

SECTION 5

DRAINAGE AND SEDIMENT CONTROL

SUBJECT: Temporary Sediment Control Structures

1. Purpose: Construction and certification of temporary sediment control structures
2. Definitions: See Below
3. Legal Authority: 38-2-5.4(a)
4. Policy/Procedures: 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

Page Two

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 if violations of associated performance standards arise.

GROUNDWATER MONITORING REPORT

Company Name	
Monitoring Frequency	Permit No.
Reporting period: quarter, 199	NPDES No.

PARAMETER	POINT DATE	POINT DATE	POINT DATE
pH			
Acidity			
Alkalinity			
Specific Conductance or TDS			
Total Iron			
Total Manganese			
Standing Water Level (well)			
Flow (spring)			
Flow (other)			
<i>(List Additional Parameters Below)</i>			

SUBJECT: Elimination of Principal Spillway for Sediment
Control Structures

1. Purpose: To clarify the requirements emergency spillway design and construction
2. Definitions:
3. Legal Authority/Reference: 38-2-5.4(c)(1)
4. Policy/Procedure: In accordance with the regulations Title 38, CSR 2, Section 5.4 (c)(1), the principal spillway requirements may be waived by the Director 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 of non-erodible material and capable of maintaining sustained flows.



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DEPARTMENT OF COMMERCE, LABOR AND
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DIVISION OF ENVIRONMENTAL PROTECTION
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Gaston Caperton
Governor

M E M O R A N D U M

David C. Callaghan
Director

TO: Office of Mining & Reclamation Staff
FROM: David C. Callaghan *DC*
DATE: April 13, 1992
SUBJECT: Policy on Sediment Dams, Embankment Type:
Elimination of Principal Spillway
Replaces and Supersedes: Policy Series P, Page No.
1.10, Dated May 24, 1984

In accordance with the regulations Title 38, CSR2, Section 5.4 (c)(1), the principal spillway requirements may be waived by the Director 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.

CC;SCK:cc

- D. For structures with major design changes, a permit revision in accordance with Rules and Regulations 3.28(c) shall be submitted and approved prior to drainage system certification.
- E. If an MR-13 without as-built plans is received and an on-site inspection reveals a minor or major design change exists, then the inspector shall not accept the MR-13. A simple statement by the inspector shall be attached to each MR-13 stating the reasons for the non-acceptance. The MR-13 shall be distributed to appropriate permit files with the statement attached.
- F. If a certification is not accepted, no additional disturbance or mining activity may take place in the component drainage area until an appropriate certification is received.
- G. Any certification or as-built drawings believed by the inspector to be factually or materially inaccurate shall not be accepted and shall be returned to the certifying professional along with a simple statement by the inspector identifying the questioned (item(s)). The PE or PS shall provide appropriate documentation that the certification or as-built documents are accurate, or shall revise and resubmit the certification accordingly. The drainage system will not be considered to be certified until any issues of accuracy, raised in good faith by the inspector, are resolved.

RSD

SUBJECT: Drainage System Certifications

1. Purpose: To define method of Drainage system certification submission, and/or requirements for as-built plans or modifications.

2. Definitions: Minor design change - a change from the pre-plan, such as, but not limited to a minor change in configuration, minor change in location and/or minor change in spillway configuration which is at least equal to or better than the original design.

Major design change - a change in location which results in a larger drainage area, a change in the type of structure and/or a change in spillway design such as construction of a rock spillway instead of a pipe.

3. Legal Authority/Reference: 22-3-13(b)(10(c) and
38-2-5.4(d)

4. Policy/Procedure:

- A. All drainage systems shall be certified on an MR-13 in accordance with Section 5.4(d) of the Rules and Regulations. Disturbance within any component drainage area may not begin until certification in accordance with 5.4(d) is submitted.
- B. If the structure meets the design requirements, the inspector shall accept the MR-13 and distribute the forms to the appropriate permit files.
- C. For structures with minor design changes, the operator shall submit as-built plans with the MR-13 in accordance with 5.4(b) of the Rules and Regulations.

- D. For structures with major design changes, a permit revision in accordance with Rules and Regulations 3.28(c) shall be submitted and approved prior to drainage system certification.
- E. If an MR-13 without as-built plans is received and an on-site inspection reveals a minor or major design change exists, then the inspector shall not accept the MR-13. A simple statement by the inspector shall be attached to each MR-13 stating the reasons for the non-acceptance. The MR-13 shall be distributed to appropriate permit files with the statement attached.
- F. If a certification is not accepted, no additional disturbance or mining activity may take place in the component drainage area until an appropriate certification is received.
- G. Any certification or as-built drawings believed by the inspector to be factually or materially inaccurate shall not be accepted and shall be returned to the certifying professional along with a simple statement by the inspector identifying the questioned (item(s)). The PE or PS shall provide appropriate documentation that the certification or as-built documents are accurate, or shall revise and resubmit the certification accordingly. The drainage system will not be considered to be certified until any issues of accuracy, raised in good faith by the inspector, are resolved.

**SUBJECT: Inspection and certified report requirements
for all water retention structures**

1. Purpose: To clarify the frequency of examination and reporting requirements for certification of impoundments

2. Definitions:

A. INSPECTION REPORT - (Due Annually) must address at a minimum: (a) has been (is being) constructed and maintained as designed and in accordance with the approved preplan. (b) report shall include discussion of any appearances of instability, structural weakness or other hazardous conditions. (c) depth and elevation of any impounded waters. (d) existing storage capacity. (e) any existing or required monitoring procedures and instrumentation and any other aspects of the structure affecting stability.

B. EXAMINATION REPORT - (Due Quarterly) must address any appearance (or lack of) structural weakness and other hazardous conditions. (i.e., slumps, scarps, cracks, bulges, piping, seeps, etc...).

C. STRUCTURES - Sediment Control Structures and Water Retention Structures.

D. CERTIFICATION - must be submitted on an MR-13 and must affirm that construction was done in accordance with the approved criteria or as otherwise noted in the certification statement.

3. Legal Authority/Reference: 38-2-5.4(d) & (e)
38-2-2.66

4. Policy/Procedures: The chart on next page summarizes and clarifies the reporting requirements for each type of inspection or examination.

	ALL WATER RETENTION STRUCTURES	EMBANKMENT STRUCTURES	MSHA CLASS STRUCTURES
INSPECTION REQUIREMENTS BY OPERATOR	a) not less than quarterly during construction b) upon completion of construction c) at least yearly until removal		
EXAMINATION REQUIREMENTS BY OPERATOR		At least quarterly	Weekly
CERTIFICATION REQUIREMENTS	Upon completion	Upon completion	Upon completion of each phase
INSPECTION REPORT SUBMITTAL REQUIREMENTS	After each inspection (copy retained at or near the operation)		
EXAMINATION REPORT REQUIREMENTS		Reports retained at or near the operation	Reports retained at or near the operation



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
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Gaston Caperton
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John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spaner
Deputy Director

M E M O R A N D U M

TO: All Permitting Supervisors
FROM: *JA* John C. Ailes, Chief
DATE: March 8, 1993
RE: Sediment Control Structures

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.

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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 if violations of associated performance standards arise.

JCA:RAC:det

cc: Rocky Parsons
Ed Griffith
Jeff McCormick
Louis Halstead
Charlie Sturey
I & E Supervisors



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MEMORANDUM

TO: Ed Griffith and Rocky Parsons
FROM:  John C. Ailes, Jr.
DATE: August 10, 1993
SUBJECT: Flocculant Approval

Please advise all permitting and I & E Field Personnel that effective immediately the only type of flocculant that will be approved for use in free flowing drainage systems will be those that have been approved by E. P. A. for use in the open environment.

It is highly recommended that only flocculants that are E. P. A. approved for use in potable water supplies are used in areas where domestic water supplies have the potential to be impacted.

This is due to several incidents of upsets and spills of other types of flocculant that have caused environmental problems including fish kills.

Headquarters will notify the two (2) industry associations so that they may disseminate to their respective members.

Please note that this does not apply to closed circuit preparation plant systems.

JCA/cl

cc: West Virginia Coal Association
West Virginia Mining and Reclamation Association
Policy Book

SUBJECT: Certification of "In Pit" Sediment Control

1. Purpose: Establish acceptance procedures for additional sediment control certifications
2. Definitions:
3. Legal Authority/Reference: CSR 38-2-5.4
4. Policy/Procedures: For operations utilizing "in pit" temporary sediment control, the following certification requirements will apply.

Each quarter when a certification (Form MR-13) will be submitted for "in pit" sediment control with the statement:

I hereby certify that during the _____ quarter of _____ (year) there has been and is currently 0.125 AC-FT of storage volume available for each acre disturbed in the watershed. A map or other description of the area being certified should be included.

This type of certification for "in pit" drainage control will comply with the requirements of 38-2-5.4(d)(i) for permits that allow temporary "in-pit" sediment control. Once "permanent" sediment control structures are constructed, they should also be certified as required by 38-2-5.4(d).

SUBJECT: Removal and/or Reclamation of Sediment Ditches

1. Purpose: Establish Procedure for abandonment of sediment ditches
2. Definitions: N/A
3. Legal Authority: 38-2-3.6(b) & (h)
38-2-5.4(h)
4. Policy/Procedures: Abandonment of sediment ditches shall be in accordance with the approved reclamation plan as contained in the permit. In the event that abandonment of sediment ditches has not been specifically addressed in the reclamation plan, refer to the final regrade cross sections to determine if the sediment ditch was proposed to be left in place. If the ditches are shown on the regrade cross sections, then the operator has the option of either regrading or breaching the sediment ditch so that it no longer impounds water. If the ditch is to be breached, the inspector shall work with the operator to choose appropriate places to breach the ditch. A permit revision will not be required to show the actual locations of the breaches of the sediment ditch.

If there is no abandonment plan in the permit and the regrade cross sections do not show a ditch being left, then the operator must regrade and revegetate the sediment ditches in accordance with 38-2-5.14(h)(1).

SUBJECT: Water Retention or other structure(s)

1. **Purpose:** Procedure for documentation of water or other structure failure
2. **Definitions:** N/A
3. **Legal Authority:** 22-3-13(b)(10)
38-2-5.4, 38-2-20
4. **Policy/Procedures:**

The attached form is to be used when investigating reported failures of water retention or other structures.

This format will standardize documentation of this type of events and will serve as a guide for items to look for and findings made.

Completed forms shall be distributed to permitting, regional file, and the appropriate I & E Supervisor.

Failureform

Company Name: _____ Permit Number: _____

INFORMATION ABOUT NOTIFICATION

When Notified: _____ By Whom: _____
People I notified _____

INFORMATION TO BE GATHERED ON SITE AT TIME OF INSPECTION OF FAILURE

Date Arrived on Site: _____ Time Arrived on site: _____

Others On Site: _____

Weather Conditions: _____ Rainfall (Amount & Duration): _____

Description Of Failure

Structure Number: _____ Other identifying Features of Structure: _____

Exact Location of Structure: _____

Date and Condition of Structure Last Observed Prior To Failure: _____

ACTIONS TAKEN WHILE ON SITE

By Inspector _____ Enforcement Action _____ Pictures _____ Video _____ Notes _____ Other _____

By Company _____ Remedial Measures: _____

Date and Time of Departure From Site: _____

FOLLOW-UP ACTIONS

By Inspector _____ Date of Follow-up Inspection: _____ Was Structure Certified: _____

If Certified, By Who: _____

By Company _____ Was Structure Repaired: _____

Attach map showing location of problem
Attach pictures of structure, on-site damage and off-site damage

Describe What You Believe Caused Failure:

Inspector: _____ Office: _____ Date: _____