

STATE OF
COLORADO

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us>

Inspection Reports for Mitchel Pits M1987023 & M1990131

1 message

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us>

Wed, May 24, 2023 at 3:18 PM

To: mitcheller@comcast.net

Hello Rick.

Enclosed are the inspection reports for the Mitchell Pit Permit No. M-1987-023 and the Mitchell Pit #2 Permit No. M-1990-131. Please review the inspection reports and reach out to me if you have any questions on how to proceed with the required corrective actions listed in each report.

As we discussed on the phone, because these are two separate permits, you will need to submit a separate Technical Revision form and pay the \$216 revision fee for each one and submit the appropriate changes made to the mining and reclamation plans and maps. The Division cannot accept exact copies for each permit, since there are differences in the permit areas, the types of activities occurring at each site, and the approved post-mining land use.

I sent the inspection reports along with the attachments and forms you need to submit in the mail today so you will have hard copies of everything you need to complete the technical revisions.

Kind regards,

--

Nikie Gagnon**Environmental Protection Specialist****COLORADO**Division of Reclamation,
Mining and Safety

Department of Natural Resources

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3 attachments

**INSP-REPORT_M1987023_Mitchell Pit_Final.pdf**

7328K

**Enclosures-for-Reports.pdf**

687K

**INSP-REPORT_M1990131_Mitchell Pit #2_Final.pdf**


4821K



MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Mitchell Pit	MINE/PROSPECTING ID#: M-1987-023	MINERAL: Sand and gravel	COUNTY: Adams
INSPECTION TYPE: Monitoring	WEATHER: Foggy, Cool	INSP. DATE: May 10, 2023	INSP. TIME: 10:00
OPERATOR: Ricky W. Mitchell	OPERATOR REPRESENTATIVE: Rick Mitchell	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$13,344.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
INSPECTOR(S): Nikie Gagnon, Amy Eschberger, Joel Renfro	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 23, 2023

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Signs & Markers

PROBLEM/POSSIBLE VIOLATION: Problem 1: The affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Rule 3.1.12(2). (For a 110c operation, the affected area is considered the permit area.)

CORRECTIVE ACTIONS: By the corrective action due date, the Operator shall conduct a survey and replace the boundary markers in the correct location(s). The Operator shall provide proof to the Division that this has been done, in the form of a map depicting the surveyed boundary, photos showing the boundary markers in place, and GPS coordinates for each corner marker.

CORRECTIVE ACTION DUE DATE: 6/23/23

INSPECTION TOPIC: Gen. Compliance With Mine Plan

PROBLEM/POSSIBLE VIOLATION: Problem 2: The current mining plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-112(1)(c)(VI) and Rule 6.3.3. The Operator must provide sufficient information to describe or identify how the Operator intends to conduct the mining operation.

CORRECTIVE ACTIONS: By the corrective action due date, the Operator shall submit a Technical Revision, with the required \$216 revision fee, to update and clarify the current approved mining plan in accordance with Rule 6.3.3 to reflect existing and proposed activities. Specifically, the mining plan needs to be updated to describe the processing activities occurring on site, the inert material backfilling activities and various recycling

operations conducted on site, the available topsoil on site and location(s) of topsoil stockpiles, and all major components of the mining operation, (e.g., roads, pits, storage areas, processing areas, stormwater management features). This revision must also include an updated mining plan map, using the surveyed boundary, which meets the requirements of Rules 6.2.1(2) and 6.3.5(2). The map must include the location and owner(s) of all permanent man-made structures located on and within 200 feet of the approved permit area.

CORRECTIVE ACTION DUE DATE: 7/24/23

INSPECTION TOPIC: Gen. Compliance With Reclamation Plan

PROBLEM/POSSIBLE VIOLATION: Problem 3: The current reclamation plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-116 and Rule 6.3.4. The Operator must provide sufficient information to describe or identify how the Operator intends to conduct reclamation.

CORRECTIVE ACTIONS: By the corrective action due date, the Operator shall submit a Technical Revision, with the required \$216 revision fee, to update and clarify the current approved reclamation plan in accordance with Rule 6.3.4 to reflect existing and proposed activities. Specifically, the reclamation plan needs to be updated to clarify whether a green house and tree farm operation are still planned for the post-mining land use, and to describe how the imported inert materials will be used for reclamation. This revision must also include an updated reclamation plan map that meets the requirements of Rules 6.2.1(2) and 6.3.5(3). This map must identify any structures that will remain within the permit area after reclamation (e.g., roads, stormwater structures). This corrective action may be submitted with the same Technical Revision required for Problem #2 of this report.

CORRECTIVE ACTION DUE DATE: 7/24/23

OBSERVATIONS

This inspection was conducted by Nikie Gagnon, Amy Eschberger and Joel Renfro, representing the Division of Reclamation, Mining and Safety (Division). Rick Mitchell (Operator), accompanied the Division during the inspection. This operation is located in Adams County, 0.5 mile southeast of the town of Bennett, Colorado.

The Mitchell Pit and the Mitchell Pit #2 (M-1990-131) are adjacent 110c permits operating as a single sand and gravel mining operation. This report focuses on the Mitchell Pit. The Mitchell Pit is permitted for 9.9 acres and the approved post mining land use is general agriculture.

Signs and Markers:

Mine signs were posted at the entrance to the mining area as required by Rule 3.1.12(1), however, permit boundary markers were missing or appeared to be incorrectly placed around the permit area. The Division discussed this problem with Mr. Mitchell and he agreed to conduct a survey and install boundary markers in the correct locations. The Operator will need to submit a map depicting the surveyed boundary, photos showing the boundary markers in place, and GPS coordinates for each corner marker (See Problem #1). Per Rule 3.1.12(2), the permit boundaries must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries. Given the adjacent permits at this site, it is critical that the two separate permit areas are clearly delineated in the field, including the shared boundary.

General Compliance with Mining and Reclamation Plans:

The Operator is actively mining the Mitchell Pit. Several small pit excavations were observed throughout the site. A highwall runs the length of the site on the western side of the permit area. The highwall has an average height of approximately 20 feet and a slope ranging from nearly vertical to 2H:1V. The highwall did not appear to be mined recently. When completing final reclamation, the Operator will need to grade all slopes to 3H:1V or flatter to comply with the approved reclamation plan. Given the closeness of the highwall to the western permit boundary, there does not appear to be enough space to cut and fill the highwall for reclamation. Therefore, it will need to be backfilled with material available on site.

A portable screening plant sits at the base of the western highwall and stockpiles of screened sand and gravel were observed in the pit. The approved mining plan states the deposit will not be processed on site. Therefore, the Operator will need to submit a Technical Revision (see enclosed form) to update the mining plan narrative to describe the processing activities occurring on site, and to update the mining plan map to show the location of the processing area(s) (See Problem #2).

The Division also observed structures located within 200 feet of the permit area which are not shown on the approved mining plan map as required by Rule 6.3.5(2), including a residence and associated structures (e.g., sheds). The Operator will need to ensure the updated mining plan map shows the location and the owner(s) of all permanent, man-made structures located within 200 feet of the permit area.

It should be noted, the approved permit indicated that existing topsoil at the site ranged from 6 inches or less in depth along the eastern side of the permit area to up to 48 inches in depth along the western side of the permit area (at the top of the hill). The approved reclamation plan calls for replacing a minimum of 6 inches of topsoil across all disturbed lands. The Operator committed to salvaging all topsoil removed during the mining operation and storing it inside the western permit boundary. However, the Division did not observe any topsoil stored within the permit area during this inspection. The updated mining plan map required by

Problem #2 will need to show the location of all topsoil stockpiles. Additionally, the updated reclamation plan required by Problem #3 will need to describe the available topsoil on site and specify whether any topsoil will need to be imported to the site for reclamation.

As stated above, the approved post-mining land use for the site is general agriculture. The approved permit application stated the Operator's intention to utilize the reclaimed site as a combination green house and tree farm operation. However, the approved reclamation plan and map do not include any details on these features. During the inspection, the Operator indicated he may want to remove plans for a green house and/or tree farm operation. These changes can be done through a Technical Revision. However, a proposal to change the post-mining land use from general agriculture to another use will require the submittal of an Amendment application. The Division recommends the Operator clarify the post-mining land use for this site in the Technical Revision required by Problems #2 and #3

Inert Fill:

Based on Division records, the Operator has been importing mixed inert fill to the site since at least 2008. According to the Operator, some of the material is recycled and sold and some is used for reclamation backfill. During this inspection, the Division observed broken up concrete, general fill dirt, and asphalt on site. Black plastic bags or landscape fabric was observed in one area below the western highwall. The Division reminded the Operator that trash is not an acceptable material for backfill. The Operator stated he will remove this material from the pit.

Additionally, the Division observed bermed basins in the pit area. Generally, the basins were dry, however, two basins had a few inches of standing water. Mr. Mitchell explained that his mining operation includes disposal of water based drilling mud or hydrovac slurry. Drilling companies haul the slurry to one of the basins within the mine site. Once the water evaporates, the clay material is sold or used to backfill the excavated pits. During this inspection, Mr. Mitchell gave the Division copies of the drilling mud disposal records for the past year to coincide with the annual report he submitted in March.

The Division reviewed the permit file for records related to the slurry mud disposal. In 2011, the U.S. Environmental Protection Agency (EPA) investigated a complaint regarding drilling mud disposal practices at this site. At that time, the EPA determined Mr. Mitchell is not illegally disposing solid waste. The Operator has been submitting inert fill notices to the Division since this activity was discovered by the Division during its July 29, 2008 inspection. However, these notices do not include all the information required by Rule 3.1.5(9). Additionally, the Division's process for submitting this information has changed to include the submittal of a Technical Revision. This allows the Division to review and approve the proposed activities, ensuring the proposed backfill material meets the definition of "inert material" provided by Rule 1.1(22), that the backfilled site will result in a post-mining configuration that is compatible with the approved post-mining land use, that the material will be placed and stabilized in a manner to avoid unacceptable settling and voids, and that the financial warranty is adequate.

Although the Operator is attributing the ponded water observed in the pits to the drilling muds that were deposited in the pits, a review of historical imagery of the site (available in Google Earth), show that one or more of the pits has had ponded water fairly consistently since mining began. The Operator should be advised, the Division of Water Resources (DWR) requires any stormwater runoff intercepted by the operation that is not diverted or captured in priority to infiltrate into the ground or be released to the stream system within 72 hours. Otherwise, the Operator will need to make replacements for evaporation.

In order to be compliant with Rules 3.1.5(9), 6.3.3, and 6.3.4, the Operator will need to submit a Technical Revision to update the mining plan and reclamation plan to include a narrative that describes all importation and backfilling practices and recycling processes occurring on site and how this material will be used for reclamation. The mining plan map and reclamation plan map will also need to be updated to reflect all existing and proposed activities. These updated maps must conform to the requirements of Rules 6.2.1(2) and 6.3.5. A single Technical Revision may be submitted to address the required corrective actions for both Problems #2 and #3 in this report.

While the Division is allowing the Operator to submit one Technical Revision to address the corrective actions for Problems #2 and #3 in this report, the Operator should be advised, a separate Technical Revision form exists for the importation of inert fill (see attached). This form will need to be submitted for any future importation of inert fill to the site. The Division will no longer accept inert fill notices from the Operator that are not submitted on this form.

Off-site Damage:

Mr. Mitchell operates a landscaping material yard on the north end of his property, adjacent to the permitted mining operation. While this area has been indicated on recent annual report maps, it was not indicated on the approved mining plan map. Given the similarity of the activities occurring in this area compared with those occurring inside the permit area (e.g., material stockpiling) and the location of this area directly adjacent to the northern permit boundary, it is critical the boundary be clearly delineated in this area to separate the mine activities from the Operator's adjacent commercial activities. Additionally, any material extracted from the mine site and any material that will be used for reclamation of the mine site must be stored within the approved permit area (excluding product hauled off-site), and not in the adjacent material yard.

The Division observed one dirt stockpile in the disturbed northern area which the Operator indicated came from the mine site. Due to the permit boundary markers being missing or improperly located, the Division was unable to determine whether this stockpile was located outside of the approved permit boundary. As a precaution, the Operator agreed to move this stockpile south to avoid a violation for off-site impacts. The updated mining plan map to be submitted for Problem #2 will need to outline and label any existing disturbance areas located adjacent to the permit boundary in accordance with Rule 6.3.5(2)(f), including areas used by the Operator's landscaping business.

During this inspection, the Division observed a berm running parallel to the western permit boundary above the mine, which appeared to be located outside of the approved permit area. The berm was vegetated and stable. The Operator indicated this material is not related to the mining operation and was placed to control runoff across his property after a washout. The Division informed the Operator that this material cannot be used for reclamation of the mine if it is stored outside of the permit boundary. If the Operator intends to use this bermed material for reclamation of the site, the permit must be expanded through the submittal of a Conversion application to include the stockpile.

Reclamation Success:

The Division estimates 9.5 acres have been disturbed by the mining operation. No evidence of reclamation was observed during this inspection other than some backfilling with inert material.

Financial Warranty:

The Division currently holds a cash bond in the amount of \$13,344.00 for reclamation of the Mitchell Pit. The required bond for this site will be re-evaluated during the Division's review of the updated mining and reclamation plans submitted with the required Technical Revision.

This completes the monitoring inspection report. Photographs taken during the inspection are attached.

Please contact Nikie Gagnon via phone at (303) 866-3567 ext. 8126 or email at nikie.gagnon@state.co.us if you have any questions regarding this report.

PHOTOGRAPHS



Photo 1. Looking northeast from the western highwall across the mining area. Landscaping and mining material stockpiles in the background (red arrows). Slurry basins and clay berms and stockpiles in the foreground (blue arrows).



Photo 2. Looking north from the top of the highwall. Stockpiles of material in the pit



Photo 3. Looking east from the top of the highwall at portable screening equipment next to material stockpiles.



Photo 4. Looking down into the pit from the top of the western highwall. Black plastic bags or landscape fabric observed in the pit during this inspection.



Photo 5. Looking southwest from the boundary marker located in the northeast corner of the permit area.



Photo 6. Looking west in the area of the northern permit boundary. Stockpiles of material from mining and the landscaping business are places in this area.



Photo 7. Slurry basin on the east side of the mining area.



Photo 8. Dry slurry basin on the east side of the mining area.



Photo 9. Wet slurry basin in the northeast corner of the permit area.



Photo 10. Stockpiles and excavations dot the pit area.



Photo 11. Residence and equipment located north of the western highwall within 200' of the permit area.



Photo 12. Berm running parallel to the western permit boundary above the mine, located outside of the approved permit area.



Photo 13. Google Earth image dated 5/2020. Permit boundaries outlined in red.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>N</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>PB</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>PB</u>	(SP) STORM WATER MGT PLAN--- <u>N</u>	(RS) RECL PLAN/COMP-- <u>PB</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

Inspection Contact Address

Rick Mitchell
Ricky W. Mitchell
P.O. Box 10
Bennett, CO 80102

Enclosures: Technical Revision form
Technical Revision form for importation of inert fill
Rule 3.1.5(9) – imported backfill material
Rule 6.2.1(2) – general requirements for maps
Rules 6.3.3, 6.3.4, and 6.3.5 – mining and reclamation plans and maps

CC: Amy Eschberger, DRMS



COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- _____ Site Name: _____

County _____ TR# _____ (DRMS Use only)

Permittee: _____

Operator (If Other than Permittee): _____

Permittee Representative: _____

Please provide a brief description of the proposed revision: _____

As defined by the Minerals Rules, a Technical Revision (TR) is: “a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan.” The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted</u> (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	<input type="checkbox"/>
112 hard rock (not DMO)	\$175	<input type="checkbox"/>
110d, 112d(1, 2 or 3)	\$1006	<input type="checkbox"/>



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

REQUEST FOR TECHNICAL REVISION (TR) Importation of Inert Fill

File No.: M-_____ Site Name: _____

County: _____ TR# _____ (DRMS Use only)

Permittee: _____

Operator (If Other than Permittee): _____

Permittee Representative: _____

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR. Page 2 is designed to address the requirements of Rule 3.1.5(9). It is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted (mark only one)</u>
110c, 111, 112 construction materials, and 112 quarries	\$216	
112 hard rock (not DMO)	\$175	
110d, 112d(1, 2 or 3)	\$1006	
2018-2019 Wildfire Material Debris Removal	Waived	



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, CO 80203

Rule 1.1(24)/1.1(20) "Inert Material" means non-water-soluble and non-putrescible solids together with such minor amounts and types of other materials, unless such materials are acid or toxic producing, as will not significantly affect the inert nature of such solids. The term includes, but is not limited to, earth, sand, gravel, rock, concrete which has been in a hardened state for at least sixty days, masonry, asphalt paving fragments, and other inert solids.

**Rebar or other protruding reinforcements must be removed prior to placement. All material must be buried to a minimum of 3 feet below final surface grade.

-
1. General Description of material to be imported: _____

 2. Approximate volume of inert material to be backfilled: _____
 3. Estimated dates of commencement: _____ and completion: _____
 4. Use/purpose of imported material: _____

 5. A general engineering plan stating how the material will be placed and stabilized in a manner to avoid unacceptable settling and voids. _____

Enclosed is a map showing the proposed location of the inert material.

3.1.5(9)(c) - Affidavit

I _____ of _____ hereby
certify that only clean and inert material will be imported at _____.
All material will adhere to the Division's definition of Inert Material as defined in Rule
1.1(24)/1.1(20).

Signature: _____ Date: _____

RULE 3: **RECLAMATION PERFORMANCE STANDARDS, INSPECTION, MONITORING, AND ENFORCEMENT**

3.1 RECLAMATION PERFORMANCE STANDARDS

3.1.1 Establishing Post-Mining Use

- (1) In consultation with the Landowner, where possible, and subject to the approval of the Board or Office, the Operator shall choose how the affected lands shall be reclaimed. These decisions can be for forest, rangeland, pastureland, cropland, general agriculture, residential, recreational, industrial/commercial, developed water resource, wildlife habitat, or other uses.
- (2) The results of these decisions shall be formulated into a Reclamation Plan, as specified in Rule 6.3.4 or 6.4.5, as required for the size and type of operation.

3.1.2 Reclaiming Substituted Land

116(4)(q)(IV)

Reclamation shall be required on all the affected land except that the Operator may substitute land previously mined and owned by the Operator but not otherwise subject to the Mined Land Reclamation Act, or the Operator may reclaim an equal number of acres of any land previously mined, but not owned by the Operator, if the Operator has not previously abandoned unreclaimed mining lands. Such exchanges can be done only with the approval of the Board and the Owner of the land to be reclaimed.

3.1.3 Time Limit and Phased Reclamation

116(4)(q)(I)

All reclamation shall be carried to completion by the Operator with all reasonable diligence, and each phase of reclamation shall be completed within five (5) years from the date the Operator informs the Board or Office that such phase has commenced, or from the date the Office has evidence that mining or exploration has ceased, unless extended by the Board or Office. The 5-year period may be applied separately to each phase as it is commenced throughout the life of the mine.

3.1.4 Public Use

116(4)(e)

On lands owned by the Operator, the Operator may permit the public to use the same for recreational purposes, in accordance with the Limited Landowner Liability Law contained in Article 41 of Title 33, C.R.S. 1984, as amended, except in areas where such use is found by the Operator to be hazardous or objectionable.

3.1.5 Reclamation Measures - Materials Handling

The Operator shall set forth the measures that will be taken to meet all the following requirements:

116(4)(a)

- (1) Grading shall be carried on so as to create a final topography appropriate to the final land use selected in the Reclamation Plan.

- 116(4)(g) (2) When backfilling is a part of the plan, the Operator shall replace overburden and waste materials in the mined area and shall ensure adequate compaction for stability and to prevent leaching of toxic or acid-forming materials.
- 116(4)(i) (3) All grading shall be done in a manner to control erosion and siltation of the affected lands, to protect areas outside the affected land from slides and other damage. If not eliminated, all highwalls shall be stabilized.
- 116(4)(q)(l) (4) All backfilling and grading shall be completed as soon as feasible after the mining process. The Operator shall establish reasonable timetables consistent with good mining and reclamation procedures.
- 116(4)(c)
116(4)(d)
116(4)(e) (5) All refuse and acid-forming or toxic producing materials that have been mined shall be handled and disposed of in a manner that will control unsightliness and protect the drainage system from pollution.
- (6) Any drill or auger holes that are part of the mining operation shall be plugged with non-combustible material, which shall prevent harmful or polluting drainage. Adits and shafts should be closed, and where practicable, backfilled and graded in a manner consistent with the post mine land use and shall comply with the provisions of the Act, Construction Material Rules and Regulations.
- (7) Maximum slopes and slope combinations shall be compatible with the configuration of surrounding conditions and selected land use. In all cases where a lake or pond is produced as a portion of the Reclamation Plan, all slopes, unless otherwise approved by the Board or Office, shall be no steeper than a ratio of 2:1 (horizontal to vertical ratio), except from 5 feet above to 10 feet below the expected water line where slopes shall be not steeper than 3:1. If a swimming area is proposed as a portion of the Reclamation Plan, the slope, unless otherwise approved by the Board or Office, shall be no steeper than 5:1 throughout the area proposed for swimming, and a slope no steeper than 2:1 elsewhere in the pond.
- 116(4)(o) (8) If the Operator's choice of reclamation is for agricultural or horticultural crops which normally require the use of farm equipment, the Operator shall grade so that the area can be traversed with farm machinery.
- (9) An Operator may backfill structural fill material generated within the MLRB permitted area into an excavated pit within the permit area as provided for in the MLRB Permit. If an Operator intends to backfill inert structural fill generated outside of the approved permit area, it is the Operator's responsibility to provide the Office notice of any proposed backfill activity not identified in the approved Reclamation Plan. If the Office does not respond to the Operator's notice within thirty (30) days after receipt of such Notice by the Office, the Operator may proceed in accordance with the provisions of this Rule. The Operator shall maintain a Financial Warranty at all times adequate to cover the cost to stabilize and cover any exposed backfilled material. The Notice to the Office shall include but is not limited to:
- (a) a narrative that describes the approximate location of the proposed activity;
- (b) the approximate volume of inert material to be backfilled;

- (c) a signed affidavit certifying that the material is clean and inert, as defined in Rule 1.1(22);
- (d) the approximate dates the proposed activity will commence and end, however, such dates shall not be an enforceable condition;
- (e) an explanation of how the backfilled site will result in a post-mining configuration that is compatible with the approved post-mining land use; and
- (f) a general engineering plan stating how the material will be placed and stabilized in a manner to avoid unacceptable settling and voids.

116(4)(c) (10) All mined material to be disposed of within the affected area must be handled in such a manner so as to prevent any unauthorized release of pollutants to the surface drainage system.

116(4)(d) (11) No unauthorized release of pollutants to groundwater shall occur from any materials mined, handled or disposed of within the permit area.

3.1.6 Water - General Requirements

116(4)(h) (1) Hydrology and Water Quality: Disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quantity or quality of water in surface and groundwater systems both during and after the mining operation and during reclamation shall be minimized by measures, including, but not limited to:

- (a) compliance with applicable Colorado water laws and regulations governing injury to existing water rights;
- (b) compliance with applicable federal and Colorado water quality laws and regulations, including statewide water quality standards and site-specific classifications and standards adopted by the Water Quality Control Commission;
- (c) compliance with applicable federal and Colorado dredge and fill requirements; and
- (d) removing temporary or large siltation structures from drainage ways after disturbed areas are revegetated and stabilized, if required by the Reclamation Plan.

116(4)(b) (2) Earth dams, if necessary to impound water, may be constructed if the formation of such impoundments will not damage adjoining property or conflict with water pollution laws, rules or regulations of the federal government, the state of Colorado or with any local government pollution ordinances.

(3) All surface areas of the affected land, including spoil piles, shall be stabilized and protected so as to effectively control erosion.

RULE 6: **PERMIT APPLICATION EXHIBIT REQUIREMENTS**

6.1 REQUIREMENTS FOR SPECIFIC OPERATIONS

6.1.1 General Provisions

This Rule provides for the specification of Exhibits required to be submitted along with each type of Permit application.

6.1.2 110, 110(6) Limited Impact, 111 Special Operations

These operations shall provide all the Exhibits, as described in Rule 6.3. Rule 6.5 (Geotechnical Stability Exhibit) may also be required on a case-by-case basis.

6.1.3 112 Reclamation Permit Operations

These operations shall provide all the Exhibits, as described in Rule 6.4. Rule 6.5 (Geotechnical Stability Exhibit) may also be required on a case-by-case basis.

6.2 GENERAL REQUIREMENTS OF EXHIBITS

6.2.1 General Requirements

(1) This Rule provides for the guidelines for, and information requirements of, each Exhibit required to be submitted with the permit application, as specified according to Rule 6.1.

(2) **Maps and Exhibits**

Maps, except the index map, must conform to the following criteria:

(a) show name of Applicant;

(b) must be prepared and signed by a registered land surveyor, professional engineer, or other qualified person;

(c) give date prepared;

(d) identify and outline the area which corresponds with the application;

(e) with the exception of the map of the affected lands required in Section 34-32.5-112(2)(d), C.R.S. 1984, as amended, shall be prepared at a scale that is appropriate to clearly show all elements that are required to be delineated by the Act and these Rules. The acceptable range of map scales shall not be larger than 1 inch = 50 feet nor smaller than 1 inch = 660 feet. Also, that a map scale, appropriate legend, map title, date and a north arrow shall be included.

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- (d) A wildlife statement prepared by the Colorado Parks and Wildlife (CPW) is not required for 111 Special Operations, or 110, or 110(6) Limited Impact Operations. The Operator/Applicant may contact the local CPW representative to verify that no critical or important wildlife habitats or wildlife species will be impacted by the proposed operation.

6.3.3 EXHIBIT C - Mining Plan

The purpose of the mining plan is to describe how mining will affect the permit area for the duration of the operation. This plan must be correlated to Exhibit E - Map. The description of the mining plan must be adequate to satisfy the requirements of Rule 3.1 and demonstrate compliance with Rule 3. At a minimum, the Operator/Applicant must include the following information:

- (a) specify the estimated dates that mining will commence and end. If the operation is intended to be an intermittent operation as defined in C.R.S 34-32.5-103(11)(b), the Applicant should include in this exhibit a statement that conforms to the provisions of Section 34-32.5-103(11)(b), C.R.S.;
- (b) the estimated depth to which soil, suitable as a plant growth medium, will be salvaged for use in the reclamation process. This description must be consistent with information provided in Exhibit B. Sufficient soil must be salvaged to meet the vegetation establishment criteria of Rule 3.1.10. If plant growth medium is not reapplied on a graded area immediately after salvage, then the Operator/Applicant must specify how the topsoil will be stockpiled and stabilized with a vegetative cover or other means until used in reclamation. Plant growth medium stockpiles must be located separate from other stockpiles, out of the way of mine traffic and out of stream channels or drainage ways. The location of plant growth medium stockpiles must be shown on Exhibit E - Map;
- (c) specify the thickness of overburden or quantity of waste rock, if any, to be removed to reach the deposit. The location of any overburden stockpiles or waste rock fills must be shown on Exhibit E - Map;
- (d) specify the thickness of the deposit to be mined;
- (e) describe the major components of the mining operation such as: roads and access routes, pit, office, shop/maintenance buildings, plant, processing facilities, and any underground openings such as adits or ventilation facilities. These components must be located on Exhibit E - Map;
- (f) specify the dimensions of any significant disturbances to the land surface such as pit excavations, mine benches, impoundments, stockpiles, waste rock disposal areas, etc.;
- (g) specify the dimensions of any existing or proposed roads that will be used for the mining operation. Describe any improvements necessary on existing roads and the specifications to be used in the construction of new roads. New or improved roads must be included as part of the affected lands and permitted acreage. Affected land shall not include off-site roads which existed prior to the date on which notice was given or permit application was made to the office and which were constructed for purposes unrelated to the proposed mining operation and which will not be substantially upgraded to support the mining

operation. Describe any associated drainage and runoff conveyance structures to include sufficient information to evaluate structure sizing;

- (h) specify how much water will be used in conjunction with the operation, and the source of this water;
- (i) if groundwater will be encountered and/or surface water intercepted or disturbed, describe how mining will affect the quantity and quality of the surface or groundwater and the methods to be used to minimize disturbance to the surface and groundwater systems including proposed dewatering, sediment-containment or chemical treatment systems, storm water run-off controls, and groundwater points of compliance;
- (j) specify how you will comply with applicable Colorado water laws and regulations governing injury to existing water rights;
- (k) if refuse and acid or toxic producing materials are exposed during mining, describe how they shall be handled and disposed of in a manner that will control unsightliness and protect the drainage system from pollution;
- (l) describe what measures will be taken to minimize disturbance to the hydrologic balance, prevent off-site damage, and provide for a stable configuration of the reclaimed area consistent with the proposed future land use;
- (m) specify whether the deposit will be processed on-site. If the deposit will be processed, then describe the nature of the process, facilities and chemicals utilized. The process area and any structures must be described on Exhibit E - Map;
- (n) identify the primary and secondary commodities to be mined/extracted and describe the intended use; and
- (o) name and describe the intended use of all expected incidental products to be mined/extracted by the proposed operation.
- (p) Specify if explosives will be used in conjunction with the mining or reclamation operation. In consultation with the Office, the Applicant must demonstrate, pursuant to Rule 6.5(4), Geotechnical Stability Exhibit, that off-site areas will not be adversely affected by blasting during mining or reclamation operations.

6.3.4 EXHIBIT D - Reclamation Plan

- (1) The purpose of the Reclamation Plan is to describe the timing, procedures, criteria and materials that will be used to reclaim the affected land to the proposed future land use. This plan must be correlated to Exhibit E - Map. The description of the Reclamation Plan must be adequate to satisfy the requirements of Rule 3.1 and demonstrate compliance with Rule 3. At a minimum, the Application shall include the following information:
 - (a) specify at what point in the mining plan and to what depth(s) overburden will be replaced in relation to ongoing extraction.

- (b) specify the maximum gradient of reclaimed slopes (horizontal:vertical). If the Application proposes slopes steeper than 3:1, the Operator/Applicant must include a justification that supports steeper slopes for the proposed post-mining land use, and demonstrates compliance with the applicable performance standards of Rule 3.1.
- (c) specify the measures that will be taken to revegetate the site, if applicable, including
 - (i) state the thickness of plant growth medium to be replaced. Sample and analyze available soils sufficiently to establish quantity and quality;
 - (ii) state at what point in the mining plan the site will be seeded. Explain how the seedbed will be prepared to eliminate compacted conditions (e.g., plowed, chiseled, disced). State the type, application rate, and soil incorporation methods of fertilizer application, if any. NOTE: Soil amendments shall only be applied where soil tests indicate nutrient deficiencies for the plant species to be established;
 - (iii) state the grass, forb, shrub and tree species to be planted and the applicable quantities. Specify the quantity of each grass and forb species as pounds of pure live seed per acre;
 - (iv) specify the application method for grass and forb seeding. If the seed is to be broadcast, the application rate shall be twice the rate required for seed drilling. If the seedbed has not been adequately roughened prior to seeding, the seed shall be raked or harrowed after broadcast application;
 - (v) if a mulch is needed, specify the kind to be used, the crimping method, and rate of application; and
 - (vi) explain the establishment methods for each species of shrub and/or tree, and state the number of each to be established per acre.
- (d) Specify which ponds, streams, roads and buildings, if any, will remain after reclamation. These features must be shown on the Exhibit E - Map. If ponds are part of the Reclamation Plan, slopes from five (5) vertical feet above to ten (10) vertical feet below the expected average water level cannot be steeper than 3H:1V; remaining slope lengths may not be steeper than 2H:1V. Where wildlife habitat is the proposed future land use, shorelines should be irregularly shaped to promote a diverse wildlife habitat. Colorado Parks and Wildlife (CPW) must be consulted where wildlife use is the proposed future land use.
- (e) Specify the reclamation treatment of any waste rock dumps, underground mine openings, ditches, sediment control facilities, buildings and other features specified in your mine plan but not previously addressed in the Reclamation Plan narrative. These features must be shown on Exhibit E - Map. This should describe the measures taken to minimize disturbance to the hydrologic balance, prevent off-

site damage, and provide for a stable configuration consistent with the proposed future land use.

117(4)(a)

- (2) All 110 Limited Impact and 111 Special Operation applications must provide an estimate of the actual costs to reclaim the site based on what it would cost the State of Colorado using an independent contractor to complete reclamation. (Such estimates are not required for activities contemplated by the operator and approved by the Office to be outside the scope of the proposed reclamation plan.) The unit costs should include estimates for the following activities as appropriate to the operation: backfilling, grading, topsoil application, seeding, mulching, fertilization, and labor to complete reclamation. Determine and specify the point during the operation when the site has reached a point of maximum disturbance. The cost to reclaim the site to the specifications of the Reclamation Plan at this point must be estimated. Unit costs (cost per cubic yard), volumes, haul or push distances, and grades must be included when backfilling and grading are part of the Reclamation Plan. Volume and unit costs for finish grading, subsoil and topsoil application must be provided in terms of cost per cubic yard. The estimated cost for fertilizer, seed and mulch acquisition and application must be provided as cost per acre.
- (a) Equipment costs must include such factors as equipment operator wages and benefits, fuel and lubricant consumption and depreciation. The cost to mobilize and demobilize the equipment from the nearest population center known to have the required equipment availability should be estimated.
- (b) All items referenced in the Reclamation Plan must be included in the cost calculation. These items in addition to earthwork, such as building demolition, fencing, monitoring well sealing or stream channel reconstruction must also be included in the reclamation cost estimate.
- (c) After the direct costs noted above have been estimated, the Office may add up to an additional maximum eighteen and one-half percent (18.5%) of that total, which includes private contract, typical overhead costs. This additional cost is required to cover indirect costs that an independent contractor would incur when performing reclamation of the site. Five percent (5%) additional cost shall be added to cover Office administration cost in the event of bond forfeiture and permit revocation.

6.3.5 EXHIBIT E - Map

- (1) In addition to the requirements of Rule 6.2.1(2), the Operator/Applicant must provide a map that clearly describes the features associated with the mining plan and the components of the Reclamation Plan. Include one (1) map for the mine plan and one (1) map for the Reclamation Plan. The map(s) must be drawn to a scale no smaller than appropriate to clearly show all elements that are required to be delineated by the Act and these Rules; show a north arrow, note any section corners adjacent to the proposed operation, and indicate the date illustrated. At a minimum, maps must include the following information:
- (2) **Mining Plan Map**
- (a) outline and label the permit boundaries, described in Exhibit A - Legal Description; for all 110 Limited Impact and 111 Special Operations, the Office considers the area bounded by the permit boundary to be analogous to the affected area;

- (b) label the names of owner(s) of record of the surface of the affected area and of the land within two hundred (200) feet of the affected area, identify the owner of the substance to be mined, and the type of structure and owners of record of any permanent or man-made structures within two hundred (200) feet of the affected area;
- (c) outline and label all major surface features to be used in connection with the proposed operation such as: existing and proposed roads, pit boundary, topsoil stockpiles, overburden stockpiles, product stockpiles, waste rock fills, stream channels, buildings, processing plant, underground openings such as adits or ventilation facilities, ponds, impoundments, dewatering pumps, diversions or waste disposal areas;
- (d) indicate the direction that construction material extraction will proceed;
- (e) note the location of any significant, valuable, and permanent man-made structures within two hundred (200) feet of the affected area. A narrative description must be provided in Exhibit B - Site Description; and
- (f) outline and label existing disturbance within and/or adjacent to the permit boundary (e.g., previously mined areas, roads or excavations resulting from utility construction). Re-disturbance of previously disturbed areas, by the proposed mining operation, must be included in the permit area and addressed in Exhibit D - Reclamation Plan.

(3) Reclamation Plan Map

- (a) show the gradient of all reclaimed slopes (horizontal:vertical) sufficient to describe the post mine topography;
- (b) indicate where vegetation will not be established and the general area(s) for shrub or tree planting;
- (c) if ponds are a part of the Reclamation Plan, outline the final shore configuration of the ponds and shallow areas if the future land use is for wildlife;
- (d) state the average thickness of replaced overburden by reclamation area or phase; and
- (e) state the average thickness of replaced topsoil by reclamation area or phase.

6.3.6 EXHIBIT F - List of Other Permits and Licenses Required

Provide a statement identifying which of the following permits, licenses and approvals which are held or will be sought in order to conduct the proposed mining and reclamation operations: effluent discharge permits, air quality emissions permits, radioactive source materials licenses, disposal of dredge and fill material (404) permits, permit to construct a dam, well permits, explosives permits, State Historic Preservation Office clearance, highway access permits, U.S. Forest Service permits,