



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

September 9, 2019

Jason Burkey
Oldcastle SW Group dba United Companies of Mesa County
2273 River Road
Grand Junction, CO 81505

RE: Otter Creek Pit, File No. M-2012-050 , 112 Construction Materials Amendment Application (AM-1), Adequacy Review #1

Dear Mr. Burkey:

The Division of Reclamation, Mining and Safety (Division) is in the process of reviewing the above referenced application in order to ensure that it adequately satisfies the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the associated Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules). During review of the material submitted, the Division determined that the following issue(s) of concern shall be adequately addressed before the application can be considered for approval.

6.4.1 EXHIBIT A - Legal Description

- (1) The legal description must identify the affected land, specify affected areas and be adequate to field locate the property. Description shall be by (a), township, range, and section, **to at least the nearest quarter-quarter section and (b), location of the main entrance to the site reported as latitude and longitude, or the Universal Transverse Mercator (UTM) Grid as determined from a USGS topographic map.** A metes and bounds survey description is acceptable in lieu of township, range, and section. Where available, the street address or lot number(s) shall be given. This information may be available from the County Assessor's office or U.S. Geological Survey (USGS) maps.
- (2) The main entrance to the mine site shall be located based on a USGS topographic map showing latitude and longitude or Universal Transverse Mercator (UTM). The operator will need to specify coordinates of latitude and longitude in degrees, minutes and seconds or in decimal degrees to an accuracy of at least five (5) decimal places (e.g., latitude 37.12345 N, longitude 104.45678 W). For UTM, the operator will need to specify North



American Datum (NAD) 1927, NAD 1983, or WGS 84, and the applicable zone, measured in meters.

Please depict the proposed amendment area in addition to the currently permitted site on a map.

6.4.3 EXHIBIT C - Pre-mining and Mining Plan Map(s) of Affected Lands

One or more maps may be necessary to legibly portray the following information:

The Division recommends conveying this information on several maps (Structure Owners, adjacent land owners, mine features, etc.)

The requirements below apply to both the proposed AM-1 boundary as well as the existing permit boundary. Maps should depict both areas. The existing permit boundary has largely not been addressed.

Please include a legend for features. Using multiple colors would make the map more legible

Include a polygon/buffer line to delineate where 200 feet from the affected lands boundary is

(a) all adjoining surface owners of record;

Please state the owner of D Road and 33 Road

Adjacent landowners of existing permit area not addressed.

(b) the name and location of all creeks, roads, buildings, oil and gas wells and lines, and power and communication lines on the area of affected land and within two hundred (200) feet of all boundaries of such area;

Without a 200 ft. buffer this is difficult to determine if adequately addressed for AM-1 proposed area.

Scale/size of map for existing permit area too small to read.

(c) the existing topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of the affected land;

C-2 Both the pre-mining and post-mining topography is depicted for proposed area. Post-mining topography should be depicted on reclamation maps only. Additionally consider removing topography from C-1 to make it easier to read.

No current topography for existing pit provided, only pre-mining topography in 2012.

(d) the total area to be involved in the operation, including the area to be mined and the area of affected lands (see definition of "Affected Land");

The total land to be affected within the 5.8 acre expansion is unclear, include an affected lands boundary in addition to AM-1 boundary for maps C-1 and C-2.

One map depicting the entire 95 acre permit boundary and affected land needs to be shown.

- (g) Show the owner's name, type of structures, and location of all significant, valuable, and permanent man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land.

Without a 200 ft. buffer this is difficult to determine if adequately addressed. See comment under Rule 6.4.19. All structures for both the expansion and existing pit need to be depicted.

6.4.4 EXHIBIT D - Mining Plan

The mining plan shall supply the following information, correlated with the affected lands, map(s) and timetables:

- (c) all water diversions and impoundments; and

Are any additional diversions necessary for phase 4 or describe how this phase will tie into existing features on site.

- (d) the size of area(s) to be worked at any one time.

State total maximum disturbance. Will phase 3 be reclaimed while mining of phase 4 or will both phases be open at the same time?

- (e) An approximate timetable to describe the mining operation. The timetable is for the purpose of **establishing the relationship between mining and reclamation during the different phases of a mining operation**. An Operator/Applicant shall not be required to meet specific dates for initiation, or completion of mining in a phase as may be identified in the timetable. This does not exempt an Operator/Applicant from complying with the performance standards of Section 3.1. If the operation is intended to be an intermittent operation as defined in Section 34-32.5-103(11)(b), C.R.S., 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. Such timetable should include:

- (e)(i) an estimate of the periods of time which will be required for the various stages or phases of the operation;

Please address the duration of each stage/phase of the operation within the specified 1-3 year overall time period.

- (f) A map (in Exhibit C - Pre-Mining and Mining Plan Maps(s) of Affected Lands, Subsection 6.4.3) may be used along with a narrative to present the following information:

- (f)(ii) nature of the stratum immediately beneath the material to be mined in sedimentary deposits.

Stated in Exhibit G (G-1 section 3. Groundwater), include in the mining plan.

- (i) **Specify** if explosives will be used in conjunction with the mining (or reclamation). In consultation with the Office, the Applicant must demonstrate pursuant to Subsection 6.5(4), Geotechnical Stability Exhibit, that offsite areas will not be adversely affected by blasting.

Table D-2: state the revised berm acreage, clarify if any additional haul roads or buffers are needed, Add phase 4, update total permit area

Tables D-4 and D-5: update to include phase 4

6.4.5 EXHIBIT E - Reclamation Plan

- (1) In preparing the Reclamation Plan, the Operator/Applicant should be specific in terms of addressing such items as final grading (including drainage), seeding, fertilizing, revegetation (trees, shrubs, etc.), and topsoiling. Operators/Applicants are encouraged to allow flexibility in their plans by committing themselves to ranges of numbers (e.g., 6"-12" of topsoil) rather than specific figures.
- (2) The Reclamation Plan shall include provisions for, or satisfactory explanation of, all general requirements for the type of reclamation proposed to be implemented by the Operator/Applicant. Reclamation shall be required on all the affected land. The Reclamation Plans shall include:
 - (d) Where applicable, plans for topsoil segregation, preservation, and replacement; for stabilization, compaction, and grading of spoil; and for revegetation. The revegetation plan shall contain a list of the preferred species of grass, legumes, forbs, shrubs or trees to be planted, the method and rates of seeding and planting, the estimated availability of viable seeds in sufficient quantities of the species proposed to be used, and the proposed time of seeding and planting;

Reference in mine plan but not explicitly addressed in reclamation plan, give topsoil range and how it will be protected/stored on site until needed.

- (e) A plan or schedule indicating how and when reclamation will be implemented. Such plan or schedule shall not be tied to any specific date but shall be tied to implementation or completion of different stages of the mining operation as described in Subparagraph 6.4.4(1)(e). The plan or schedule shall include:

Timing of phase 4 reclamation relative to phases 1-3.

- (i) An estimate of the periods of time which will be required for the various stages or phases of reclamation;
- (ii) A description of the size and location of each area to be reclaimed during each phase; and

What is the revised volume of dryland seed mix to be applied? Any additional undisturbed acreage within phase 4.

(iii) An outline of the sequence in which each stage or phase of reclamation will be carried out.

(The schedule need not be separate and distinct from the Reclamation Plan, but may be incorporated therein.)

(f)(ii) Seeding - specify types, mixtures, quantities, and expected time(s) of seeding and planting;

Since drill seeding is to be used, please give the PLS/Ac rate for each species at the drill rate rather than a percentage of the total broadcast pounds to be applied.

The Division is interpreting the seeding rate for the wetlands areas as already having been doubled the drill see rate, is this correct?

(iii) Fertilization - if applicable, specify types, mixtures, quantities and time of application;

Will any be used in either the dryland or wetland areas? If so please specify the type, rate and application method.

Exhibit L (Pg L-3 #5) references fertilizer use in the dryland areas.

(iv) Revegetation - specify types of trees, shrubs, etc., quantities, size and location; and

5 additional cottonwoods will be planted. How many trees in the previous phase were planted vs. how many still remain? E-1 #5 only references a replacement rate, not what was actually present.

Vertical spacing relative to water is specified but not horizontal placement, distance between trees. Will they be evenly distributed or in clumps?

(v) Topsoiling - specify anticipated minimum depth or range of depths for those areas where topsoil will be replaced.

Range of topsoil depth to be applied within each phase.

What is the updated worst case scenario, phase 3 and 4? Volumes to be applied?

6.4.6 EXHIBIT F - Reclamation Plan Map

The map(s) of the proposed affected land, by all phases of the total scope of the mining operation, shall indicate the following:

Placement of cottonwood trees not depicted/specified.

6.4.7 EXHIBIT G - Water Information

- (2)(a) Locate on the map (in Exhibit C) tributary water courses, wells, springs, stock water ponds, reservoirs, and ditches on the affected land and on adjacent lands where such structures may be affected by the proposed mining operations;

Unable to locate the referenced Oberding drain (irrigation ditch) on the maps.

- (2)(b) Identify all known aquifers; and

Explicitly state no aquifers exist

- (3) The Operator/Applicant shall provide an estimate of the project water requirements including flow rates and annual volumes for the development, mining and reclamation phases of the project.

Updated calculations for the additional surface area of the north lake (pgs. G-6 &7)

- (4) The Operator/Applicant shall indicate the projected amount from each of the sources of water to supply the project water requirements for the mining operation and reclamation.

Updated calculations for the additional surface area of the north lake (pgs. G-6 &7)

Gravel well permit #81730-F (Exhibit G-2) limits the total pond surface area to 55 acres. The north pond will be increased to 45 acres and the south pond will remain at 15.4 acres, that's a total of 60.4 surface acres. Please address the 5.4 acre deficiency in your gravel well permit.

6.4.10 EXHIBIT J - Vegetation Information

- (1)(b) the relationship of present vegetation types to soil types, or alternatively, the information may be presented on a map; and

Please depict the proposed AM-1 boundary and existing pit boundary on aerial imagery.

6.4.12 EXHIBIT L - Reclamation Costs

If both phase 3 and 4 will be reclaimed at the same time the worst case scenario will be increased.

Please specify the updated acreages/volumes for; grading (additional LF of 1:1 backfill slope), overburden replacement, increased stockpile de-compaction, topsoil replacement, increased dryland and wetlands revegetation.

6.4.13 EXHIBIT M - Other Permits and Licenses

Please see the Divisions comment in Exhibit G regarding the increase lake surface acreage and a need to revise/obtain additional gravel well pond permit from DWR.

6.4.19 EXHIBIT S - Permanent Man-made Structures

Where the mining operation will adversely affect the stability of any significant, valuable and permanent man-made structure located within two hundred (200) feet of the affected land, the applicant may either:

Please provide a list of all structure owners within 200 ft. of the affected lands (both permitted and proposed). That list should include the structure owner name and address as well as a description of all structures owner by that person(s).

- (a) provide a notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure; or

Excel Energy-Notice mentioned as being completed but not included with Application (no proof or copy of agreement)

Grand Valley Drainage District-Irrigation Canal-Mentioned but included structure agreement references a different structure feature.

Certified Mailing Receipt-no copy of actual agreement sent

- Brinkworth, Daniel and Aubrey-Need description of structure(s)
- Excel Energy-Need description of structure(s)
- Griffith, Dean and Verona-Need description of structure(s)
- McIntosh, Mabel-Need description of structure(s)
- Boes, Brenda and Norbert-Need description of structure(s)
- Reyes, Florentino and Leona-Need description of structure(s)
- Rosencrans, Jerry and Sarah-Need description of structure(s)

Agreements Completed (certified mail and agreement provided):

- Boes, Norber-3289 ½ D Road LLP-Road (actual structure/feature not identified)
- Brinkworth, Daniel and Aubrey-3305 D 1/ 2 Road (actual structure/feature not identified)
- Grand Valley Drainage District-33 Road Drain

Agreements Required:

- TBD-Need list of structures within 200 ft of affected lands

- (b) where such an agreement cannot be reached, the applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation; or.

A new evaluation needs to be conducted for the proposed expansion area. Note there is a difference in FOS for critical vs. non-critical structures. Please explicitly state each structure being evaluated, the distances from the affected lands, and the distances in which disturbances can safely occur while maintaining the appropriate FOS. Also reference Rule 6.5 and the MLRB FOS policy for guidance.

Previous Engineering evaluation is dependent upon an 'experimentation' to confirm site conditions however no commitments to conduct such 'experiments' are mentioned in the mining plan. Please address this by either adding a commitment in the mining plan or a revised engineering evaluation that applies to the whole mine site.

- (c) where such structure is a utility, the Applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility.

6.5 GEOTECHNICAL STABILITY EXHIBIT To support Rule 6.4.19

- (1) On a site-specific basis, an Applicant shall be required to provide a geotechnical evaluation of all geologic hazards that have the potential to affect any proposed impoundment, slope, embankment, highwall, or waste pile within the affected area. The Applicant may also be required to provide a geotechnical evaluation of all geologic hazards, within or in the vicinity of the affected lands that may be de-stabilized or exacerbated by mining or reclamation activities.
- (2) On a site-specific basis, an Applicant shall be required to provide engineering stability analyses for proposed final reclaimed slopes, highwalls, waste piles and embankments. An Applicant may also be required to provide engineering stability analyses for certain slopes configuration as they will occur during operations, including, but not limited to embankments. Information for slope stability analyses may include, but would not be limited to, slope angles and configurations, compaction and density, physical characteristics of earthen materials, pore pressure information, slope height, post-placement use of site, and information on structures or facilities that could be adversely affected by slope failure.
- (3) Where there is the potential for off-site impacts due to failure of any geologic structure or constructed earthen facility, which may be caused by mining or reclamation activities, the Applicant shall demonstrate through appropriate geotechnical and stability analyses that off-site areas will be protected with appropriate factors of safety incorporated into the analysis. The minimum acceptable safety factors will be subject to approval by the Office, on a case-by-case basis, depending upon the degree of certainty of soil or rock strength determinations utilized in the stability analysis, depending upon the consequences

associated with a potential failure, and depending upon the potential for seismic activity at each site.

- (4) At sites where blasting is part of the proposed mining or reclamation plan, the Applicant shall demonstrate through appropriate blasting, vibration, geotechnical, and structural engineering analyses, that off-site areas will not be adversely affected by blasting.

1.6.2(1)(e)/(g) Public Notice

Please provide the Division with a list of all surface land Owners of Record within 200 feet of the affected lands (both propose and permitted). Include the name and address for each Owner.

The following certified mail receipt were included for proof of notice to Owners of Record:

- Brinkworth, Daniel and Aubrey
- Excel Energy
- Griffith, Dean and Verona
- McIntosh, Mabel
- Boes, Brenda and Norbert
- Grand Valley Drainage District
- 3289 ½ D Road LLP
- Reyes, Florentino and Leona
- Rosencrans, Jerry and Sarah
- Vedsted, Diann

Please submit your response(s) to the above listed issue(s) by October 1, 2019 in order to allow the Division sufficient time for review. A decision date of November 4, 2019 has been set for this application. If any adequacy item remain unresolved by the decision date the Division is mandated to deny the application.

The Division will continue to review your application and will contact you if additional information is needed.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us

Sincerely,

A handwritten signature in blue ink that reads "Amy Yeldell". The signature is written in a cursive, flowing style.

Amy Yeldell
Environmental Protection Specialist

Cc:
Travis Marshall, Senior EPS, Grand Junction DRMS
Ivan Geer-River City Consultants, Inc.