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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

August 31, 2016

Jim Sorensen
Brown Canyon Stone Works, LLC
7684 Whileaway Road
Park City, Utah 84098

Subject: Division Directive and Sixth Review of Notice of Intention to Commence Large Mining Operations, Brown's Canyon Stone Works, LLC, Brown's Canyon Rock Quarry Mine, M/043/0021, Summit County, Utah

Dear Mr. Sorensen:

The Division of Oil, Gas and Mining has completed a review of the referenced Notice of Intention to Commence Large Mining Operations (Notice or NOI) which was received July 5, 2016. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion and include the location in the document where the text has been updated. Please address items requested in the attached technical review.

Please submit your response to this review by September 12, 2016.

The Division will suspend further review until receiving your response to this review. Please contact the appropriate reviewer with questions about the review: Leslie Heppler (lah) at 801-538-5257, April Abate (aa) at 801-538-5214, Mike Bradley (mpb) at 801-538-5332, Wayne Western (whw) at 801-538-5263, or me (pbb) at 801-538-5261. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb
Attachment: Review
cc: Summit County (SLewis@summitcounty.org)
P:\GROUPS\MINERALS\WP\M043-Summit\M0430021-BrownsCyn-StoneWorks\Final\REV6-7445-08312016.docx

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UTAH DNR OIL, GAS & MINING

SIXTH REVIEW OF NOTICEOF INTENTION
TO COMMENCE LARGE MINING OPERATIONS
Jim Sorensen-Brown Canyon Stone Works, LLC
Browns Canyon Stone Works Mine
M/043/0021
August 31, 2016

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Opt Cover letter	*Previous comment - An attachment to the cover letter in response to the Division's previous comment #1 includes statements concerning operation and reclamation of certain areas. Please add this response to Section 106.4 regarding the operation plan and Section 110.2 regarding the reclamation plan.* Thank you for fixing the cover letter. More comments are written below under 106.4 and 110.2.	lah	
3	Table of Content	*Previous comment - Please include a place holder in the Appendices for the Conditional Use Permit from the county. In addition include in the Table of Contents.* New comment - Thank you for including in the Table of Contents. Please include a place holder, as per R647-1-102.3 and include the current Conditional Use Permit from Summit County.	lah lah	
4	Un numbered page after the cover sheet	After "This form applies only to…", please add the following sentence: "The operator understands that there are inconsistencies between the text and figures in the NOI. Any inconsistencies in the NOI will be enforced at the discretion of the Division of Oil, Gas and Mining. At any time the operator may choose to remediate the inconsistencies in the NOI."	lah	

R647-4-105 - Maps, Drawings & Photographs

105.1 - Topographic base map, boundaries, pre-act disturbance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
5	Page 6 d,e,f	*Previous comment - There are no acreage figures shown on Figure E-1; they are shown on Exhibit D.*	lah	
		Previous comment - E4 is a good map to show reclamation treatments, but the map needs to include the regrading of the stockpiles, dumps and oversteepened slopes. In addition please clarify areas to be topsoiled and seeded. In addition, please change "reseeding" required to "seeding", as theoretically, if seeding is done properly, reseeding will not be needed.	lah	
	Page 6 e	New comment – As written … "seeding will occur on slopes less than 2H:1V during reclamation." Please rewrite to "seeding will occur on all slopes less steep than 1H:1V as shown on Exhibit E4 and E5" as this statement is consistent with Exhibits E4 and E5	lah	

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Page 6	*Previous comment- Text will need to be modified to match changes in the maps*	lah	
		Previous comment - All maps do not include the angle of repose slopes northwest of the equipment area, that need to be topsoiled and reseeded	lah	
		Previous comment – As requested above, a cross section through the slope will clearly show the fill to be added and will enable a volume calculation for bonding purposes.	lah	
		Previous comment - Thank you for including cross section D-D'. As noted below please continue the section to extend down the embankment/fill slope to the toe of the slope which will enable volume calculations for bonding purposes.	lah	
		New comment – Still looking for the volume of material needed at about 2+25 on Exhibit E3, section D-D'. The volume will continue across the angle of repose slope. It should be included as a line item, as the area could be reclaimed at this time and reduce the bond costs.	lah	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Exhibit 5	The new Exhibit 5 is a welcome addition to the plan as it captures the worst case scenario (for bonding) with the current oversteepened higwall slopes. The roads need to be further defined as noted below. A cross section(s) is needed for volume calculations for bonding purposes. The cross section(s) needs to be perpendicular to the highwall.	lah	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
8	Earlier comment still to be reviewed		pbb	
9	Exhibit E1, E2 and E4	*Previous comment - The access to the "staging/equipment area" is cut off. Is a new road to be built? In addition please provide proper documentation relating to public safety (i.e. Department of Transportation) and stability of the slope.* New comment – As per the correspondence in H, the county would be involved on the stability of the roadway.	lah	
11	Exhibit E1 and E3	*Previous comment - Cross section D-D' needs to extend down the embankment/fill slope to the toe of the slope.* New comment – The area of concern is at about 2+25on section D-D'. The text says in Section 110.2 that slopes that are steeper than 2H:1V will be regraded to less than 2H:1V except for the highwall. The cross section and associated reclamation cost estimate need to reflect this commitment to reduce the slopes on the outslope of the parking area.	lah	
12	Exhibit E2	*Previous comment - Cross sections are mislabeled – A-A' is actually B-B' (according to Exhibit E1) and B-B' is actually A-A' Change one or the other. In addition, the long section should show the slight drainage in exhibit I, i.e. show arrows with the percent grade labeled on the arrow.* New Comment -Thank you for properly labeling the cross sections. Some of the arrows that have been added on Exhibit I are incorrect. A 45-percent (%) grade is not the same as a 45-degree slope. Please correct the inconsistencies.	lah	
13	Exhibit E4	Exhibit E4 notes, "Area of highwall to be ripped 1H:1V", yet on page 18, the text indicate that it is "solid rock". Please change text box on Exhibit 4 to match page 18 and include blasting costs in the surety calculations	lah	

R647-4-106 - Operation Plan

106.8 - Depth to groundwater, extent of overburden, geologic setting

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
14	Page 10	New text has been added regarding volumes of material "to be mined". The Division is more interested in the volume of stockpiles that would have to be reclaimed at worst case scenario. If reclamation were to be done by the Division, the Division would not keep mining, but use the use existing stockpiles. The exact volume would not be known, but an estimate can be used for bonding purposes based on current day stockpiles. If the volume changes from the estimate, the NOI can be amended or revised in the future. This text should point to Exhibit D	lah	
15	Page 10	Section 106 needs to be consistent with 110.	lah	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
16	Page 10	The chart (page 10) has estimated tons of material and the text has cubic yards. In addition, assumptions of both pounds per cubic yards and tons per cubic yard are used in the text. Reclamation earthwork is dominantly pushing existing material on site around to regrade to a stable configuration. To simplify the NOI, use cubic yards, as the onsite material characteristics do not justify including shrink/swell assumptions. Section 106 needs to be consistent with Section 110.	lah	

R647-4-109 - Impact Assessment

109.1 – Projected impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
17	Page 15	*Previous Comment - Please provide a copy of the final version of the industrial SWPPP permit issued once it becomes available for inclusion in the Notice. The Division needs a valid, up-to-date copy of the permit issued through the Division of Water Quality in order to approve an expansion to the Notice.*	aa	
	Appendix E	Thank you for including the SWPPP in Appendix E, but it appears to be incomplete. For example, Section D of the form, SWPPP Team, is blank. Corresponding Section 1.3 of the SWPPP template lists Jim Sorensen as the sole member of the team. SWPPP Team members are supposed to be on-site employees during working hours. Also, use of the term "N/A" is inappropriate in many places. Please complete the SWPPP as this will need to be kept on site and updated with completed inspection forms, training documentation, and personnel changes on the SWPPP Team. The SWPPP is a living document and must be available for county and state agency inspection.	mb	
18	Exhibit I/Appx E	The Stormwater Map in Exhibit I could be moved into the SWPPP to become the required Attachment A map of the SWPPP that is missing.	mb	
19	Appendix E	For the final NOI submittal, please delete the instruction blocks in each section of the SWPPP to reduce the number of pages of the document.	mb	

109.4 – Projected impacts on slope stability, erosion control, air quality, public health and safety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Omission	*Previous comment - Please provide proper documentation relating to public safety (i.e. Department of Transportation) and slope stability of the highwall. (This comment is related to the Exhibits, as was noted above).*	lah	
		New comment – New verbiage on page 18 points to Appendix H and email refers to Summit county. In Appendix F, there is no conditional use permit submitted at this time. Please submit the conditional use permit.	lah	

R647-4-110 - Reclamation Plan

110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Page 20	*Previous comment - Bond costs are calculated on worse case scenario, not on final configuration; the current mine design as presented will be a bonding challenge.* New comment – The previous review contained a statement that no specific response was required for this comment, and while the comment did not require a *specific* response, the reclamation cost estimate *does definitely* need to account for the current status of the mine and the cost for reclamation based on the condition of the mine when reclamation is most costly, i.e. worst case. The mine plan presented is a solution to the current glory hole that exists on the site. The worst case scenario would be the blasting and regrading of the current glory hole; until such time as the plan submitted is approved and is actually implemented on the ground. Please include in the bond calculation the costs to blast and regrade the current glory hole. Please add the costs as line items, as once the glory hole is properly mined and at a stable slope angle of 1H:1V slope, the line item(s) can be removed and the reclamation cost estimate decreased.	lah lah	
22	Page 20	Item a. – Paragraph notes "the roads will be ripped and seeded … main road will remain as a road". Both Figures E5 and E4 are not consistent with the statements. Please modify the plan for consistency, in other words, the figures show all areas (23.1 acres to be reclaimed), with few notes on the roads. Please show the exact location of the "main" road to remain and remove the green cross hatch from the main road. Keep in mind the post mining land use of the main road needs to be consistent with the post mining land use of cattle grazing and hunting deer. The Division will not approve four main roads to be left unreclaimed on a site of less than 30 acres for the cows and deer. As currently shown there are four areas of roads and it is not clear which is the main road. The road needs to function as a road and not four non-continuous spots on a map. This request is made for bonding purposes. The operator may change the location of the road in the future by submitting an amendment or a revision to the plan. The bond can be changed at that time. This should actually reduce the bond if done correctly.	lah	

110.5 - Revegetation planting program

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
	Section 110.5, Seed Bed Preparation	Comment 30 of the previous review asked that costs for additional vegetation treatment for the parking area outslope be included in the reclamation cost estimate. The NOI says areas with excessive *noxious* (emphasis added) weeds will implement additional control measures. Cheatgrass is not classified as a noxious weed, so this commitment would not apply to cheatgrass-infested areas. Please remove the term "noxious" from this statement. The NOI (Section 110.2) says slopes steeper than 2H:1V will regraded to less than 2H:1V. Weed control may be effected by regrading of the parking area outslope, but additional control efforts will likely be needed. Please commit to controlling weeds such that the vegetation is suitable for the postmining land use.	pbb	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
23		*Previous comment - Please include productivity worksheets for verification of production rates.* New Comment - Please include productivity worksheets for the verification of production rates. The reply was "Production Rates were provided by Russ Witt of Western Construction Materials from the Large Mining Operations Progress Report." The production data was not included. At a minimum the production worksheets must include type of equipment, distance, grade and material factors. ~~The Division needs this for verification.~~	whw whw	
24		*Previous comment - In the reclamation plan (page 20), the Notice says highwalls will be reclaimed and stabilized by backfilling against them and cutting the wall were necessary to a slope of 2H:1V except solid rock where a 1H:1H slope will be the maximum. Please include plans and cost estimates to reclaim the pit as outlined in the Notice should mining cease at the end of five years.* New Comment - In the reclamation plan (page 20), the Notice says highwalls will be reclaimed and stabilized by backfilling against them and cutting the wall where necessary to a slope of 2H:1V except solid rock where a 1H:1V slope will be the maximum. Please include plans and cost estimates to reclaim the pit as outlined in the Notice should mining cease at the end of five years. Reply was "Costs have been updated to reflect the end of 5-year costs." In the bond calculations, under highwall information there is no cost associated with highwall reclamation, only a statement that at reclamation the operator chooses not to reclaim the highwall for safety reasons. The operator must conduct mining operations in such a way so that reclamation can occur. The plan clearly states on page 20 that highwalls will be backfilled to 2H:1V unless in solid rock. There needs to be a line item for backfilling to achieve a 2H:1V slope.	whw whw	
25		On page 20 the operator states that the waste dumps will be regraded to a slope of less than 3H:1V. Please include reclamation cost for the earthwork. Please also include costs for additional vegetation treatment for the parking area outslope. Per the grading plan, this area should be left at a slope of 2H:1V or less steep, and measures are to be taken to decrease weed cover.	whw & pbb	
26		In the bond calculations the operator states that slope reclamation will require 20 cubic yards per acre for 23.1 acres and that the pit reclamation will require 30 cubic yards for two acres. Please provide backup data for those numbers. There are 43,560 square feet or 4,849 square yards per acre; 20 cubic yards/4,849 square yards equals 0.004132 yards or 0.15 inches. Placing 0.15 inches of material per acre does not appear to be adequate reclamation.	whw	
27		The escalation rate is 0.07 percent, not 0.05.	whw	
28		Please include a line item for blasting to reduce the slope angle of the pit highwall as shown in Appendix A, page A-3, bottom photo. The highwall cannot be reclaimed by pushing material against the highwall.	whw	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
29	Pg. 4 and Appx D	Since there are demolition costs for both the shed and scale house, it must be assumed that they are not mobile. These buildings must be inspected for asbestos prior to demolition, regardless of age, as required by the Utah Division of Air Quality. Any regulated quantities of asbestos-containing materials found in them must be properly removed and disposed of prior to demolition. At a minimum, please provide a cost for the pre-demolition inspection of these buildings.	mb	
30	Pg. 9 and Appx D	The 1,000-gal oil tank is said to be currently unused. If it is not being used, it should be removed from the site; otherwise the Division must assume that it will be used at some point. If the tank is used again and filled with diesel fuel or other regulated hazardous liquid, the permit must be amended and the surety bond adjusted accordingly to account for the costs associated with emptying and disposing of a full tank of liquid. An option to removing the tank is to change the NOI at this time, rather than amending the NOI at some point in the future, and assume for bonding purposes that the tank is full.	mb	