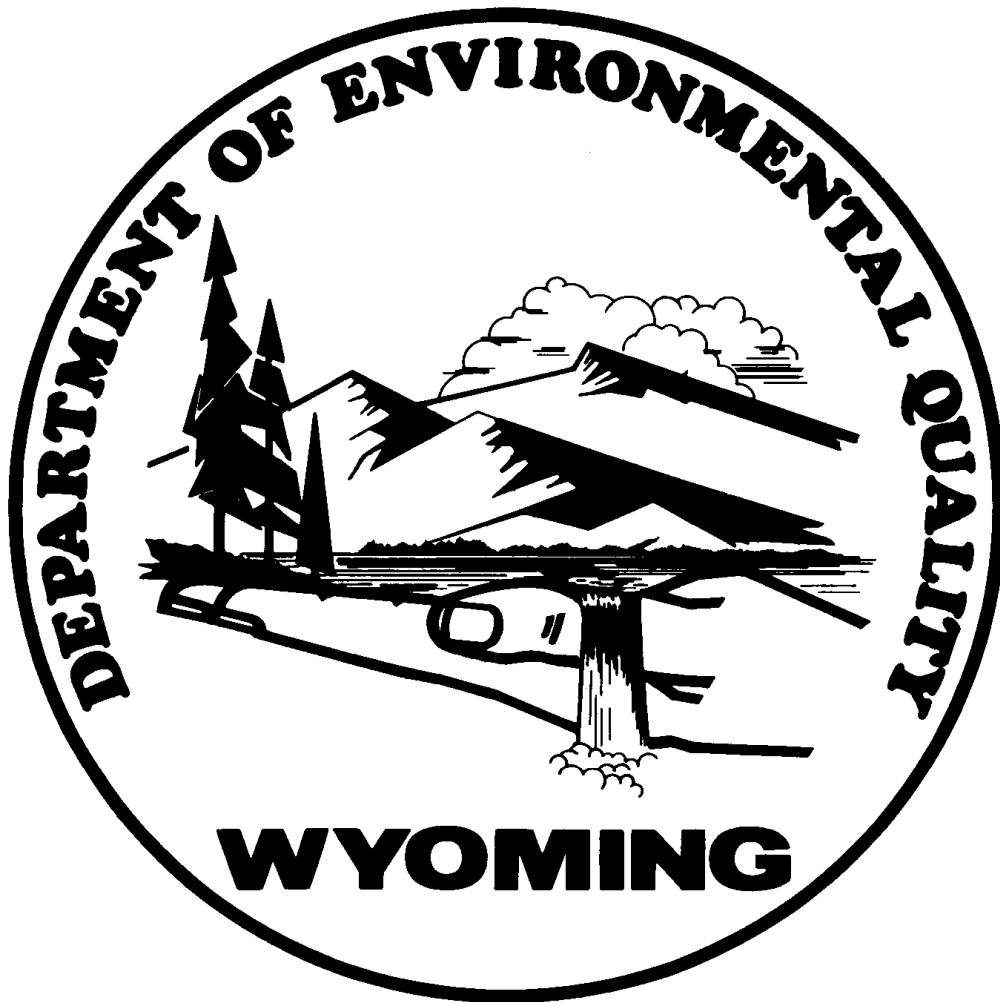


**DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION**



GUIDELINE NO. 22

**VERIFICATION AND COMPLIANCE
STANDARDS FOR PHASE 1 PARTIAL
INCREMENTAL BOND RELEASE**

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I. INTRODUCTION

This document is a guideline only. Its contents should not be interpreted by applicants, permittees, interested members of the public or organizations or Department of Environmental Quality, Land Quality Division (LQD) staff, or other local, state or federal governmental agency staff as mandatory. Except for specifically referenced regulations, this document has not been subject to rulemaking procedures and the contents are not to be interpreted as regulatory requirements. This guideline is based upon applicable provisions of the Wyoming Environmental Quality Act (WEQA) and LQD Coal Rules and Regulations (Coal R&R) and it contains statements of LQD policy and statements of LQD preferred procedures.

The LQD emphasizes that preliminary meetings and exchanges of information are crucial to achieving mutual agreement on the request components and to the timely coordination and execution of all steps in the release process.

The Phase 1 Partial Incremental Bond Release process applies only to Categories 3 through 5 lands, i.e., lands supporting operations which were not completed or substantially completed prior to July 1, 1973 and any affected lands or structures taken out of use between July 1, 1973 and May 25, 1975, through present.

A. Applicable LQD Coal Rules and Regulations (Coal R&R)

1. Chapter 15, Section 5(a)(i) which states that sixty percent of the Incremental Bond may be released "...when the operator completes the backfilling, regrading, topsoil replacement, recontouring and drainage control of a bonded area in accordance with his [sic] approved reclamation plan...for the applicable permit area."
2. Chapter 4, Section 2(c)(v) which states that "Topsoil, subsoil and/or an approved topsoil substitute shall be redistributed in a manner that:
 - (A) Achieves an approximate uniform, stable thickness consistent with the approved permit and the approved postmining land uses, contours and surface water drainage system..."

B. Definitions

1. "Area Bond" is the estimated cost of meeting the rough backfilling requirements of Chapter 4 of the Coal Rules and Regulations and/or any additional rough backfilling requirements in the permit (See Chapter 12, Section 2(a)(i).
2. "Rough backfilling" means replacement of sufficient material in the pit or pits including special disposal practices for toxic and acid-forming materials, special handling and placement of materials for stream reconstruction or alluvial valley floors, and compaction as required so as to render the affected area in a condition whereby the reclaimed land surface generally resembles the approved post mining contours.

3. “Intermittent stream” means a stream or part of a stream that is below the local water table for some part of the year, but is not a perennial stream.
4. “Ephemeral” means a stream which flows only in direct response to precipitation in the immediate watershed or in response to snow melt, and which has a channel bottom that is always above the prevailing water table.

II. PHASE 1 PARTIAL INCREMENTAL BOND RELEASE

Rough Backfill Verification (RBV) and four (4) Phase 1 Partial Incremental verifications are required in support of a Coal R&R Chapter 15 Phase 1 Partial Incremental Bond Release request. Since the Coal R&R Chapter 15 is administrative in nature, RBV and all Phase 1 Partial Incremental verifications must be approved prior to the Chapter 15 Phase 1 Partial Incremental Bond Release request. Details regarding the RBV process including applicable performance standards are discussed in LQD GUIDELINE NO. 21: ROUGH BACKFILL VERIFICATION AND AREA BOND FOR COAL MINES

A. Required Phase 1 Partial Incremental Verifications

1. Stream Channel Reconstruction Verification

Prior to a Phase 1 Partial Incremental Bond Release request there must be a demonstration that the postmining drainage network reconstruction is acceptable and there are no depressions or other impoundments which accumulate water unless approved in the permit. Stream Channel Reconstruction Verification can occur via the AR or as independent Stream Channel Reconstruction Verification submittal package.

a. Performance Standards

The information submitted in support of Stream Channel Reconstruction Verification should make the Permittee’s case that:

- (1) All channels within the backfilled acreage have been constructed according to engineering designs in the approved permit¹
- (2) The match points (transition) between native channels and reconstructed perennial, intermittent and ephemeral channels agree with the approved design(s) within the accuracy of normal field construction and survey practices.
- (3) Perennial, intermittent and ephemeral reclaimed channel gradients, channel lengths and channel sinuosity match the approved design(s)
- (4) Perennial, intermittent and ephemeral streams floodplain and channel cross-sections are not narrower than the approved design(s)

¹ This does not apply to first order non-designed drainages.

- (5) Perennial, intermittent and ephemeral longitudinal channel profiles are concave and have no hydraulic jumps.
- (6) On-channel depressions are smaller than a 0.5 acre-foot in volume unless included in approved permit.

b. Post Mine Topography (PMT) Flexibility²

There is zero tolerance (horizontal and vertical) flexibility for Perennial streams.

- (1) Intermittent stream (including ephemeral streams with a contributing drainage area greater than one square mile).
 - (a) Vertical – zero tolerance for match points (transition from reconstructed channel to native channel)
 - (b) Horizontal – stream channels may shift within the drainage basin as long as all other performance standards are satisfied.
- (2) Ephemeral stream (including channels with a contributing drainage area less than one square mile).
 - (a) Vertical – the match point or confluence of the drainage channel may move along the higher order stream as long as an acceptable channel gradient is maintained. Therefore there is some flexibility in vertical location of stream confluence
 - (b) Horizontal - stream channel centerlines and confluence may shift within the drainage basin as long as all other performance standards are satisfied.

c. Submittal Requirements

- (1) A request for Stream Channel Reconstruction Verification via an independent submittal or the AR should be clearly identified.
- (2) Construction verification data and/or drawings (e.g., channel profiles, cross-sections, and channel gradients) for all designed channels within the area being requested for Stream Reconstruction Verification, demonstrating that they were constructed according to the engineering designs in the approved permit.
- (3) A map(s) that:

² This information is contained in LQD Memorandum dated August 5, 2003 titled Performance Measures for PMT Flexibility

- (a) Presents the actual “as-built” constructed contours of the area backfilled of the same scale as the PMT contour map in the approved permit; and
- (b) Identifies the location of all reconstructed stream channels.
- (c) Identifies all areas being requested for Stream Channel Reconstruction Verification as uniquely delineated polygons.
- (d) Identifies all areas that have previously achieved Stream Channel Reconstruction Verification as uniquely delineated polygons.

2. Backfill Quality Verification

Backfill quality verification does not apply to Category 3 lands. The 1975 rules for Category 4 lands do allow the LQD to require special handling and sampling of the overburden on a case by case basis. There may be permit commitments concerning special handling and/or sampling of the overburden. On the basis of the permit commitments and site conditions, the district supervisor may require verification of the proper handling and placement of overburden material for Category 4 lands."

The Act includes the requirement to properly dispose of acid and toxic forming material but no mention of sampling.

Prior to a Phase 1 Partial Incremental Bond Release request there must be a demonstration that backfill quality sampling data supports achievement of the permit commitments for backfill quality sampling. Backfill Quality Verification can occur via the AR or as independent Backfill Quality Verification submittal package.

a. Performance Standards

All overburden and spoil material that is determined to be toxic, acid forming or will prevent adequate reestablishment of vegetation on the reclaimed land surface, unless such materials occur naturally on the land surface, must be properly disposed of during the mining operation.

b. Submittal Requirements

- (1) A request for Backfill Quality Verification via an independent submittal or the AR should be clearly identified.
- (2) A map that
 - (a) identifies all areas being requested for Backfill Quality Verification as uniquely delineated polygons

- (b) Identifies corresponding regulatory categories for all disturbed areas being considered for verification.
- (3) For mines participating in the Regraded Spoils Program, reference applicable submittals and approvals for the reclaimed area being considered for Backfill Quality Verification.
- (4) For mines with no documentation of Backfill Quality Verification approval illustrate the location of backfill quality sampling sites. The information should organize and present the backfill sample data to demonstrate that the sample intensity and methods meet the permit commitments.

3. Soil Depth Verification

Soil Depth Verification does not apply to Category 3 or Category 4 lands.

The verification of soil (topsoil, subsoil and substitute material) application should occur via the AR or as an independent Soil Depth Verification package. Prior to a Phase 1 Partial Incremental Bond Release request there must be a demonstration that the approved topsoil replacement commitments have been satisfied.

a. Performance Standards

Topsoil, subsoil and or an approved topsoil substitute shall be redistributed in a manner consistent with the approved permit and the approved post mining land uses, contours and surface water drainage systems.

b. Submittal Requirements

- (1) A request for Soil Depth Verification via an independent submittal or the AR should be clearly identified.
- (2) A map(s) that:
 - (a) Identifies corresponding regulatory categories for all disturbed area being considered for verification.
 - (b) Identifies all topsoil replacement units using a unique Unit Identification nomenclature. A topsoil replacement unit means a defined area backfilled to the approved rough grade which has been topsoiled to the approved depth.
 - (c) Identifies all areas that have been approved for Soil Depth Verification as uniquely delineated polygons.
 - (d) Identifies all areas being requested for Soil Depth Verification as uniquely delineated polygons.

(3) Supporting information that:

- (a) States the approval topsoil replacement depth (or range of depths) for each topsoil replacement unit.
- (b) States the volume of topsoil replacement on each individual topsoil replacement unit, including a brief explanation of how topsoil volume was calculated for each topsoil replacement unit, e.g., certified load counts, depth lathe and acreage, depth holes and acres, etc.
- (c) States the acreage of each identified replacement unit.
- (d) States whether approved topsoil substitutes were applied to any topsoil replacement unit.
- (e) States whether the permit requires fertility testing of stockpiled topsoil, if required, whether the testing was completed.

4. Drainage System Functionality Verification

Drainage System Functionality Verification will include a qualitative assessment regarding the suitability of the restored drainage control system. All reconstructed drainages, including non-designed channels, will be evaluated based upon the approved reclamation plan and PMT Flexibility commitments detailed in Section II(A)(2)(b) of this document if applicable.

A. Submittal Requirements

- (1) A request for Drainage System Functionality Verification via an independent submittal or the AR should be clearly identified.
- (2) A map(s) that:
 - (a) Presents the actual “as-built” constructed contours of the drainage area at the same scale as the PMT contour map in the approved permit; and
 - (b) Identifies the location of all reconstructed drainages and stream channels.
 - (c) Identifies all areas being requested for Drainage System Functionality Verification as uniquely delineated polygons.
 - (d) Identifies all areas that have previously achieved Drainage System Functionality Verification as uniquely delineated polygons.

B. Tracking of Verification Approval

Specific approval of all Phase 1 Partial Incremental verifications submitted must be stated in the approval letter for the AR or individual submittal. In instances where Phase 1 Bond Release verification were processed via the AR prior to the finalization date of this document and there is no documentation of approval for the AR containing said information or data, supporting the verifications detailed above, the referenced AR may be revisited and handled on a case specific basis. LQD District Supervisors will have the discretion to require operators to submit additional Phase 1 Bond Release verification information if they feel information in the referenced AR is inadequate or missing.

Approvals for all Phase 1 Partial Incremental verifications described in this document will be tracked using:

1. Annual Report

The cumulative inventory of all areas that have achieved Phase 1 Partial Incremental verification(s) will be included in the most current AR as a map that identifies all areas that have been previously approved for Phase 1 Partial Incremental verification(s) using uniquely delineated polygons.

2. Stand Alone Bond Release Verification Volume

- a. Annual Report Approval

Copies of all AR approval letters that include Phase 1 Partial Incremental Verification(s) will be contained within the stand alone Bond Release Verification Volume.

- b. Individual Submittal Package Approval

All individual submittal packages will be contained within the stand alone Bond Release Verification Volume with the accompanying approval letter.

3. Geographic Information System (GIS) Geodatabase

Permit coordinators who wish to support Phase 1 Partial Incremental Verification through the use of GIS may require applicable layers from operators. The reviewer will coordinate with the operator regarding the required layers and acceptable formats of submittal.