



COLORADO
**Division of Reclamation,
Mining and Safety**
Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

December 11, 2020

Andrew Lockman
GEI Consultants, Inc.
4601 DTC Blvd STE 900
Denver CO 80237

**Re: Preliminary Review of a 112 Construction Materials Reclamation Permit Amendment Application
Package AM07, Aggregate Industries – Morrison Quarry, Permit M1973-021**

Mr. Lockman,

The Division of Reclamation, Mining, and Safety has completed its preliminary adequacy review of your 112 construction materials reclamation permit amendment application. The application was called complete for review on November 13, 2020. All comment and review periods began on November 13, 2020. **The decision date for this application is currently set for February 11, 2021. Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, it will be your responsibility to request an extension of the review period. If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division will deny this application. In order to allow the Division adequate time to review your responses to any adequacy issues, please submit your adequacy responses to the Division no later than one week prior to the decision date (February 4, 2021).**

Please note that any changes or additions to the application on file in our office must also be reflected in the public review copy, which has been placed with the Jefferson County Clerk and Recorder, and proof of this provided to the Division.

The review consisted of comparing the application content with specific requirements of Rule 6.1, 6.2, 6.4 and 6.5 of the Minerals Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials. As with most applications, there are items that will require clarification of the existing information. Any inadequacies are identified under the respective exhibit heading.

APPLICATION FORM:

Please have authorized permittee representative acknowledge and properly initial “Responsibilities as a Permittee” statements on pages 5 and 6 of the application form.

Application Signature Page:

The Applicant/Operator or Company Name provided on the signature page must match exactly with the Applicant/Operator or company name given on Item 1 of Page 1 of the application form.

Signature Page of application form is required to be sealed by the Corporate Secretary or Equivalent.



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 Section 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.

EXHIBIT A - Legal Description (Rule 6.4.1): The legal description must identify all affected land and be wholly adequate for field location of the property. It can be in the form of metes and bounds survey or a description by reference to township, range and section to at least the nearest quarter/quarter section. Where applicable, the street address or lot numbers may be used.

Adequate as submitted

EXHIBIT B - Index Map (Rule 6.4.2): An index map showing the regional location of all affected land and all roads and other access to the area. A standard U.S. Geological Survey topographic quadrangle or equivalent is acceptable. Scale criteria need not be followed for this map.

Adequate as submitted

EXHIBIT C - Pre-mining and Mining Plan Map(s) of Affected Lands (Rule 6.4.3): One or more maps may be necessary to legibly portray the following information:

- (a) all immediately adjacent surface owners of record;
- (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;
- (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;
- (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");
- (e) the type of present vegetation covering the affected lands; and
- (f) in conjunction with Exhibit G - Water Information, Subsection 6.4.7, if required by the Office, further water resources information will be presented on a map in this section.
- (g) Show the owner's name, type of structures, and location of all permanent or man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land.

- (h) In conjunction with Exhibit I - Soils Information, Subsection 6.4.9, soils information may be presented on a map in this section;
- (i) Aerial photos, if available, may be included in this section.

Modify as needed when addressing comments for Exhibit D

EXHIBIT D - Mining Plan (Rule 6.4.4): The mining plan shall supply the following information, correlated with the affected lands, map(s) and timetables:

- (a) description of the method(s) of mining to be employed in each stage of the operation as related to any surface disturbance on affected lands;
- (b) earthmoving;
- (c) all water diversions and impoundments; and
- (d) the size of area(s) to be worked at any one 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. You will 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 you from complying with the performance standards of Section 3.1. Such timetable should include:
 - (i) an estimate of the periods of time which will be required for the various stages or phases of the operation;
 - (ii) a description of the size and location of each area to be worked during each phase; and
 - (iii) outlining the sequence in which each stage or phase of the operation will be carried out. (Timetables need not be separate and distinct from the mining plan, but may be incorporated therein.)
- (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:
 - (i) nature, depth and thickness of the ore body or deposit to be mined and the thickness and type of overburden to be removed (may be marked "CONFIDENTIAL," as per Paragraph 1.3(3)); and
 - (ii) nature of the stratum immediately beneath the material to be mined in sedimentary deposits.
- (g) Identify the primary and secondary commodities to be mined/extracted and describe the intended use; and
- (h) name and describe the intended use of all expected incidental products to be mined/extracted by the proposed operation.

Please address the “error” statement in bold print in the second paragraph of Exhibit D.

Existing permit stipulation 10 states that “Before any permanent changes to drainage diversions are made, the operator must submit and the division must approve the final design and construction of the drainage diversion structures”. Please provide additional information about how and where “unnamed drainage 1” will be relocated, the construction of the drainage diversion structure, and how it will be sized to prevent failure during storm events. Will this drainage be replaced to its original course during reclamation (which appears as it would drain into the South Quarry)? If so, how, and has the State Engineer’s Office approved it?

The internal access road as approved in TR07 is not discussed or shown in the mining plan, mining plan map, or reclamation plan of the AM07 submittal – please address.

The comment letter provided by the State Engineer's Office Division of Water Resources (SEO) provides the following statement: Based on data from September 25, 2020, the well east of the South Quarry had a water level elevation of 6,461.3 feet, and the well south of the South Quarry had a water level elevation of 6,588.8 feet. If water level data indicates that mining at the site has exposed groundwater, the excavation will be considered a well and will require an approved substitute water supply plan or decreed plan for augmentation to replace the evaporative losses to the stream system. All mining at the site must cease and all exposed groundwater must be backfilled until such time as the applicant has obtained such approval.

Based on the existing data, which shows groundwater in the south well at an elevation of approximately 6590', please explain how/why is there any expectation that groundwater will not be exposed in the South Quarry if it is mined to a floor elevation of 6195' as shown in AM07, or even to 6400' as currently proposed?

How and when does the Operator intend to address the issue of potentially exposed groundwater in the South Quarry?

DRMS is required to bond for exposed groundwater in unlined pits in one of 4 ways:

- 1) Isolate the pit from the surrounding aquifer by sealing the pit to SEO standards with a compacted clay liner***
- 2) Isolate the pit from the surrounding aquifer by installing a slurry wall which will pass SEO testing requirements (does not seem possible for this site)***
- 3) Determine bond required to backfill pit to above static water levels to eliminate groundwater exposure (very, very costly)***
- 4) Operator commits existing water rights sufficient to satisfy a permanent augmentation plan for exposed groundwater and pursues a permanent augmentation plan through water court.***

How does the operator intend to seal the pit as it is being excavated and/or demonstrate that the pit meets the standard for a lined reservoir? Alternatively, the operator may demonstrate to SEO and seek SEO approval stating that the bedrock the pit is excavated into meets the permeability standards for a "lined pit" and that no additional bonding or augmentation plans are required.

The operator shall also acknowledge the requirements for discharge of storm-water that has not infiltrated into the subsurface within 72 hours from the site into the local stream system.

EXHIBIT E - Reclamation Plan (Rule 6.4.5):

(1) In preparing the Reclamation Plan, you should be specific in terms of addressing such items as final grading (including drainage), seeding, fertilizing, revegetation (trees, shrubs, etc.), and topsoiling. You are encouraged to allow flexibility in your plans by committing 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 you. Reclamation shall be required on all the affected land. The Reclamation Plans shall include:

- (a) A description of the type(s) of reclamation you propose to achieve in the reclamation of the affected land, why each was chosen, the amount of acreage accorded to each, and a general discussion of methods of reclamation as related to the mechanics of earthmoving;
- (b) A comparison of the proposed post-mining land use to other land uses in the vicinity and to adopted state and local land use plans and programs. In those instances where the post-mining land use is for industrial, residential, or commercial purposes and such use is not reasonably assured, a plan for

revegetation shall be submitted. Appropriate evidence supporting such reasonable assurance shall be submitted;

(c) A description of how the Reclamation Plan will be implemented to meet each applicable requirement of Section 3.1;

(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;

(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:

(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

(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) A description of each of the following:

(i) Final grading - specify maximum anticipated slope gradient or expected ranges thereof;

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

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

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

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

How does the operator intend to prevent the South Quarry from capturing water out of priority (either exposed groundwater or surface runoff) and maintain compliance with SEO requirements if it is mined to a total depth of 6195' as shown? Storm water retention has already been noted as an issue in this area.

Section 5.1 Existing Reclamation - Reclamation within the Central Quarry area is stated as being "effectively completed" or "considered complete" however this area is currently still being utilized for product stockpiles and mine operations and will still require significant additional reclamation – please correct.

Section 5.2.1 North Repository Area - Detailed plans providing construction and geotechnical information regarding the placement of fill and construction/extension of strip drains, toe drains, and sedimentation basins will need to be provided for review. If these features have already been approved in previous amendments or revisions detailed references to where that information can be found (Revision number and section/date) should be provided. Construction and oversight costs for these features will also need to be detailed in Exhibit L – Reclamation Costs.

Section 5.2.2 South and West Quarry – The information provided for reclamation in these areas in this amendment is at a conceptual level. Significantly more detail will need to be provided as to how this plan will

be executed by the operator to complete reclamation. The level of detail required will need to be sufficient for DRMS to calculate the required reclamation bond necessary to complete the work if necessary – i.e. volumes of material required, where placed, and how..

No information has been provided with regard as to how the current processing area, mine office areas, access road and associated features (scale, wheel wash, etc.) will be reclaimed. Please address.

EXHIBIT F - Reclamation Plan Map (Rule 6.4.6): The map(s) of the proposed affected land, by all phases of the total scope of the mining operation, shall indicate the following:

- (a) The expected physical appearance of the area of the affected land, correlated to the proposed mining and reclamation timetables. The map must show proposed topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of all reclaimed lands; and
- (b) Portrayal of the proposed final land use for each portion of the affected lands.

The reclamation maps provided are at a conceptual level at best. Significantly more detail with respect to the final site appearance will need to be provided. Separate reclamation plan maps at a scale sufficient to show the final proposed bench configurations, contours, sloping, and revegetation details should be provided for the North Repository, Central Quarry, and South and West Quarry areas.

Reclamation maps should show the proposed location and extents of features shown on the provided Exhibit F.3. Additional figures showing the final proposed reclamations for the plant and mine office areas may also be helpful.

Maps should show areas to be planted with shrubs and trees as listed in Table 2 of Figure F.3, and Table 2 will need to specify how many of what tree/shrub will be planted per acre. As shown, the table implies that 250 of each of the 8 species listed will be planted per acre – is this correct?

EXHIBIT G - Water Information (Rule 6.4.7):

- (1) If the operation is not expected to directly affect surface or groundwater systems, a statement of that expectation shall be submitted.
- (2) If the operation is expected to directly affect surface or groundwater systems, you shall:
 - (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;
 - (b) Identify all known aquifers; and
 - (c) Submit a brief statement or plan showing how water from dewatering operations or from runoff from disturbed areas, piled material and operating surfaces will be managed to protect against pollution of either surface or groundwater (and, where applicable, control pollution in a manner that is consistent with water quality discharge permits), both during and after the operation.
- (3) You must provide an estimate of the project water requirements including flow rates and annual volumes for the development, mining and reclamation phases of the project.
- (4) You must indicate the projected amount from each of the sources of water to supply the project water requirements for the mining operation and reclamation.

(5) You must affirmatively state that the Operator/Applicant has acquired (or has applied for) a National Pollutant Discharge Elimination System (NPDES) permit from the Water Quality Control Division at the Colorado Department of Health, if necessary.

Please see and address SEO comments regarding requirements for exposed groundwater as described in Exhibit D and in the SEO comment letter. Planned depth of South Quarry is currently 6400' and projected final depth proposed is 6195', however, groundwater in the area currently ranges from an elevation of 6461' to 6588'. How will the pit prevent groundwater exposure and be kept dry as mining progresses?

Section 7.2 Stormwater – This section refers to Outfalls 1, 3, 4, and 5, along with several other retention structures and ditches, however, only Outfall 3 is shown on the provided figure. Please provide sufficient figures to depict the stormwater controls as described in the text. Also please describe how flow in “unnamed drainage No. 1 will be dealt with during mining and after reclamation.

EXHIBIT H - Wildlife Information (Rule 6.4.8):

(1) In developing the wildlife information, you may wish to contact the local wildlife conservation officer. You must include in this Exhibit, a description of the game and non-game resources on and in the vicinity of the application area, including:

- (a) a description of the significant wildlife resources on the affected land;
- (b) seasonal use of the area;
- (c) the presence and estimated population of threatened or endangered species from either federal or state lists; and
- (d) a description of the general effect during and after the proposed operation on the existing wildlife of the area, including but not limited to temporary and permanent loss of food and habitat, interference with migratory routes, and the general effect on the wildlife from increased human activity, including noise.

Adequate as submitted.

EXHIBIT I - Soils Information (Rule 6.4.9): In consultation with the Soil Conservation Service or other qualified person, you must indicate on a map (in Exhibit C) or by a statement, the general type, thickness and distribution of soil over the affected land. Such description will address suitability of topsoil (or other material) for establishment and maintenance of plant growth. The above information shall satisfy "completeness" requirements for purposes of determination of date of filing.

Adequate as submitted.

EXHIBIT J - Vegetation Information (Rule 6.4.10):

(1) You must include in this Exhibit a narrative of the following items:

- (a) descriptions of present vegetation types, which include quantitative estimates of cover and height for the principal species in each life-form represented (i.e., trees, tall shrubs, low shrubs, grasses, forbs);
- (b) the relationship of present vegetation types to soil types, or alternatively, the information may be presented on a map; and
- (c) estimates of average annual production for hay meadows and croplands, and carrying capacity for range lands on or in the vicinity of the affected land, if the choice of reclamation is for range or agriculture.

(2) You must show the relation of the types of vegetation to existing topography on a map in Exhibit C. In providing such information, you may want to contact the local Soil Conservation District.

Adequate as submitted.

EXHIBIT K - Climate (Rule 6.4.11): Provide a description of the significant climatological factors for the locality.

Adequate as submitted.

EXHIBIT L - Reclamation Costs (Rule 6.4.12): All information necessary to calculate the costs of reclamation must be submitted and broken down into the various major phases of reclamation. You must provide sufficient information to calculate the cost of reclamation that would be incurred by the state.

DRMS will evaluate the reclamation bond calculation when the other adequacy issues have been sufficiently resolved. The estimate provided should break down costs by major areas on site (north quarry, central quarry, south quarry, plant area, etc.) and then detail the tasks and costs for reclamation within those areas (road removal, structure demolition/removal, regrading, fill, topsoil replacement, construction of reclamation features, revegetation, etc.). Consider and prepare this breakdown as if you were preparing a request for proposal to complete all the reclamation work described in the reclamation plan. Feel free to include additional maps as necessary.

EXHIBIT M - Other Permits and Licenses (Rule 6.4.13): A statement identifying which of the following permits, licenses and approvals the Operator/Applicant holds or will be seeking in order to conduct the proposed mining and reclamation operations: effluent discharge permits, air quality emissions permits, radioactive source material licenses, the State Historic Preservation Office clearance, disposal of dredge and fill material (404) permits, permit to construct a dam, well permits, highway access permits, U.S. Forest Service permits, Bureau of Land Management permits, county zoning and land use permits, and city zoning and land use permits.

Adequate as submitted.

EXHIBIT N - Source of Legal Right to Enter (Rule 6.4.14): You must provide the source of your legal right to enter and initiate a mining operation on the affected land.

Adequate as submitted.

EXHIBIT O - Owner(s) of Record of Affected Land (Surface Area) and Owners of Substance to be Mined (Rule 6.4.15): Please submit a complete list of all owners or show the owners on your map in Exhibit C.

Adequate as submitted. As a note – owners of adjacent properties do not need to be included in this exhibit.

EXHIBIT P - Municipalities Within Two Miles (Rule 6.4.16): Please list any municipality(s) within two miles of the proposed mining operation and address of the general office of each municipality.

Adequate as submitted.

EXHIBIT Q - Proof of Mailing of Notices to County Commissioners and Soil Conservation District (Rule 6.4.17): Please submit proof of actual delivery or proof of mailing by Certified Mail, return receipt requested, of

Notice of the Application to the local Board of County Commissioners and, if the mining operation is within the boundaries of a Soil Conservation District, to the Board of Supervisors of the Soil Conservation District.

Adequate as submitted.

EXHIBIT R - Proof of Filing with County Clerk and Recorder (Rule 6.4.18): You must submit an affidavit or receipt indicating the date on which the application was placed with the local County Clerk and Recorder.

Adequate as submitted.

EXHIBIT S - Permanent Man-Made Structures (Rule 6.4.19): Please note that roadways and above-ground or underground utilities (if present) within 200 feet of the proposed affected area are considered permanent man-made structures. In accordance with Rule 6.4.19, when mining operations will adversely affect the stability of any significant, valuable and permanent man-made structure located within 200 feet of the affected area, the applicant may either:

- (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
- (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.

Please provide evidence (certified letter to structure owners) that a notarized agreement between the structure owners and the applicant was pursued.

If an agreement is unable to be reached a geotechnical assessment may be provided to demonstrate that the structures shall not be damaged.

You must provide information sufficient to demonstrate that the stability of any structures located within two hundred (200) feet of the operation or affected land will not be adversely affected.

Proof of mailing for the structure agreements to Xcel Energy and Town of Morrison was not included with the submittal as stated – please provide proof of delivery for these agreements.

You will also need to provide structure agreements to Xcel, CDOT, Century Link and Comcast for their structures (utilities) within 200' of the affected area (access road). Please provide proof of delivery for these agreements. Due to the distance from proposed mining activity, geotechnical evaluation will not be required if these agreements are not executed and returned by the structure owners.

Additional Information:

DRMS notes that you have provided the Division with proof of notice publication as well as proof of notice to surrounding property owners within 200' of the permit. Any letters from other commenting agencies/entities received by the Division to date have been included with this correspondence for you to review.

Outstanding Permit Stipulations:

DRMS will terminate existing stipulations 2, 3, 6 and 7 at this time based on the information provided. **Please note that stipulations 4, 5, 9 and 10 remain active and in effect.**

Appendix A – Geotechnical Stability Exhibit: ***The Division is still reviewing the materials submitted and will provide adequacy comments for this exhibit, if necessary, as a follow up document.***

This concludes the Division's preliminary adequacy review of this application. This letter shall not be construed to mean that there are no other technical deficiencies in your application. Other issues may arise as additional information is supplied. Please remember that the decision date for this amendment application is February 11, 2021. As previously mentioned, if you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this application. If there are still unresolved issues when the decision date arrives and no extension has been requested, the application will be denied. If you have any questions, please contact me at (303) 229-9414.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric Scott", with a stylized flourish at the end.

Eric Scott – Environmental Protection Specialist

CC:

Enclosures: SEO Comment Letter



Response to Construction Materials Reclamation Permit Amendment Application Consideration

DATE: December 7, 2020

TO: Eric C. Scott, Environmental Protection Specialist

FROM: Sarah Brucker, Water Resources Engineer 

RE: Morrison Quarry, File No. M-1973-021 - AM07
Applicant/Operator: Aggregate Industries - WCR, Inc., (303) 716-5312
Sections 10 & 11, Twp 5 South, Rng 70 West, 6th P.M., Jefferson County
Water Division 1, Water District 9

COMMENTS: The subject application is the seventh amendment to a quarry operation located approximately one mile south of the Town of Morrison. The amendment seeks to add 3.5 acres to the currently permitted 361.3 acres to incorporate the mine access road, scale, and truck wash area into the permit boundary. The amendment also seeks to revise bench configurations for the South Quarry, to present quarry configuration with bench and highwall configurations for the West Quarry, and to develop a mining bottom elevation for the West Quarry and confirm the mining bottom elevation for the South Quarry.

The mining operations described in this amendment consist of two phases. Phase 1, which is anticipated to have a duration of approximately 12 years, involves continued full development of the South Quarry below an elevation of 7,000 feet and above 6,440 feet. This will include use of a steepened highwall configuration below the current quarry floor of approximately 6,800 feet and re-mining the existing highwalls from 7,000 feet to 6,800 feet. The maximum bench height will be 70 feet and the minimum bench width will be 30 feet. Phase 1 will also include the concurrent development of the West Quarry, with mining occurring from approximate elevations of 7,360 feet to 7,000 feet. For benches above an elevation of 7,000 feet, the maximum highwall height will be 40 feet and the minimum bench width will be 60 feet. Below an elevation of 7,000 feet, the maximum highwall height will be 70 feet and the minimum bench width will be 30 feet. Mining below 7,000 feet will be considered part of the South Quarry operations and will proceed to an elevation of approximately 6,440 feet during Phase 1. Phase 2, which is anticipated to have a duration of approximately 13 years, will complete mining operations and lower the bottom of the South Quarry to an elevation of 6,195 feet.

This office previously requested that the applicant be required to install piezometers around the South Quarry to measure the groundwater level and demonstrate that excavation is not exposing groundwater. The applicant began a monthly groundwater monitoring program in August of 2020 using a series of five wells, two of which are located at the South Quarry. Both wells in the South Quarry have a bottom elevation of just under 6,400 feet. Once mining has proceeded to an elevation of 6,454 (anticipated by 2029), either the depth of the wells will be increased or new wells will be installed. Based on data from September 25, 2020, the well east of the South Quarry had a water level elevation of 6,461.3 feet, and the well south of the South Quarry had a water level elevation of 6,588.8 feet. If water level data indicates that mining at the site has exposed groundwater, the excavation will be considered a well and



will require an approved substitute water supply plan or decreed plan for augmentation to replace the evaporative losses to the stream system. All mining at the site must cease and all exposed groundwater must be backfilled until such time as the applicant has obtained such approval.

Water for mining operations at the site is pumped from Morrison Quarry No. 2 (WDID 0903317), which is filled by two surface water diversions off Bear Creek known as Morrison Municipal Intake (WDID 0901031) and Morrison Municipal Intake No. 2 (WDID 0901020). Water use at the Morrison Quarry is approximately 50 acre-feet per year.

Stormwater falling on the site is managed through a combination of grading, berms, check dams, and settling ponds. Any stormwater runoff intercepted by this operation that is not diverted or captured in priority must be released to the stream system or infiltrate into the ground within 72 hours; otherwise the operator will need to make replacements for evaporation.

Subject to continuation of the groundwater elevation monitoring program, this office has no concerns regarding the proposed amendments. The Division of Reclamation, Mining and Safety and/or the applicant may contact the State Engineer's Office with any questions.