the hill, ridge, or mountain creating a level plateau or gently rolling contour with no highwalls remaining and capable of supporting postmining land uses in accordance with the following requirements:

- The proposed postmining land use of the affected land is limited to Heavy Industry, Light Industry and Commercial Services, Commercial Forestry, Cropland, Bio-Cropland, Residential or Public Service.

- The proposed use constitutes an equal or better use compared with the premining use.

- The proposed use will be compatible with adjacent land uses and existing State and local land use plans.

- County commissions and other State and Federal agencies were provided an opportunity to review and comment on the proposed land use.

- The application contains a specific plan and assurances that the proposed postmining land use will be:

  - Compatible with adjacent land uses;
  - Practicable with respect to financing and completing the proposed use;
  - Supported by commitments from public agencies where appropriate;
  - Planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use;
  - Designed by an approved person to assure the stability, drainage, and configuration necessary for the intended use of the site; and
  - Obtainable according to data regarding expected need and market.

- All other requirements of the Act will be met.

Steep Slope AOC Variance Criteria

Also, Question O-5.B relating to steep slope mining (average greater than 20 degrees) is being revised to require the applicant to specifically address the following as required by 38 CSR 2.14.12:

- The land after reclamation is suitable for industrial, commercial, residential or public use (including commercial forestry, biofuel cropland and recreational facilities)
- All highwalls will be completely backfilled in a manner that results in a static safety factor of 1.3;
- Only spoil not necessary to achieve the postmining land use may be removed from the mine bench;
- The watershed of the permitted and adjacent areas will be improved by reducing pollutants, environmental impacts or flood hazards; provided that, the watershed will be deemed improved only if:
    - The amount of total suspended solids or other pollutants discharged to ground or surface water from the permit area will be reduced, so as to improve the public or private uses or the ecology of such water, or flood hazards within the watershed containing the permit area will be reduced by reduction of the peak flow discharge from precipitation events or thaws; and
    - The total volume of flow from the proposed permit area, during every season of the year, will not vary in a way that adversely affects the ecology of any surface water or any existing or planned use of surface or ground water;
- Appropriate Federal, State and local government agencies were provided an opportunity to comment on the proposed postmining land use and deemed it to be an equal or better economic or public use;
- The plan is designed and certified by a registered professional engineer to assure stability, drainage, and configuration necessary for the intended use of the site;
- The surface landowner requested in writing that a variance be granted to achieve the approved alternative postmining land use;
- The alternative postmining land use requirements are met;
- All other applicable requirements of the Act and regulations, except for those relating to AOC, are met.

The reviewer will be required to specifically address each of these requirements and justify their decision in the facts and findings (MR-2A) at the bottom of the variance page.

B. Subject: Durability / Topsoil Substitutes
Date: September 22, 1999

A meeting was held on Thursday, September 16, 1999, to discuss the Office of Surface Mining's (OSM) concerns on the following issues regarding their permit reviews:

1. How can a material be durable and still be identified as a topsoil substitute?

2. What is the topsoil substitute proposed to be used in each phase of the operation?

Regarding the first issue, it was explained to OSM that durability is a function of whether a material slakes in water and topsoil substitute is a function of whether the material can be a media which is capable of supporting and maintaining the approved post mining land use. The analyses for durability and topsoil substitute are not interrelated. Therefore, a material that meets the criteria for durability cannot be excluded as a topsoil substitute. The only way a material can be excluded as a topsoil substitute is based on the analysis specified in the rules and/or the resulting media is not capable of supporting and maintaining the approved post mining land use.

It was further stated that "durable" material is used as a topsoil substitute throughout the Appalachian coal fields. After a discussion, OSM concurred that a material can both meet the criteria for durability and the criteria as a topsoil substitute, with some mechanical action for sizing.

The second issue is related to "the best available" material used as a topsoil substitute. OSM stated "the best available" material is not clearly indicated in the application. At first, OSM stated is should be "best material" on the permit. It was explained to OSM that this approach is impracticable. OSM concurred but still stated that the application must clearly indicate “what is the best available material?” It was suggested that since the mining and reclamation plan denotes the sequence and/or phase of mining proposed for the operation and that each sequence has a spoil balance, the application could indicate the topsoil substitute(s) that would be used for each sequence/phase of the operation. OSM then agreed with this concept as long as the material identified has site-specific analyses conducted.

C. Subject: Topsoil & Topsoil Substitute Guidance
Date: September 28, 2016
Approval: Harold D. Ward, Acting Director

1. Purpose

The purpose of this guidance is to provide clarification of topsoil and topsoil substitutes and their utilization with regard to Article 3 application review. Also referenced are the performance standards for topsoil and topsoil substitutes with regard to inspection and enforcement of an approved Article 3 permit.

2. Permit Review Discussion

“Topsoil” is defined in **38CSR2 2.128** as the A and E horizon soil layer of the four (4) major soil horizons.

"Overburden" is defined in **38CSR2 2.84** as consolidated or unconsolidated material of any nature which overlies a mineral deposit, excluding topsoil.

Operation Plans & Specifications contained within an application, according to **38CSR2.3.6.d** require" A description of how the applicant will remove, store and redistribute topsoil, subsoil or topsoil substitutes, and other materials. When topsoil substitutes are proposed, analytical data, and laboratory certification required in subdivision 14.3.c of this rule shall be made a part of the permit application; the suitability determination,"

If sufficient topsoil material (A & E horizons) is not available to meet post mining land use requirements, then information for a topsoil substitute is required in the Article 3 application. Forestland and wildlife post mining land uses require the uniform redistribution of at least four (4) feet of topsoil or topsoil substitute across the mine area.

38CSR2 14.3 states that "Any substitute material used for topsoiling must be capable of supporting and maintaining the approved postmining land use. This determination of capability shall be based on the results of appropriate chemical and physical analysis of overburden and topsoil. These analyses shall include at a minimum depth, thickness, and areal extent of the substitute structure or soil horizon, pH, texture class, percent coarse fragments and nutrient content. A certification of analysis shall be made by a qualified laboratory stating that:

- **14.3.c.1.** The proposed substitute material is equally suitable for sustaining vegetation as the existing topsoil;
- **14.3.c.2.** The resulting soil medium is the best reasonably available in the permit area to support vegetation; and
- **14.3.c.3.** The analyses were conducted using standard testing procedures.
- **14.3.d.** Soil Amendments. Nutrients and soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer so that it supports the approved postmining land use and meets the revegetation requirements of section 9 of this rule. These tests shall include nutrient analysis and lime requirement tests. Results of these tests shall be submitted to the Secretary with the final planting report as required by this rule.

3. Permit Review Focus Items

The reviewer/reviewers shall ensure that all Article 3 applications which are required to address topsoil and/or topsoil substitute meet the following standards:

- Clarification and consistent use of terminology related to topsoil and/or topsoil substitute throughout Article 3 application sections.
- Consistency of topsoil_and/or topsoil substitute material's proposed use throughout Article 3 application sections.
- Requirement for laboratory certification of topsoil substitute analysis.
- Requirement for topsoil substitute variance.
- Identification and assurance of quantity and availability of topsoil and/or topsoil substitute material for distribution within the scope of the mining and reclamation plan.
- Proposal maps shall identify the location of topsoil storage areas.

4. Inspection &Enforcement Discussion

According to **38CSR2 14.3.a**, with regard to topsoil removal, "Prior to disturbance of an area, topsoil shall be removed from the area to be disturbed in a separate layer and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location as specified in the preplan. Stockpiled topsoil shall remain in place until used for redistribution unless otherwise approved by the Secretary. Stockpiled topsoil shall be protected from excessive compaction. Where the removal of vegetative material, topsoil or other materials may result in erosion, the Secretary may limit the size of the area from which these materials are removed at any one time.

A variance approving a topsoil substitute does not relieve the permittee of the requirement to remove all available topsoil and stockpile for redistribution across the mine area during final regrading. The above regulation requires topsoil to be removed and stored at locations indicated on the proposal map.

§22-3-13 (b)(5) further emphasizes the need for topsoil recovery stating, **"**Remove the topsoil from the land in a separate layer, replace it on the backfill area, or if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful vegetative cover by quick growing plants or by other similar means in order to protect topsoil from wind and water erosion and keep it free of any contamination by other acid or toxic material: Provided, That if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate and preserve in a like manner any other strata which is best able to support vegetation;"

5. Reference Information

38CSR Applicable Regulations:

Definitions

- **2.84.** Overburden means consolidated or unconsolidated material of any nature which overlies a mineral deposit, excluding topsoil.
- **2.128.** Topsoil means the A and E-horizon soil layer of the four (4) major soil horizons.

Maps

- **3.4.d.18.** The location and extent of topsoil borrow areas, and the location of topsoil storage areas;

Operation Plans & Specifications

- **3.6.b.2.** Overburden and topsoil handling and storage areas and structures;
- **3.6.d.** A description of how the applicant will remove, store and redistribute topsoil, subsoil or topsoil substitutes, and other materials. When topsoil substitutes are proposed, analytical data, and laboratory certification required in subdivision 14.3.c of this rule shall be made a part of the permit application; the suitability determination,
- **3.6.e.** Where topsoil borrow areas are proposed, the applicant shall submit a reclamation plan for such areas;

Removal of Abandoned Coal Refuse Disposal Piles Project Narrative

- **3.14.b.10.B.** The area of land to be affected by the removal operation, including any coal storage and topsoil borrow and storage areas;

PMLU - Commercial Forestry & Forestry

- **7.4.b.1.D.** Soil and Soil Substitutes.
- **7.4.b.1.E.** Soil Placement and Grading.

PMLU – Homestead

- **7.5.j.** Soils, Soil Placement and Grading.

PMLU – Forestland

- **7.6.b.** Planting Plan
- **7.6.c.** Soil placement, Substitute material and Grading.

PMLU – Wildlife

- **7.7.b.** Planting Plan
- **7.7.c.** Soil placement, Substitute material and Grading

PMLU – Bio-Fuel Cropland

- **7.8.2.** Soil reconstruction specifications

PMLU - Prime Farmlands

- **10.4.c.** Soil Replacement.

Performance Standards

- **14.1.d.** Topsoil Markers.
- **14.3.** Topsoil.
- **14.3.a**. Removal. Prior to disturbance of an area, topsoil shall be removed from the area to be disturbed in a separate layer and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location as specified in the preplan. Stockpiled topsoil shall remain in place until used for redistribution unless otherwise approved by the Secretary. Stockpiled topsoil shall be protected from excessive compaction. Where the removal of vegetative material, topsoil or other materials may result in erosion, the Secretary may limit the size of the area from which these materials are removed at any one time.
- **14.3.b.** Redistribution. Prior to redistribution of topsoil, the regraded land shall be treated, if necessary, to reduce the potential for slippage of the redistributed material and/or to enhance root penetration. Topsoil and other materials shall be redistributed in a manner that prevents excess compaction and that achieves an approximate uniform contour, soil density, and surface water drainage system. Immediately after redistribution all topsoil areas shall be protected from wind and water erosion, stable thickness, consistent with the approved postmining land uses,
- **14.3.c.** Top Soil Substitutes. Any substitute material used for top soiling must be capable of supporting and maintaining the approved postmining land use. This determination of capability shall be based on the results of appropriate chemical and physical analysis of overburden and topsoil. These analyses shall include at a minimum depth, thickness, and areal extent of the substitute structure or soil horizon,

pH, texture class, percent coarse fragments and nutrient content. A certification of analysis shall be made by a qualified laboratory stating that:

- **14.3.c.1.** The proposed substitute material is equally suitable for sustaining vegetation as the existing topsoil;
- **14.3.c.2.** The resulting soil medium is the best reasonably available in the permit area to support vegetation; and
- **14.3.c.3.** The analyses were conducted using standard testing procedures.
- **14.3.d.** Soil Amendments. Nutrients and soil amendments in the amounts determined by soil tests shall be applied to the redistributed surface soil layer so that it supports the approved postmining land use and meets the revegetation requirements of section 9 of this rule. These tests shall include nutrient analysis and lime requirement tests. Results of these tests shall be submitted to the Secretary with the final planting report as required by this rule.

22-3 Applicable Code

§22-3-9. Permit application requirements and contents.

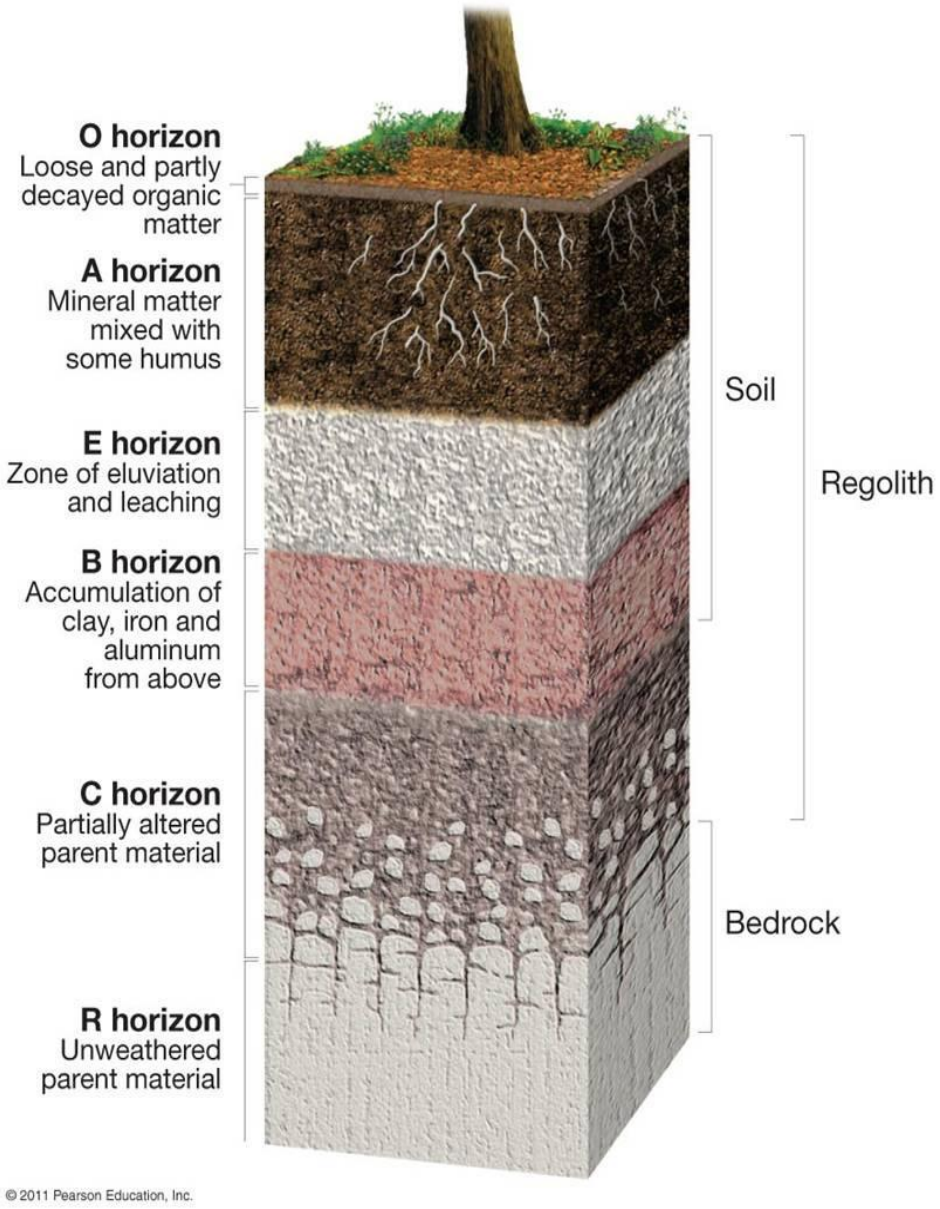
(13) Cross-section maps or plans of the proposed affected area, including the actual area to be mined, prepared by or under the direction of and certified by a person approved by the director, showing pertinent elevation and location of test borings or core samplings, where required by the director, and depicting the following information: (A) The nature and depth of the various strata or overburden; (B) the location of subsurface water, if encountered, and its quality; (C) the nature and thickness of any coal or rider seams above the seam to be mined; (D) the nature of the stratum immediately beneath the coal seam to be mined; (E) all mineral crop lines and the strike and dip of the coal to be mined, within the area of land to be affected; (F) existing or previous surface-mining limits; (G) the location and extent of known workings of any underground mines, including mine openings to the surface; (H) the location of any significant aquifers; (I) the estimated elevation of the water table; (J) the location of spoil, waste or refuse areas and topsoil preservation areas; (K) the location of all impoundments for waste or erosion control; (L) any settling or water treatment facility or drainage system; (M) constructed or natural drainways and the location of any discharges to any surface body of water on the area of land to be affected or adjacent thereto; and (N) adequate profiles at appropriate cross sections of the anticipated final surface configuration that will be achieved pursuant to the operator's proposed reclamation plan;

§22-3-13. General environmental protection performance standards for surface-mining; variances.

(b)(5) Remove the topsoil from the land in a separate layer, replace it on the backfill area, or if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful vegetative cover by quick growing plants or by other similar means in order to protect topsoil from wind and water erosion and keep it free of any contamination by other acid or toxic material: Provided, That if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate and preserve in a like manner any other strata which is best able to support vegetation;

(b)(6) Restore the topsoil or the best available subsoil which is best able to support vegetation;

6. SOIL HORIZONS



D. Subject: Guidance for Review of Topsoil Substitute Information
Date: January 24, 2017
Approval: Harold Ward, Acting Director

The use of topsoil substitute material, as it pertains to forestland and wildlife post-mining land uses, may be approved by the Secretary provided the applicant demonstrates the following: the volume of topsoil on the permit area is insufficient to meet the depth requirements of 7.6.c.1 (48 inches), the substitute material consists of at least 75% sandstone, has a composite phase pH between 5.0 and 7.5, has a soluble salt level of less than 1.0 mmhos/cm and is in accordance with §14.3.

§14.3 states that topsoil shall be removed from the area to be disturbed in a separate layer, and if not immediately redistributed, it shall be segregated and stockpiled in a separate stable location. §14.3.c further states that the determination of topsoil substitute capability shall be based on the results of a chemical and physical analysis of overburden and topsoil. This analysis will include the minimum depth, thickness, and areal extent of the substitute material. This certification must be made by a qualified laboratory and state that the proposed substitute material is equally suitable for sustaining vegetation as the existing topsoil (§14.3.c.1), the resulting soil medium is the best reasonably available in the permit area to support vegetation (§14.3.c.2), and the analyses were conducted using standard testing procedures (§14.3.c.3).

To ensure that these regulations are adequately addressed in the Surface Mine Application (SMA), the SMA discusses topsoil substitutes in several sections. **Section I-13** is where the topsoil substitute analysis report is provided. This is where the chemical and physical comparison of the native soil to the topsoil substitute material is detailed and the statements of §14.3.c.1, §14.3.c.2, and §14.3.c.3 are presented. In reviewing this report, it is important to remember the volume and chemical requirements detailed in §7.6.c and §7.6.c.1 specify at least 48 inches of material. Additionally, this material needs to consist of at least 75% sandstone, have a composite phase pH between 5.0 and 7.5, and have a soluble salt level of less than 1.0 mmhos/cm.

The geologic cross section, **Section I-7**, shows the depth, thickness, and areal extent of the substitute material.

Volumetric calculations that verify the necessary quantity of the substitute material is available through the mining phases in **Section N-1B**.

The planting plans provided in **Section O-9** of the SMA discuss, in part, a prediction of the mine soil character based on overburden analysis, soil analysis, and other available information (**Section O-9A**). This narrative needs to discuss the use of substitute material as a growth medium for the proposed post-mining vegetation.

When issuing topsoil substitute waiver approvals, ensure the following items are addressed:

1. Is the topsoil substitute waiver information provided in **Section I-13**?

    a. Does it have adequate chemical and physical comparison to native soils?

        - Percentage of sandstone?
        - Color of sandstone?
        - pH range?
        - Soluble salts less than 1 mmhos/cm?

    b. Does the narrative clearly state that the material is equally suitable for sustaining vegetation as the existing topsoil (§14.3.c.1), the resulting soil medium is the best reasonably available in the permit area to support vegetation (§14.3.c.2), and the analyses were conducted using standard testing procedures (§14.3.c.3)?

    c. Is the report signed by a Certified Soil Scientist who works for an approved laboratory?

2. Does the Geologic Cross Section (**Section I-7**) show the topsoil substitute horizons?

3. Does the mine plan in **Section N-1B** discuss the use of topsoil substitutes, and if so, are the aspects of §3.4.d.18, §3.6.b.2, and §3.6.d adequately addressed?

    a. Is the best, most reasonably available substitute material identified for each mining phase?

    b. Are volume calculations provided by mining phase to prove enough substitute material is available?

    c. Is there language that states the existing topsoil material will be reserved and added to the topsoil substitute material

    d. Do the phase maps show the proposed location of topsoil substitute material storage?

4. Does the planting plan (**Section O-9**) reference the use of topsoil substitute?

E. Subject: Commercial Forestry
Date: September 13, 2000
Approval: John Ailes, Deputy Chief, OMR
Revised: August 25, 2016

OSM has recently approved commercial forestry as a postmining land use for AOC variance on mountaintop removal permits only. The following are guidelines for all permits approved with this postmining land use after August 18, 2000:

- Commercial forestry land use must be on the area seeking a mountaintop AOC variance. Commercial forestry land use cannot be used on steep slope variance areas.

- The Planting and Management Plan must be developed by a Registered Professional Forester.
  38CSR7.4.1.A

- Two copies of each plan must be submitted to the Division of Forestry District Forester and two copies to the Secretary of WVDEP.
  38 CSR 7.4.b.1.A.6

- Before approving a planting plan for commercial forestry, the plan must be reviewed and approved by a Registered Professional Forester employed by the WV Division of Forestry or the WVDEP. In addition, a Certified Professional Soil Scientist must review and shall field verify the soil slope and sandstone mapping.
  38CSR7.4.b.1.B.1

- The Secretary of WVDEP shall ensure that the reviewing forester and soil scientist prepares site specific written findings addressing each of the elements contained in the plan. These findings shall be made part of the facts and findings section of the application.
  38CSR7.4.b.1.B.1

F. Subject: Productivity & Ground Cover Success Standards
Date: May 1, 2002
Approval: Matt Crum, Director, DMR

The productivity success standards for grazing land and hayland will be based upon determinations for similar map units as published in the productivity tables in Natural Resources Conservation Service (NRCS) soil surveys for the county or from average county yields recognized by the United States Department of Agriculture. The yields for grazing land or hayland will be measured in material produced per acre or animal units supported. The success of production shall be equal to or greater than that of the standard obtained from the tables.

Evaluation methods for productivity to be utilized are described in section 1 of "Technical Guides of Reference Areas and Technical Standards for Evaluating Surface Mine Vegetation in OSM Regions I and II" by Robert E. Farmer, Jr. et al., OSM J5701442/TV-54055A, 1981, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.

The productivity success standard for cropland shall be determined using yields for reference crops from unmined areas. Reference crop yields shall be determined from the current yields records of representative local farms in the surrounding area or from the average county yields recognized by the United States Department of Agriculture. The success of production shall be equal to or greater than that of the reference crop from unmined areas. Evaluation methods for productivity to be utilized are described in section 1 of "Technical Guides of Reference Areas and Technical Standards for Evaluating Surface Mine Vegetation in OSM Regions I and II" by Robert E. Farmer, Jr. et. al., OSM J5701442/TV-54055A, 1981, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.

The company shall be responsible for providing DEP with copies of the productivity tables and/or data used to determine reference crop yield. Where the USDA or other agricultural data for productivity does not exist for a particular county, the applicant will work with the DEP and the USDA to develop standards for the proposed area.

Ground cover success shall be based on the Rennie and Framer technique described in section 3 of "Technical Guides of Reference Areas and Technical Standards for Evaluating Surface Mine Vegetation in OSM Regions I and II" by Robert E. Farmer, Jr. et.al. OSM J5701442/TV-54055A, 1981, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement. et. al., OSM J5701442/TV-54055A, 1981, U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement.

Pre-Inspections for Surface Mine Applications

A. PRE-INSPECTIONS

1. Pre-inspections for new surface mine applications and permit amendment applications are to be held within two (2) weeks following the issuance of the first round of technical corrections.

2. The Permit Review Staff and Inspector should have completed a technical review and should already be familiar with the application.

3. The Pre-Inspection Narrative should describe any pertinent, unusual or outstanding items observed during the site inspection and state if site conditions are consistent with the application.

4. Site should be flagged to show location of proposed road centerlines, existing cemeteries, location of sediment control structures, toe of fill areas, and all seeps located within critical areas (*i.e. under fills, in roadways, regrade areas*).

Pre-Inspection Representatives

- Engineer/Technical Analyst
- Environmental Resource Analyst
- Geologist
- ERS
- Inspector or other pertinent I&E Personnel
- NPDES Reviewer
- OTHER REPRESENTATIVES – Consultant and company representatives should be present.
- Outside Agencies – May include SHPO, DNR, USCOE, DOH, etc.

Materials to Bring

- Safety Gear
- Geo-reference mapping of proposed permitted area, GPS Camera and other documenting equipment as needed.
- Sample Bottles, HACH Kit and other Testing Equipment as needed.

General Information for Report

- Date, Time, Weather, Location, Method of Mining and Coal Seam(s) should be noted.
- Describe and document site conditions to include but not limited to any wetlands, pre-law highwalls, types of slopes, parks, historical lands, homes, structures, utilities, endangered species, cemeteries, roads, etc.
- Document any variances proposed and if the applicant has provided justification.
- Describe sediment control plans. Can they be constructed as proposed?
- Document excess spoil plans and if excess spoil will be deposited onto adjacent permit(s).
- Document jurisdictional determination findings.

- Document if special handling is required.
- Include NPDES information. Are outlets presumed to be precipitation or non-precipitation induced and located in natural drainways.
- Document if mitigation will be required to include plans if available.
- Document Transportation Plans.
- All known significant concerns that need to be considered for review team/I&E recommendations shall be documented.
- Any unresolved issues, Special Conditions and Potential Adverse Environmental Impacts or conditions that may cause major design changes to the application shall be documented.
- Permit Review Team Leader shall record notes and complete the pre- inspection report. Any unresolved issues shall be documented and presented to the Permit Supervisor.

Pre & Post Mining Land Uses

- Is the PMLU compatible with the proposed site configuration?
- If adjacent permits, has the planting plans been successful?
- If the proposed PMLU is Forestland or Fish and Wildlife, has the applicant requested a topsoil substitute waiver request?
- If a topsoil substitute waiver is requested, is appropriate information available in Section I-13 of the application demonstrating that the substitute material is of sufficient quantity and equally suitable for sustaining vegetation as the existing topsoil.
- If a topsoil substitute waiver has been requested, is information presented in Section(s) N, O and I of the application consistent?
- The applicant shall demonstrate 4’ of suitable cover material is available in accordance with 38-2-7.6.c.1 if sufficient topsoil material is not present.
- In accordance with 38-2-7.7.c.2 the applicant shall provide information demonstrating that topsoil substitute material consists of at least 75% sandstone, has a composite pH between 5.0 and 7.5, has a soluble salt level < 1.0 mmhos/cm. Substitute materials with less than 75% sandstone may be allowed provided that the applicant has demonstrated overburden in the mine area does not contain an adequate volume to meet the depth requirements.

Pre-Submittal Meetings

A. Pre-Submittal Meetings

1. Title of Meeting (WVDEP DMR Pre-Submittal Meeting)

2. Complete Form Below (Sample form will be on Intra-net):

Applicant: **Permit Type:**

Project Name: **Application Type:** Choose an item.

Date: Click here to enter a date. **Coal Seam(s):**

Consultant: **County:** Choose an item.

Receiving Stream(s): **Nearest PO Proposed:**

Participants:

Name	Organization	Phone	Email

3. NPDES/BWQ NPDES Handbook

a. NPDES/BWQ SAMPLING SITES

- Were BWQ Points Established? Choose an item.
- Number of Points Established? Choose an item.
- Six (6) consecutive months of BWQ – Two (2) samples per month.
- Samples must comply with NPDES BWQ Protocol.

b. AEPP

- Is an AEPP required? Choose an item.
- If yes, BAS sites must be established by the Regional Biologist in accordance with the Narrative Water Quality Guidance Document.
- Contact Alice Lee to set benthic sites
- AEPP AMPs should be included in section J-11 of the Article III permit application.

4. Geology/Hydrology Geology Handbook

a. Surface and Groundwater PHC (Sections J-3 and J-4)

- Were PHC Points Established? Choose an item.
- Number of Points Established: Choose an item.

PHC data must be with 2 years of application submittal date. Six (6) consecutive months of data for each PHC site with the following parameters:

- **Total Hot Acidity** (mg/l or ppm) **Mineral Acidity** (mg/l or ppm)
- **Total Alkalinity** (mg/l or ppm) **Aluminum** (mg/l or ppm)
- **Total Dissolved Solids** (mg/l or ppm) **Flow** (cfs or gpm)
- **Total Iron** (mg/l or ppm) **Total Manganese** (mg/l or ppm)
- **pH** (Std. Units) **Specific Conductance** (µmhos)
- **Sulfates** (mg/l or ppm) **Total Suspended Solids** (mg/l or ppm)

One sample out of the six months must contain the following parameters:

- **Total Acidity** (mg/l or ppm) **Total Alkalinity** (mg/l or ppm)
- **Total Aluminum** (mg/l or ppm) **Antimony** (mg/l or ppm)
- **Arsenic** (mg/l or ppm) **Beryllium** (mg/l or ppm)
- **Cadmium** (mg/l or ppm) **Total Chlorides** (mg/l or ppm)
- **Chromium** (mg/l or ppm) **Copper** (mg/l or ppm)
- **Cyanide** (mg/l or ppm) **Total Dissolved Solids** (mg/l or ppm)
- **Field pH** (Std. Units) **Flow** (cfs or gpm)
- **Total Iron** (mg/l or ppm) **Lead** (mg/l or ppm)
- **Total Manganese** (mg/l or ppm) **Mercury** (mg/l or ppm)
- **Nickel** (mg/l or ppm) **Nitrates** (mg/l or ppm)
- **Phenols** (mg/l or ppm) **Selenium** (mg/l or ppm)
- **Silver** (mg/l or ppm) **Specific Conductance** (µmhos)
- **Total Sulfates** (mg/l or ppm) **Total Suspended Solids** (mg/l or ppm)
- **Temperature** (C) **Thallium** (mg/l or ppm)
- **Turbidity** (mg/l or ppm) **Zinc** (mg/l or ppm)

All data must be included sections J-3 (Surface) and J-4 (Ground) of the permit application **when submitted**. Failure to submit water data may result in **denial** of application.

Hydrologic Information

b. Groundwater Inventory

Groundwater Inventory (J-2) must be conducted within a half-mile radius of the bonded area and any underground works. All groundwater users, seeps, discharges, and public water sources need to be properly identified in J-2 and on the Geohydrologic Map (minus confidential PSD information).

A one-time sample for each groundwater user should be included in the application at the time of submittal using the PHC sampling parameters (excluding the one-time heavy metals parameters unless directed by the Regional Staff Geologist.

Information is required for administrative completeness.
Hydrologic Information

c. ABA/Selenium/Slake-Durability/Properties of Soft Rock

Number of Core Holes assigned: Choose an item.
Will offsite Geologic Data be used? Choose an item. Permit No.:

The location and number of core holes will be assigned by the Regional Permit Geologist. Any deviation of location or number must be approved by the Geologist prior to submittal.

Core holes should be labeled consistently throughout application and mapping.

Core must be analyzed for ABA and Selenium on all material to be disturbed plus 10 ft below the lowest coal seam to be mined. Material Handling Plans must reflect this data and be certified in accordance with the Selenium Guidance Document. (I-11/O-8)

If Durable Rock Fills are proposed, a Slake Durability analysis must be included. (I-5)

Underground activities require Properties of Soft Rock, though this may be waived by the Review Geologist. (I-12)

All information must be included in the application at time of submittal or the application may be **denied.**
Hydrologic Information

5. InterAgency/Intra Agency Consultation

a. SHPO Consultation

Is SHPO Required? Choose an item.
If YES, SHPO consultation should be submitted prior to submitting the permit application. Approval does not need to occur for Administrative Review, but consultation must be started**.**

All correspondences should be included in section G-3 of the permit application.
State Historic Preservation Office

b. DNR Lands Inquiry Consultation

Will a DNR Lands Inquiry be required? Choose an item.

If YES, a Lands Inquiry must be submitted in section H-2 of the application. The Lands Inquiry must be within 2 years of submittal date. Lands Inquiry does not need to be permit specific, but must cover the affected project area.
Fish & Wildlife Information

c. Endangered Species Consultation

Will Endangered Species Consultation be required? Choose an item.
Does the permit fall with a buffer zone for known endangered/protected species? Choose an item.
If YES, consultation may be started before permit is submitted. Submit all required information to WVDEP review Biologist in Kanawha City.

Initial consultation letter must be in the permit application for administrative completeness. Bat Studies are valid for 5 years from the date conducted. Protection and Enhancement Plans may have tree cutting restrictions.

All correspondences should be included in H-4 of the permit application.
NLEB Compliance Bulletin

6. Engineering Technical Handbook

a. Jurisdictional Impacts

Has a USACE Jurisdictional Determination been conducted? Choose an item.

The USACE approved JD, including map with all applicable information and USACE determination letter, should be included in section P-1 of the permit application when submitted.
Drainage & Sediment Control Information

b. Excess Spoil Disposal

Will any Fills be associated with this application? Choose an item.
If YES, what type of Fill? Choose an item.
Number of Fills: Choose an item.

The USACE approved JD, including map with all applicable information and USACE determination letter, should be included in section P-1 of the permit application when submitted.
Excess Spoil Disposal & AOC Information

c. SWROA

Is a SWROA required for this application? Choose an item.
Drainage & Sediment Control Information

7. Variance/Waivers

a. Variance/Waiver Request

Will there be any variance/waiver requests? Choose an item.
If YES: list variance/waivers.

All variance/waiver requests should include the applicant's justification for the specific request addressed in the appropriate section of the application. All variance/waiver request should be listed in section L-1 of the permit application upon submittal.

8. Meeting Summary

Summary of Submittal/Special Notes

_____

Prepared By: _____

REFUSE DISPOSAL And REPROCESSING

A. Subject: Coal Processing Waste Disposal in Backfill
Date: June 9, 1995

38-2-14.15(m) of the Surface Mining Reclamation Regulations states in part that coal processing waste (coal refuse) placed in the backfill will not contain acid-producing or toxic-forming materials. For purposes of this section, coal processing waste will be considered not containing acid-producing or toxic-forming materials if:

1. It has been demonstrated to the satisfaction of the agency by laboratory testing to be non-toxic and/or non-acid-producing; or
2. An adequate handling plan including alkaline additives has been developed and demonstrated to the satisfaction of the DEP that the material after alkaline addition is non-toxic and/or non-acid-producing. **This additive should not include alkaline overburden unless mixture has been demonstrated to the satisfaction of the agency by laboratory testing, as described below, to be non-toxic and/or non-acid-producing prior to placement.**

Site-specific plans developed by the permittee will be evaluated on a case-by-case basis by the DEP. The plans shall include at a minimum the following:

1. Simulated weathering tests on the coal processing waste ***alone***;
2. Simulated weathering tests on the coal processing waste ***mixed*** with the proposed additive at the projected rates;
3. Contingency plan; and
4. The feasibility of the proposed plan.

The simulated weathering study shall continue until steady state conditions are achieved.

Existing operations permitted to dispose of coal processing material waste in the backfill shall have their plans reviewed by DEP in order to determine if they comply with 38-2-14.15(m) and this procedure.

Coal processing disposal sites which meet all of the criteria of 38-2-22 will not be considered as disposing of coal processing waste under 38-2-14.15(m).

B. Subject: Removal of Abandoned Coal Refuse Piles
Date: May 1, 2002
Approval: Matt Crum, Director, DMR

The Secretary may issue a reclamation contract, in accordance with 38-2-3.14, solely for the removal of existing abandoned coal processing waste piles; only if the average quality of the refuse material **does not** meet the minimum BTU value standards to be classified as coal and/or has a percent ash value of greater than 50, as set forth in ASTM standard D 388-99.

Refuse material that **does not** meet minimum BTU value standards to be classified as coal means; a pile of waste products of coal mining, physical coal cleaning, and coal preparation operations (e.g. culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material in which the material in the pile has a calculated average BTU value less than 10,500.

Calculation of the average BTU value of the pile will be based on samples taken in a minimum of five different, uniformly distributed locations. The number and spacing of sampling locations should take into account variability of the material in short distances.

ROADS

Valid Existing Rights for Haulroads
Internal Primary Roads
Delta Routes
One Hundred Feet of Highway Variance

A. Subject: Valid Existing Rights for Haulroads
Date: September 25, 1998

This document is to clarify and provide guidance on the definition of Valid Existing Rights (VER) for haulroads. The WV Surface Mining Regulations §38-2-2.130 state …" For haulroads, valid existing rights means a road or recorded right-of-way or easement for a road which was in existence prior to August 3, 1977."

If a right-of-way or easement existed prior to August 3, 1977, existing rights apply to that right-of-way or easement width regardless of the existing road width or even if no road was ever built.

If no right-of-way or easement existed prior to August 3, 1977, but a road can be proven to have been in existence prior to August 3, 1977, then VER exists. The applicant can only bond the existing road and ditchline. The road cannot be widened without a waiver being obtained from the owner of the dwelling within 300 feet.

Existing means existing on August 3, 1977. Waivers are not acceptable for public buildings, schools, churches, community or institutional buildings, public parks or cemeteries.

B. Subject: Internal Primary Roads
Date: March 18, 1993

The West Virginia Surface Mining Reclamation Regulations at 38-2-2.58 provide a definition for a haulageway or access road. However, ramps and routes of travel within the immediate mining area or within spoil or coal mine waste disposal areas are excluded from this definition. Furthermore, the Regulations at 38-2-4.1 classify each road, as defined in subsection 2.58, as either a primary road or an infrequently used access road.

Confusion has arisen of late regarding the definition of "immediate mining area" and when a road is classified as "primary". Immediate mining area, as envisioned by 38-2-2.58 of the Regulations and reinforced by federal register language, refers to the area where coal is being removed from the seam and to other areas that should not be subject to the performance standards for roads because they are subject to frequent surface changes. These other areas may include areas where topsoil and overburden are being moved and areas undergoing active reclamation. Utilizing this as a basis, any road which is not within the immediate mining area and will be in place and in use for six months or longer, will be classed as a primary road.

As a result, these internal primary roads must meet performance standards and be certified in accordance with 38-2-4.13 of the Regulations. A design must be contained in the permit which provides sufficient detail that assures performance standards will be met. This design should include and may be limited to a typical cross section and a narrative which addresses the surfacing material, a water management plan which assures that drainage from the mined area flows to the proper sediment control structure, and that the road will be properly constructed, maintained, and certified.

However, site specific conditions may require that additional criteria be included in the design. It is realized that most of these roads are constructed in areas where drainage from the road is treated by sediment control structures designed and constructed for the mined area, so sediment control should not be a factor in these designs. The focus of these designs should be on proper surfacing, slope, grade, and drainage conveyance to ensure performance standards can be adhered to.

Certifications for these internal primary roads should include a profile, plan view, and appropriate cross sections. This information would then show that the road is built in accordance with the approved plan, except as otherwise noted in the certification statement.

Please ensure that all future permit applications include plans which comply with these requirements. Furthermore, for existing permits that do not contain plans which adequately comply with these requirements, an application for permit revision, to include a road design as review, permit renewal, or if violations of associated performance standards arise, whichever should occur first.

C. Subject: Delta Routes
Date: October 1991

A delta road is a road shown on Department of Highway county road maps as being maintained but not owned by the state.

All roads shown on the Department of Highway county road maps as being delta routes are to be bonded by the permit. The operator must provide proof of legal right to conduct mining operations on these roads in the permit application.

D. Subject: One Hundred Feet of Highway Variance
Date: December 2, 1999

Chapter 22-3-22(d)(3) states "Within one hundred feet of the outside right-of-way line on any public road, except where mine access roads or haulage roads join such right-of-way line, and except that the Secretary may permit the roads to be relocated or the area affected to lie within one hundred feet of the road if, after public notice and an opportunity for a public hearing in the locality, the Secretary makes a written finding that the interests of the public and the landowners affected thereby will be protected;"

As part of section C-7a of the surface mining application, the company must submit justification for having proposed the operation within 100 feet of the outside right-of-way of a public road and demonstrate how the public and landowner affected will be protected.

OMR staff will review the justification and plans to ensure that the public and landowner protection is addressed. Findings will be documented using the approved Waiver or Variance Approval section of the DMM-2A.

State Historic Preservation Officer

Procedure
Attachment to Procedure

A. SUBJECT: State Historic Preservation Officer (SHPO)
DATE: December 1, 1993

The West Virginia State Historic Preservation Office (SHPO) is authorized pursuant to Chapter 29, Article 1, Section 5 of the Code of West Virginia to review all undertakings permitted, funded, licensed or otherwise assisted in whole or in part by the State in order to carry out its duties and responsibilities under State and Federal laws.

Chapter 22, Article 3, Section 22(d)(2) of the Code of West Virginia requires joint approval by the DEP and SHPO of the issuance of permits for surface mining operations which will adversely affect any publicly-owned park or place included in the National Register of Historic Sites or the National Register of Natural Landmarks.

CSR 38-2-3.19 provides that the DEP will submit to the SHPO for its review any permit applications for surface mining operations which will adversely affect any publicly owned park or place listed on the National Register of Historic Places or any archeological sites.

Therefore, DEP will provide to SHPO those elements of an administratively complete permit application, or permit related actions as listed in Attachment A, which are necessary for SHPO to perform its review as follows:

1. Applicant will complete Form MR-SHPO for those types of applications specified in the form and submit to the DEP Regional Office ***in all copies*** of the appropriate permitting application. One separate copy of the completed MR-SHPO with the following attachments will be submitted to DEP to be forwarded to SHPO for review:

- One topographic map at a scale of 1" to 500', color coded to show the boundaries and extent of the proposed surface mining operation;
- One topographic map of a scale of 1" to 2000' (standard USGS topographic maps) which show the boundaries of the proposed operation.
- **Include photographs of all structures** (excluding trailers and temporary buildings, any structure built within the past twenty-five years, and equipment) situated on or adjacent to the proposed operation.)

  NOTES: “Adjacent” in this context means within one-thousand feet of the proposed or permitted area. All photographs must be keyed to the project map.
- Indicate places where photographer stood and direction the camera was aimed.
- Applicant’s statement of the conditions of the proposed surface mining site with particular attention given to any known historic, cultural, or archeological resources, and how these resources will be protected.

2. SHPO will review and submit response to DEP within thirty (30) days of receipt. SHPO may request an extension of an additional thirty (30) days. Failure of SHPO to respond within the appropriate time period will constitute a recommendation for approval of the application.

Responses received will be handled in the following manner:

- If SHPO responds that the operation will adversely affect an identified site, the DEP will require applicant to revise application to prevent the adverse impacts, or implement other protection measures jointly approved by DEP and SHPO.

- If SHPO responds that the operation, based on the application data and/or field investigations, will impact important historic, cultural, and archeological resources which are not listed or eligible for listing on the state or national registers, SHPO will describe the basis for the findings and make recommendations to DEP for further investigations to be performed by the applicant which will verify the existence or non-existence of historic and cultural resources. In the event that such exist, SHPO will again be provided an opportunity to review the applicant's proposals and provide comments and recommendations.

- SHPO comments and/or correspondence will be forwarded to the applicant for appropriate action, with copies placed in the regional application file.

3. SHPO will provide to each DEP regional office a monthly report of each application received and in the review process.

Waiver of SHPO for previously disturbed area: SHPO could be waived by one of the following:

a. If the topographic map shows an existing road;

b. If the applicant submits pictures of the existing disturbed area. A site plan type map would need to be submitted with the pictures showing the location of each picture on the disturbed area to be bonded.

B. Subject: Permitting Actions to be Transmitted by DEP to SHPO for Review Date: (Revised 12/3/96)

1. All MR-4 applications for new surface and underground mining permits

2. All MR-3 applications for prospecting approvals except as follows:

a. Those which do not involve any land disturbance;

b. Those which involve channel sampling along existing roadways, trails tramways or existing benches, and where excavation by heavy equipment is not required for access or sampling;

c. Those which involve only core drilling and are less than ten acres;

d. Those in which land disturbance is proposed only on slopes of twenty degrees (20º) or greater in steepness.

3. All MR-17 applications for renewal of existing permits except as follows:

a. Those on which all projected land disturbance has occurred prior to the renewal date;

b. Those on which mining and/or land disturbance is not completed, but is documented to have had a prior SHPO review with findings of no existence of, or no effect on, historic or cultural resources.

4. All incidental boundary revisions (IBR's) which involve more than five acres of land disturbance, [1] unless such land disturbance borders along the original permit boundary, and is not a unit extension of the permit boundary as an appendage to the permit. [2]

[1] DEP will maintain a record of all IBR's which are not transmitted to SHPO, and will provide to SHPO a monthly listing of such IBR's and other permitting actions. After six months from the effective date of this policy, SHPO will advise DEP of any recommended changes of the types of IBR applications which should be reviewed.

[2] Examples of unit extensions or appendages to the permit are: new roads, fills, staging or storage areas, new portals, etc. Proposed disturbances of greater than five acres on ridgetops or valley floors are subject to SHPO review regardless of purpose.

Subsidence Information

Procedure for Subsidence
Groundwater Well Monitoring Plans
Protection of Perennial and Intermittent Streams
Underground Mine Outcrop Barriers and Post Mining Hydrology Evaluation
Procedure for Pre-Subsidence Structure Survey
Clarification of Subsidence Memo and/or New Regulations
Post Underground Mining Assessment (PUMA)

A. Subject: Subsidence
Date: May 22, 1996

This procedure supersedes the March 23, 1993 memorandum and is in response to The Energy Policy Act of 1992 and the March 31, 1995 Federal Register.

1. **a. Subsidence Survey Map**: The map described in 3.12 of the June 1, 1995 Surface Mining Reclamation Regulations must identify structures, location and type of domestic water sources, perennial and intermittent streams or renewable resource lands both on the permit area and adjacent areas within an angle draw of at least 30 degrees**.** However, an angle other than 30-degree can be used based upon results of site specific analyses and demonstration that a different angle of draw is justified. Computer program packages predicting surface movement and deformation caused by underground coal extraction can be utilized.

b. Pre-subsidence Structural Survey: The survey described in Series 16 of the **I&E Handbook** shall be submitted and acknowledged by DEP prior to any underground extraction within the area defined by the angle shown in 1.a. above for any structure for which a survey is required. Structural surveys are required for all non-commercial or residential dwellings and structures related thereto. No mining shall take place in any area for which a structural survey is required until such survey is completed and acknowledged by DEP.

For areas of extraction that is less than or equal to 60 percent, a pre-subsidence structural survey exemption may be requested by the permittee; provided, it is demonstrated that damage to the structure(s) will not occur (adequate support).
In areas of developmental mining *(less than or equal to 60 percent extraction)*, a postponement of the pre-subsidence structural survey may be requested by the permittee; provided, it is demonstrated that damage to the structure(s) will not occur. No mining (*extraction greater than 60 percent)* within the angle of draw shall occur until the pre-subsidence structural survey is completed.

In areas for which a pre-subsidence structure survey exemption and/or postponement is granted and the percent extraction exceeds 60 percent, the exemption and/or postponement for the structural survey is voided for the entire underground mining operation. In addition, the presumption of causation will apply to any damage to structure(s) as a result of earth movement within a 30- degree angle of draw from any underground extraction.

If water supply is any other than a public utility, the permittee must submit information described in Series 16 of the **I&E Handbook** with the request for exemption or postponement.

Note: 30-degree angle of draw is only for survey purpose. 15-degree angle of critical deformation is for protection zone and must be clearly denoted on the subsidence map.

c. Schedule of Compliance:

(1) Not-started Permits: Both a. and b. above must be submitted to and acknowledged by DEP prior to initiation of any mining activities. No mining shall take place in any area for which a structural survey is required until such survey is submitted to and acknowledged by DEP.

(2) Existing Permits with Reserves: Both a. and b. above must be submitted to and acknowledged by DEP **no later than August 1, 1996.** However, both a. and b. above are required for previously mined areas **only** if second mining is contemplated.

(3) A permittee may submit for review existing surveys if the permittee believes they have surveyed an area previous to this policy to the extent that it complies with this policy. This information may be deemed acceptable provided it satisfies the intent of this policy, provides sufficient information to adequately investigate complaints, and the affected party has been notified and concurs.

(4) Previously mined areas: Both a. and b. above are **not required** for areas where mining was completed prior to **August 1, 1996**. However, both a. and b. above are required for previously mined areas **only** if second mining is contemplated.

2. **Presumption of Causation:** If alleged subsidence damage to any noncommercial or residential dwellings and structures related thereto occurs as the result of earth movement within the area which a pre-subsidence structure survey is required, a rebuttable presumption exists that the underground mining operation caused the damage.

a. If the permittee was denied access to the land or property for the purpose of conducting the pre-subsidence survey, no presumption of causation will exist.

b. The presumption will be rebutted if, for example, the evidence establishes that:

(1) The damage predated the mining in question

(2) The damage was proximately caused by some other factor or factors and was not proximately caused by subsidence; or

(3) The damage occurred outside the surface area within which subsidence was actually caused by the mining in question.

c. In any determination whether damage to protected structures was caused by subsidence from underground mining, all relevant and reasonably available information will be considered by the DEP.

3. **Liability:** Regardless of the date of issuance, permittee is liable for subsidence damage caused by underground mining that occurred after October 24, 1992.

4. Maintenance Cost of Replacement Water Supply: Replacement of water supply includes an equivalent water delivery system. Therefore, the permittee is responsible for payment of operation and maintenance cost of the equivalent water delivery system which is in excess of customary and reasonable delivery cost for the premining water supply. Upon agreement by the permittee and the water supply owner, the obligation to pay such operation and maintenance costs may be satisfied by a onetime payment in the amount which covers the present worth of the increased annual operation and maintenance cost agreed to by the permittee and the water supply owner.

5. Bonding for Subsidence Damage: When subsidence related damage occurs to lands, structures, or water supply, and if DEP issues violation(s), the DEP may extend the 90-day abatement period to complete repairs, but shall not exceed one year from date of violation notice. Provided, however, the permittee demonstrates, in writing, that it would be unreasonable to complete repairs within the 90-day time period. If extended beyond 90-days, as part of the remedial measures, the permittee shall post an escrow bond to cover the estimated costs of repairs.

NOTE: Memorandums dated March 7, 1995 and April 24, 1995 regarding groundwater wells and protection of streams remain in effect.

B. Subject: Groundwater Well Monitoring Plans
Date: March 7, 1995

The West Virginia Surface Mining Reclamation Regulations at 38-2-3.12.(a)(8) require that an application for an underground coal mining permit contain a subsidence control plan which includes a description of monitoring plans to determine the commencement and degree of subsidence so that other appropriate measures can be taken to prevent, reduce or correct material damage. Additionally, the Regulations at 38-2-3.22(b)(4) require that if the determination of the probable hydrologic consequences (PHC) indicates that a currently used or significant groundwater resource is likely to be contaminated, diminished, or interrupted, additional information shall be provided as necessary to fully evaluate such probable hydrologic consequences as water availability and suitability for both the premining and postmining land use in order to plan remedial and reclamation activities such as alternative water sources.

With respect to groundwater wells which have been determined to have the potential to be adversely impacted by underground coal mining, it shall be the position of this agency to require that the permit contain a groundwater well monitoring plan which includes at a minimum, the following:

1. Which wells, if not all, that must be monitored to determine if any adverse impacts are occurring. The decision as to which wells must be monitored shall be made by the Secretary during a review of the permit/application. If the Secretary determines that the necessary data cannot be obtained from existing residential groundwater wells, then the permittee/applicant shall be required to install an adequate number of properly designed monitoring wells.

2. The frequency, duration and parameters of monitoring for all applicable wells, will be determined by the Secretary.

3. An acknowledgement by the permittee that for any well that is determined to have been adversely impacted by their mining operation, an alternative source of water will be supplied to the well user within 24 hours of the determination. The monitoring plan shall clearly identify proposed alternative water sources.

4. For existing permitted underground mining operations, the I & E Inspector, in consultation with Permit Review, shall review the subsidence control and groundwater well monitoring plans to determine their adequacy. This determination may necessitate that a permit revision application by submitted by the permittee.

C. Subject: Protection of Perennial and Intermittent Streams
Date: April 24, 1995

The West Virginia Surface Mining Reclamation Regulations at 38-2-3.12(a)(8) require that an application for an underground coal mining permit contain a subsidence control plan which includes a description of monitoring plans to determine the commencement and degree of subsidence so that other appropriate measures can be taken to prevent, reduce or correct material damage. Additionally, the Regulations at 38-2-3.22(c) (4) require that if the determination of the probable hydrologic consequences (PHC) indicates that a currently used or significant surface water resource is likely to be contaminated, diminished, or interrupted, additional information shall be provided as necessary to fully evaluate such probable hydrologic consequences as water availability and suitability for both the premining and postmining land use in order to plan remedial and reclamation activities.

With respect to perennial streams and significant intermittent streams (whose loss could cause material damage to the hydrologic balance) which have been determined to have the potential to be adversely impacted by underground coal mining, it shall be the position of this agency to require that the permit contain a subsidence plan which includes at a minimum, the following:

1. A survey that identifies all perennial and intermittent streams within the critical angle of deformation. The survey shall also identify which streams that could be materially damaged by subsidence.

2. A stream monitoring plan in order to determine if any adverse impacts are occurring. The decision as to which streams must be monitored shall be made by the Secretary during a review of the permit/application. The frequency and duration of monitoring will be determined by the Secretary.

3. A mining plan that clearly defines the measures that will be taken to prevent or minimize material damage to perennial and significant intermittent streams prior to mining. This could include but is not limited to stream lining and in some cases prohibition of mining if prevention of material damage cannot be adequately documented to the satisfaction of the Secretary.

4. A contingency plan which defines the mitigated/remedial measures and timetable.

   For existing permitted underground mining operations, the I & E Inspector, in consultation with Permit Review, shall review the subsidence plans to determine their adequacy. This

determination may necessitate that a permit revision application be submitted by the permittee.

D. Subject: Underground Mine Outcrop Barriers and Post Mining Hydrology Evaluation
Date: May 22, 1996 Revised: November 15, 2012
Approval: Lewis Halstead

Purpose: This procedure is intended to prevent the occurrence of a "mine blowout," and to prescribe the requirements for the evaluation of post underground mining hydrologic impacts prior to bond reduction for operations that proposes underdrainage mining and/or where the Secretary
has determined the application has an elevated risk of blowout or offsite impacts. "Blowouts" are a rapid release of large volume of water impounded in underground mine workings to the land surface due to the failure of outcrop barrier pillar.

1. The permit applicant must leave an unmined section of coal where the coal seam approaches the land surface to create an outcrop barrier pillar except:

a. Where the applicant has demonstrated in the permit application that based upon the geologic and hydrologic conditions in the permit area no accumulation of water in the underground workings will occur;

b. In those locations where the applicant has proposed mine entries for ventilation and transportation of men and materials.
c. Areas where a determination has been made that hydrologic head relief is required.

2. The permit applicant must demonstrate the outcrop barrier is of sufficient width to support the overburden and prevent its failure and sudden release of water due to water pressure against the unmined coal. The applicant must provide an outcrop barrier pillar design based on sound engineering principles. An overburden blow out and stability analysis must be performed and included in the permit package.

3. When the overburden blow out and stability analysis indicates that the coal seam is the weakest point, the permit applicant may use the Empirical Formula (commonly known as the Rule of Thumb) which states that the width of the outcrop barrier $W = 50 + H$ where W is the width of the coal barrier in feet and H is the maximum hydrostatic head that can be built on the outcrop barrier.

4. The outcrop barrier design must also consider seepage analysis in estimating the flow that will be expected from the barrier. The outcrop barrier may be lengthened if estimated flow rates are such that surface water hydrology is likely to be adversely impacted. Alternatively, methods to decrease seepage by use of impermeable materials behind the barrier including curtain grouting may be prescribed.

5. Where underground mining is proposed to be conducted to an adjacent abandoned waterlogged mine, the effect of additional head of water must be considered by the permit applicant in the design of internal and outcrop barriers. For this purpose, the accuracy of

maps of the abandoned mine must be verified by additional borings or by the use of geophysical survey techniques when determined necessary.

6. The width of all outcrop barriers as determined from the design computations must be plotted on the topographic map and included in the permit application. The seam elevations along the outcrop line, location and elevations of springs and seeps must also be plotted on the topographic map. Methods to conduct the water flows safely from seeps downstream of the barrier must be incorporated in the permit.

7. Where multi-seam mining is proposed, the permittee must demonstrate that outcrop barriers in the upper seam are underlain by solid coal barriers in the lower seam, except as provided under item 1.b or where the stability analysis shows that partial mining can occur and that remaining pillars in the lower seam will support the outcrop barriers in the upper seam. The permittee must demonstrate that developmental maps for multi-seam mining include information relating to proposed underground barriers, where mining has already occurred and where it is planned.

8.The permit applicant must demonstrate that procedures for the prevention of buildup of hydrostatic head beyond the designed water level is assured by drilling relief wells or using angled boreholes into the hillside at a point in the overburden for direct passage of mine water to the surface are included in the permit.

However, the uses of these methods which result in gravity discharge from acid producing coal seam are prohibited. Alternatively, pumping of water from deep mine workings to the surface may be included in the permit package. Where such procedures for prevention of the buildup of water beyond the designed water level are used, the permittee must demonstrate that appropriate water treatment methods are included in the permit.

9. Applications that proposes underdrainage mining and/or where the Secretary has determined the application has an elevated risk of blowout or other adverse offsite impacts applicant must provide monitoring plans to include measurements on hydraulic head, quality and quantity of water discharged from workings and verification of outcrop barriers on a regular basis, as determined by the reviewer and/or the inspector. This information shall be used by the permittee to perform an analysis of surface and groundwater quantity and quality that will be prior to granting bond reduction. This analysis must be submitted at least 180 days prior to submittal of initial release request.

The analysis will include an assessment of the data to show that material damage has been prevented. The analysis can include an evaluation of any trends which may exist in the available data that which demonstrate the elevated risk of blowout or other adverse offsite impacts have been minimized and material damage have been prevented.

E. Subject: Pre-Subsidence Structure Survey Procedures
Date: June 30, 1995

The survey process begins with the operator informing in writing all residents or owners of manmade dwellings or manmade structures located within a thirty (30) degree angle of draw projected from the mining limits. This notification must state the reason for the survey and that denial of access will mean that no presumption of causation will exist. The notification must be

mailed or delivered to the resident/owner via certified mail or signed and witnessed receipt. The certification number will be referenced on the letter.

Surveys must be submitted and acknowledged by this agency prior or simultaneously to owners and residents receiving the Notice (6-month notice) described in 38-2-16.1 of the West Virginia Surface Mining Reclamation Regulations. No mining may take place in any area for which a survey is required until such survey is completed, and acknowledged by this office.

The list of residents and owners shall be reviewed and updated by the permittee at a minimum annually for new structures and residents. Within fifteen (15) days of becoming aware of any changes to the original survey (new residents/structures/etc.) the permittee must complete and submit to this agency a revised survey. Any new individuals and /or structures must have a survey if mining (mineral extraction) in the area is not completed.

A copy of the notice of the right to a survey along with the return receipt must be submitted to the appropriate Regional Office. A "Notice" will be mailed to the permittee advising the permittee that these surveys must be conducted for the insurance carrier who has indemnified the permittee for subsidence related damages. If carrier elects to engage the services of another entity to conduct the survey, the carrier must certify, in writing, that this person or entity is qualified to do such work.

Once the Regional Office receives the surveys, they shall be logged in and date stamped. Then, one copy of each survey will be submitted to Headquarters for review.

Upon review by headquarters staff, if the survey is found to be complete and adequate, it will be sent back to the regional office. The regional office will then notify the permittee that the survey has been reviewed and appears to be of sufficient detail to identify the condition of the structure. The permittee shall provide a copy to the owner/resident at this time.

A "log" will be kept at each Regional Office to track each survey during the process. Each survey shall be entered in the log book at the Regional Office and contain the following information:

- Resident/Owner
- SMA or Permit Number
- Permittee name
- Date Notification received by owner/resident
- Date “Notice” sent to permittee
- Date “Notice” received by permittee
- Date survey received
- Date survey acknowledged (accepted)
- Date acknowledgment letter sent

The following guidelines must be adhered to when reviewing a pre-subsidence survey. The inspector must perform the initial review with final review being conducted by the supervisor. The guidelines are provided to assist in evaluating whether the survey adequately documents pre-subsidence damage and other physical conditions which could be affected by subsidence. Each survey of a building and structures related thereto should be bound or stapled together and shall conform to the following format:

- Name of owner
- Name of tenant (if applicable)
- Permittee and SMA# or Permit #
- A copy of the Notification for the Pre-subsidence Survey. If access is denied, include documentation.
- Address of structure, description of structure and location identifier keyed to the subsidence survey map
- Mailing address of owner and tenant
- Plan view of the relative location of structures surveyed (scale not required)
- General description of structure (number of stories, construction materials for frame, construction material for exterior finish and approximate age, if available).
- A general description of the survey methods and direction of progression of the survey, including a key to any abbreviations used.
- Sufficient exterior photographs to illustrate a wide angle full frame view of each exterior wall, close-up photographs to illustrate any pre-subsidence damages noted, and mid-range photographs to illustrate relationships of close-up photos to wide angle photos. Exterior photos should also illustrate the condition of visible foundation walls, sidewalks, steps, porches, chimneys, well houses, fences, utilities, garages, out buildings and other exterior structures.
- Information on the type of water supply (public utility, private multi-dwelling water systems, well(s) spring, cistern).
- If water supply is any other than a public utility, survey must include water analysis (tds or spec. cond. at 25 degrees centigrade, pH, acidity, alkalinity, total Fe, total manganese, and sulfates) and a description of the type of system and treatment being used. For wells, give type (drilled or dug) and, if available well log, depth, age, depth and type of casing or lining, static water level, flow data, pump capacity, drilling contractor and indicate source of data.
- Documentation of the conditions of each interior room to include comments on type of finishing material for each interior wall, ceiling and floor, and notations on the location and approximate dimensions of any defect or unusual condition. Interior condition may be illustrated by drawings, sketches, narrative description and photographs.
- **A notation of any unusual construction technique or method, especially extra-ordinary or sub-standard ("not-to-code") materials or spacing, absence of footer or foundations, pre-fabricated or modular construction, previous relocation of the structure, unusual lot construction or foundation and similar unusual conditions.
- A notation describing any portion of the structure not documented and explanation of why.
- Signature of the person conducting the survey, name and address of person or firm conducting the survey and a copy of insurance carrier documents certifying that the person or firm is qualified to conduct pre-subsidence surveys.

Photographs submitted with a survey must be provided on a CD as well as printed copies. Videos can be used as a supplement only. **Items marked with "**" above may be entirely documented by photographs if sufficient photographs are included to adequately illustrate the required information.**

F. Subject: Clarification of Subsidence Memo and/or New Regulations
Date: July 22, 1997

Since the DEP/OMR procedure for "Subsidence Survey Maps" and "Pre-Subsidence Surveys" were signed on May 28, 1996, there has been debate over "whether the 30º angle of draw is measured from mining limits or from limits of 60% extraction or both." Also, the question arose as to where the 15º angle of critical deformation is measured? The 15º angle of critical deformation has always been measured from any underground mining.

The Federal Regulations 817.121(c) (4) state: "within an area determined by projecting a 30-degree angle of draw from the outermost boundary of any underground mine working to the surface of the land."

The following is the clarification of the policy and/or new regulations.

1. A survey map is required showing 30º from any underground mining.

2. An I & E or permitting exemption from pre-subsidence surveys, if less than 60% extraction, may be requested by the company. This demonstration has to satisfy the agency that subsidence will not impact a structure within the 30º angle of draw measured from any coal removal and the 30º angle of draw from the >60% extraction area. This area will be exempt from pre-subsidence surveys if the exemption is approved.

3. The presumption of causation will apply within 30º angle of draw from >60% extraction, if an exemption is granted. If no exemption, then presumption of causation is within 30º from any mining.

4. For alleged damage in areas outside of the 30º angle of draw of any coal removal, and for any damage in exempted areas, investigations will be undertaken (by DEP) to determine if subsidence caused the damage and who is liable for damage.

G. Subject: Water Rights and Replacement
Date: July 1, 1995

Upon receipt of notification that a water supply was adversely affected by mining, the permittee shall provide drinking water to the user within twenty-four (24) hours.

Within two (2) weeks, the permittee shall have the user hooked up to a temporary water supply. The temporary supply shall be hooked up to existing plumbing, if any, to allow the user to conduct all normal activities associated with domestic water use. This includes drinking, cooking, bathing, washing, noncommercial farming, and gardening.

Within two (2) years of notification the permittee shall have the user connected to a permanent water supply.

The permittee is responsible for payment of operation and maintenance costs on a replacement water supply in excess of reasonable and customary delivery costs that the user incurred.

Upon agreement by the permittee and the user (owner), the obligation to pay such operation and maintenance costs may be satisfied by a one-time lump sum amount agreed to by the permittee and the water supply user (owner).

H. Subject: Post Underground Mining Assessment (PUMA)
Date: June 13, 2016

This information is to clarify the November 15, 2012, policy titled, **"Underground Mine Outcrop Barriers and Post Mining Hydrology Evaluation,**" which is included in the Permitting Handbook, and the **Inspection and Enforcement Handbook**, Series 15, pages 4-5.

The November 15, 2012 policy requires the submittal of hydrologic analyses for underdrainage mines and mines having blowout potential, or other possible adverse offsite impacts. Its intent is twofold. First, in cases where there is no discharge from a mine at the time of a request for Phase I bond release, it provides a quantitative method to demonstrate that the post-mining discharge will be in compliance with applicable water quality standards; thereby, providing rationale in support of the approval or denial of the release application. Secondly, the policy is intended to be forward-looking to assure that during the permit review of new mining applications or expansions of existing underground mines, the permit review team will require adequate pre-mining and during-mining groundwater and/or surface water monitoring, as necessary, to enable the permittee to demonstrate that the predictions in the Probable Hydrologic Consequences (PHC) remain valid, prior to the initial bond release. This required supplemental information for the PHC has become known as the Post Underground Mining Assessment (PUMA).

Therefore, based upon its defined scope, a PUMA is not necessary for all deep mines or when resulting mine discharges are compliant with applicable water quality standards. Only underdrainage mines or other mines having an elevated blowout risk or those lacking sufficient data to demonstrate the validity of the predictions of the PHC will require such analyses.

Typically, PUMAs are not required for above-drainage mines unless elevated risks of blowout or other adverse offsite impacts exist, e.g., artesian effects, subsidence material damage, stream dewatering, etc.

All underground mine permits must be evaluated to determine the need for a PUMA, with such determination documented in the permit record. Therefore, within thirty (30) days of the completion of underground mining operations, the permittee shall submit a **Deep Mine Abandonment Plan** in the form of an Article 3 permit revision**.** This revision will provide the documentation necessary to uphold the approved PHC and Hydrologic Reclamation Plan (HRP), thus affirming that a PUMA is not required for the permit. Otherwise, a PUMA will be required for the permit. The associated permit revision will require all relevant PUMA information and resulting updates to the PHC, HRP, and existing mine seal designs necessary for approval. The regional Geologist IV will be responsible for conducting the review of the submitted information, with engineering assistance as required.

Should a pending Phase I release application exist for an underground permit, the inspector, after conferring with the region's Geologist IV and the I & E Supervisor, will order the permittee on an MR-6 inspection form to perform a PUMA evaluation. Likewise, the revision should either include a PUMA, or present adequate documentation supporting why a PUMA is

not applicable. The assigned inspector is to immediately contact the assigned Release Specialist or the Release

Supervisor and make them aware of this outstanding requirement. **Under no circumstance is the release application to remain pending while the required PUMA revision is being prepared or under agency review. The applicant may either withdraw the application or it will be denied until the requirement is met.**

Additionally, there may be permits approaching Phase II and Phase III release that achieved Phase I status prior to the November 15, 2012 Policy. If such permits require PUMAs, as determined by the region's Geologist IV and I&E Supervisor, the inspector will order the permittee on an MR-6 inspection form to submit a permit revision incorporating all applicable PUMA requirements prior to processing the release request. It will be the responsibility of the regional Geologist IV to review any resulting permit revisions.

The PUMA shall at a minimum include the following information to support all PHC predictions, as follows:

- Final mine map depicting coal seam contours, areas of known water inundation, limits of mining, adjacent mining operations, topographical features, the location of all boreholes (both vertical and horizontal), mine barriers, and dewatering sites.
- Detail map showing coal seam elevation contours, outcrop barrier widths, and if applicable, internal barrier widths adjacent to other mine workings.
- For above-drainage mines, identify any seeps or punch-outs on the down dip end of the mine and provide any available water data from seeps and/or punch-outs.
- Identification of any overlying or underlying mines.
- Resulting hydraulic head calculations reflecting the effects from superjacent, subjacent, and adjacent mining extents; potential barrier interaction between mines; and fracture-induced permeability increases from multiple seam and longwall mining.
- Comprehensive outcrop barrier evaluation comparing existing dimensions and potential hydraulic heads to originally approved values in permit. For significant departures, a factor of safety reevaluation will be necessary.
- Depiction of existing or anticipated mine pool elevations for the mine and inclusion of requirements for monitoring and mine pool level maintenance to control artesian or other adverse effects, if applicable.
- Supporting analyses and descriptions of all underground water discharge(s) from the permit and associated underground mining limits.
- Provide the most recent water data from the approved Article 3 surface and groundwater monitoring sites. At a minimum, provide six (6) consecutive months or, if monitoring quarterly, two (2) years of samples.
- Identification of any pump stations, their pump rates, and sampled water qualities.
- Assessment of any injection sites and associated injected volumes affecting mine pool elevations.
- Discussion of past stream dewatering events or well impacts and associated remediation for the specific mine.
- Evaluation of all water sources intentionally introduced to the mine void.

More data may be required, at the discretion of the reviewing geologist.

Surface Mine Board Appeals

Overview
Board Members
Actions Which Initiate Appeals
Steps Following Appeal Notification
Reference Information

West Virginia Department of Environmental Protection
Surface Mine Board

http://www.dep.wv.gov/smb/Pages/default.aspx

Formerly known as the Reclamation Board of Review, the West Virginia Surface Mine Board's function is to hear appeals regarding the issuance or denial of permits, permit conditions, notices of violation for alleged violation of law or regulations by the West Virginia Department of Environmental Protection, Division of Mining and Reclamation.

Board Members

The Board shall be composed of seven members who shall be appointed by the Governor with the advice and consent of the Senate. Not more than four members of the board shall be of the same political party.

One of the appointees to such board shall be a person who by reason of previous vocation, employment or affiliations, can be classed as one capable and experienced in coal mining, one experienced in the practice of agriculture, one capable and experienced in modern forestry practices, one capable and experienced in engineering, one capable and experienced in water pollution control or water conservation problems, one with significant experience in the advocacy of environmental protection, and one shall be a person who represents the general public interest.

In any case brought before the board relating to quarry operations, two alternate board members will serve on the board who have expertise related to the operation of quarries. These two alternate members will serve in place of the board member appointed due to his or her expertise in coal operations and the board member which has been appointed due to his or her expertise in forestry.

The members of the board shall be appointed as follows: two members appointed to serve a term of two years; two members appointed to serve a term of three years; two members to serve a term of four years; and one member to serve a term of five years.

Current Board Members

James Smith, Chairman
Represents: Engineering
Occupation: Coal Mining
Politics: Republican
Member: Since 2007
Experience:

Ed Grafton, Vice Chairman
Represents: Forestry
Occupation: Retired from Glenville State College
Politics: Democrat
Member: Since 1970
Experience:

Henry Rauch
Represents: Water Pollution Control
Occupation: Geology Professor at West Virginia University
Politics: Independent
Member: Since 1978
Experience: Ph.D. degree in geochemistry/hydrogeology from Penn State University. Since 1970, geology professor for West Virginia University, teaching, research and service work in water pollution and water resources. Primary specialty area is the impact of coal mining on ground and stream waters.

Stephen Butler, Alternate Vice Chairman
Represents: Agriculture
Occupation: West Virginia Farm Bureau
Politics:
Member: Since 2016
Experience:

Mark Schuerger
Represents: Coal Industry
Occupation: Coal Company
Politics: Republican
Member: Since 2007
Experience:

Jon Hunter
Represents: Advocacy of Environment
Occupation: Former Member of the Legislature
Politics: Democrat
Member: Since 2009
Experience:

Ronald Crites
Represents: General Public Interest
Occupation: Former Sheriff
Politics: Democrat
Member: Since 2009
Experience:

Actions That Can Initiate Surface Mine Board Appeals

- **Permitting Actions**
  Permit Application Issuance/ Denial **38CSR-2-3.32.A** & **22-3-21(B)**
  Performance Bond & Site Specific Bond Decisions
  Ownership & Control/Transfers Decisions

- **Bond Release Actions**
  Permit Release Approval/Denial **38CSR-2-12.2.G** & **22-3-23(F)**

- **Inspection & Enforcement Actions**
  Citizen Complaint Investigation (Mr-35) **22-3-2**
  Citizen Request for Site Inspection Decision **38CSR-2-18.3.B**
  Civil Penalty Assessment **38CSR-2-20.10.B.1** & **22-3-17(D)(1)**
  Enforcement of Performance Standards
  Inactive Status Request
  Showcause Request

Notification of Surface Mine Board Appeal

Upon notification of an appeal to the Surface Mine Board the following steps should be taken:

- Inform the DMR staff involved with actions leading to notice of appeal.
- Inform staff of hearing date.
- Obtain information necessary for preparation of certified record – consult with WVDEP legal counsel.
- Compile & submit certified record – follow sample certified record inventory - consult with HQ coordinator & WVDEP legal counsel.
- Certified record must be submitted to board within fourteen (14) days of appeal notice.
- Meet with WVDEP legal counsel for hearing preparation.
- Attend hearing (may involve a site visit).
- Appeal may include intervenors for the appellants and/or appellees, such as permittee's legal counsel, citizen's groups, environmental groups, individual citizens.

A judicial review of the ruling by surface mine board may be requested by the appellant or the appellee. The judicial review may take place in the circuit court of Kanawha County or the county in which the surface mining operation is located. The circuit court judgement is final unless reversed, vacated or modified on appeal to the supreme court of appeals. 22b-4

Reference Information for Surface Mine Board Appeals

- Surface Mine Board Link on WVDEP Website - **SMB**
- 38CSR2 West Virginia Surface Mine Reclamation Rules - **38CSR2**
- WV Code Chapter 22 Article 3 West Virginia Surface Coal Mining & Reclamation - Act **22-3**
- 49CSR1 Procedural Rules Governing Appeals Before the Surface Mine Board - **49CSR1**
- WV Code Chapter 22b Article 1 Environmental Boards - **22b-1**
- WV Code Chapter 22b Article 4 Surface Mine Board **22b-4**
- WVDEP Permit Hearing & Appeals Guide – Office Of Environmental Advocate **Appeals Guide**
- WVDEP Citizen's Guide - Office Of Environmental Advocate **Citizen Guide**
- Sample Certified Record **Sample Certified Record**

IMPORTANT LINKS

- **Quarry Handbook Quarry Handbook**
- **Geology Handbook Geology Handbook**
- **Technical Handbook Technical Handbook**
- **Inspection & Enforcement Handbook I & E Handbook**
- **WV Surface Mining Reclamation Rules 38CSR2**
- **WV Surface Coal Mining & Reclamation Act 22-3**
- **Surface Mining Blasting Rule 199CSR1**
- **Coal Related Dam Safety Rules 38CSR4**
- **Dam Control & Safety Act 22-14**
- **Rules for Quarrying & Reclamation 38CSR3**
- **Quarry Reclamation Act 22-4**
- **Groundwater Protection Rules Coal Mining Operations 38CSR2f**
- **Requirements Governing Water Quality Standards 47CSR2**
- **Water Resources Special Rules 47CSR11**
- **WV/NPDES Rules for Coal Mining Facilities 47CSR30**