

## RESPONSES TO ADEQUACY REVIEW #2 AND #3 QUESTIONS

1. A spreadsheet "Tabulated Mine Quantities.xlsx." was included with the TR-12 materials. Three material types were broken out; storage (final placement), Waste (cut material to be relocated into storage) and gypsum (taken off site). The Division is interpreting that for bonding purposes Storage and Waste will be utilized as backfill material. However, no volumes for growth medium (topsoil) were provided.
  - a. Please revise the spreadsheet to include topsoil volumes by location.

### Adequacy 3 Additional Questions

With regards to the worst-case scenario (5 yr period) all affected lands need to be reclaimed. Growth medium is listed under the "Lower Pit Extent" however it is only 16,000 CY. An additional 16,000 CY is referenced under "Lower Pit and Upper Pit Reclaimed". The Reclamation Plan (section 7.6) mentions that the current volume stockpiled is 244,000 CY and that is insufficient.

- i. Explicitly state the number of CY of growth medium that is stockpiled on site,
- ii. its storage locations
- iii. and the volume to be used at each designated area.

*(RESPONSE) Revised quantities are set out in Exhibit L.*

2. Please update section 2.13 to clarify the material consistency of "intraburden" or "waste". Previous revisions have classified the overburden as Shalely Sandstone or dry clay. Specify the material consistency to be utilized for backfill material.

*(RESPONSE) Material consistency and density provided from onsite geotechnical investigation data have been added to section 2.13.*

3. Please provide a map which labels the various areas broken out on the "Tabulated Mine Quantities.xlsx." Include on the map all referenced storage locations.

*(RESPONSE) Figure 1.1 in Exhibit L provides the areas used for reclamation cost estimation.*

4. Please provide the "worst case scenario" maximum highwall length, height, and slope to be backfilled at any time during the mine plan.

*(RESPONSE)*

	Lower Pit		Upper Pit
	Upper Section	Lower Section	
Maximum Highwall Length (Cumulative)	3,175'	2,535'	2800'
Maximum Highwall Height	180'	90'	130'
Maximum Highwall Slope - Reclaim to 3H:1V	1H:1V	1.4H:1V	1.2H:1V

Note - "Worst case scenario" applies to a 5-year look ahead of planned mining activity. This exercise should be revisited by 09/01/29.

5. For the backfill and topsoil (or “growth medium”) material specify the volume, storage location, the average haul distance and haul grade for transporting the material, by area and material type.

Adequacy 3 Additional Questions

- a. What do the \* annotate under Avg Haul Grade?
- b. While helpful, volumes provided in this table do not correlate to figures provided on Attachment 3 – Tabulated Mine Plan Quantities. Significantly larger grading quantities are references on Attachment 3.
- i. In addition to the long-term forecasting please provide a table which shows only the current reclamation liabilities and those anticipated to be affected over the next 5 years.

*(RESPONSE)*

Areas	Revegetation / Disturbed Area (acres)	Overburden Grading Volumes (LCY)	Overburden Average Grading Distance (ft)	AG Topsoil Volumes (CY)	3rd Party Topsoil Volumes (CY)	Topsoil Grading Volume (CY)	Topsoil Haul Distance (ft)	Topsoil Grading Distance (ft)
Stockpile	4.93	-	-	1,988	0	1,988	625	100
Staging Area								
Lower Pit	52.81	946,869	300	-	21,299	21,299	-	100
Upper Pit	28.54	199,933	155	-	11,513	11,513	-	100
Main Haul Rd	17.97	-	-	7,248	-	7,248	3,070	100
Lower Pit Rd	15.43	-	-	3,764	2,458	6,222	2,325	100
Sed Pond	1.26	-	-	-	508	508	-	100
M201 Rd								
Sed Pond	6.30	-	-	-	2,542	2,542	-	100
M601 Rd								
Upper Pit Rd	8.70	118,400	-	-	3,509	3,509	-	100

*Adequacy 3 Clarifications:*

- a) This was a typographic error and the “\*” should have been “°” signifying degrees. The table has been revised.
- b) The table above and Exhibit L are now consistent.
  - i. The current state of the mine is considered the worst case scenario for reclamation in the 5-year window as no additional disturbance or highwall extension is created in the Lower Pit, additional proposed mining in the Upper Pit will increase the disturbed area only minimally (~6 acres expansion on the lower bench, no additional highwall), and no development or mining associated with the East Pit is proposed in this window. The volumes of waste material generated during this window will reduce backfill/regrade requirements from the current pit configuration with all waste placed in-pit. The reclamation cost estimate quantities presented in Exhibit L represent the worst case in the 5-year window and assume unforeseen and unexpected cessation of mine operations and reclamation of the site in its current condition.

6. Section 3.6 of the Reclamation Plan acknowledges that the site is topsoil deficient and that overburden will be blended to 'stretch' the volume. Has any soil testing of this blended material occurred to date? If so, what were the results?

Adequacy 3 Additional Questions

Revised language of Section 7.6 conflicts with the information provided in the previous paragraph. The Operator originally committed to applying 6-12 inches of topsoil. Then in the revised paragraph states that the goal is 2 inches however even that scant amount may be blended. If insufficient growth medium is available on site, the operator may be required to import topsoil or additional organic material to create a proper seed bed.

*(RESPONSE) Documentation is added that covers to-date efforts on site of soil testing of the blended material in section 3.6 of Exhibit E. While reclamation appears to have been successful with as little as two inches of growth medium American Gypsum proposes for the purposes of the Reclamation Cost Estimate for Financial Warranty purposes using six inches of growth medium consisting of approximately equal parts topsoil and finer-grained material available on site, placed in uncompacted layers over regraded slopes, and track-walked to promote vegetation growth. The approach to different areas will be documented and monitored for success and adapting the approach to the most successful practices.*

7. A cost for riprap was provided. Is this the cost to purchase the material only or does this include delivery to the site?

*(RESPONSE) The \$50-65/CY for 6-inch D50 riprap material includes delivery.*

8. Volumetrics were not provided for all currently disturbed areas. Please clearly provide information for the all-road segments, shop and office facilities, sediment control and access roads, stockpiles, and loadout areas in addition to the open pits.

Adequacy 3 Additional Questions

Several roads have significant cut/fill associated with their removal. Please provide the grading volumes associated with each of the major road segments as well as sediment ponds and their access roads.

*(RESPONSE) The grading volumes for all disturbed areas including the upper pit road (outside the pit) are included in the response to Adequacy Item 5 above. The portion of the roads within the pits are regraded to 3H:1V or flatter, and the volumes associated with them are included in the pit regrade volumes. Details regarding the volume estimates are provided in Exhibit L*

9. Section 2.2 of the mining plan states, "the maximum footprint (of the upper pit) would be excavated to a pit floor elevation..." Per Rule 6.4.4(d) please state the size of area(s) to be worked at any one time. Provide the maximum acreages to be opened at any time, broken out by pit.
  - a. Table 2.1 Estimated Schedule of Operations breaks the mine into several phases. Per Rule 6.4.4(e)(ii), please include a description of the size of each phase and clarify whether the disturbance associated with each phase should be added to the previous phase. (If you feel that this information is better presented in the Tabulated Mine Quantities spreadsheet, please refer to it in the text or as a footnote to Table 2.1).

*(RESPONSE) Incremental changes in disturbed area are noted in Table 2.1. Extraction of the remaining material in the Lower Pit is anticipated to be completed by 2026 depending on production demand and the amount of waste encountered. Mining operations will then return to the upper pit and through the 5-year window (2024-2028), the southern bench area will be mined lowering that bench by as much as 50 feet, depending on production demand and the amount of waste encountered. This would increase the disturbed area of the Upper Pit by approximately 6.4 acres.*

- b. Please confirm that Table 2.1 does not include any mining activity that has not already been permitted.

*(RESPONSE) All mining and reclamation activity described in Exhibits D and E was previously approved under AM-04, 2020 and previous revisions.*

- c. Clarify what phases need to exist through life of mine but should be included in the worst-case scenario and will require reclamation.

*(RESPONSE) Based on the 5-year window approach to the "Worst Case Scenario," the following phases need to exist during this time period and would require reclamation:*

*Phase #1 Lower Pit will be fully mined. The disturbance area will not change.*

*Phase #4 Upper Pit existing disturbance.*

*Currently disturbed access/haul roads, and sediment control*

10. Please include an inventoried list of all culverts (material type, length, and diameter) which were installed and will be removed as part of reclaiming haul roads.

*(RESPONSE) Current inventory of existing culverts have been added to Exhibit E, Table 3.3 Existing Mine Office/Staging Area Buildings/Support Facilities*

- a. Indicate if they will be excavated during recontouring of the roads or if additional excavation will be required for removal and if so, how much.

*(RESPONSE) Exhibit E, Section 3.9 text updated.*

11. Will any mulch be applied to reclaimed areas?

**Adequacy 3 Additional Questions**

**Section 7.6 does not explicitly state if mulch will or will not be applied during reclamation as required per Rule 6.4.5(1)(c).**

*(RESPONSE) The response to Adequacy Item #6 includes details of potentially incorporating mulch into the soil blending for reclaimed areas. (Exhibit E, section 3.6). The use of mulch is considered optional at the discretion of the operator. The requirements for growth medium in the worst-case scenario are such that without the assumed volumes available from the East Pit area, large amounts of topsoil would need to be imported to complete reclamation prematurely to full development of the mine. This may be alleviated by use of mulch or other growth medium amendments to establish suitable growth medium with higher percentages of mine waste.*

12. Removal of buildings/structures is not explicitly discussed within the Reclamation Plan. Will any man-made structures remain post mining? Will all debris be transported off site for disposal? Please specify this within the narrative portion of the Reclamation Plan.

*(RESPONSE) Clarification text added to Exhibit E, section 3.9.*

13. Within the reclamation plan installation of “rock vortex weirs or rip-rap” is mentioned. Is this referring to the surface water channel that is to be constructed through the regraded 6900 access road? Or are additional rock features necessary? If so, please provide the details of these features, including but not limited to dimensions, volume of import or excavated materials, anticipated quantity, and location(s).

*(RESPONSE) The mention of "rock vortex weirs or rip-rap" refers to an ad hoc remediation solution following the planned reclamation efforts in the event further water/erosion control structures are necessary. At this time, there is no designed quantity. A suggested budget number of \$125,000 can be carried to address any ad hoc control measures following the general reclamation efforts.*

14. Please provide the height of all structures to be removed.

*(RESPONSE) Table 3.3 of Exhibit E updated with structure heights where applicable.*

15. For items in which the foundation type is cinder blocks please clarify if just the perimeter of the structure that sits on the blocks like a stem wall/footer or if a temporary pad has been constructed.

*(RESPONSE) Table 3.3 of Exhibit E updated with foundation details. Cinder blocks are utilized for corner cribbing, typical.*

16. Please provide the construction details of the mine access gate which shall be removed upon final reclamation.

**Adequacy 3 Additional Questions**

A photo was provided (Figure 7.5 and 7.6) however no information regarding building materials and dimensions was provided. This information should be added to Table 7.3 as it is a feature that will need to be removed upon final reclamation. is needed to accurately calculate the demolition and disposal costs of the feature.

*(RESPONSE) Mine access gate information updated in section 3.9.*

17. Section 3.10 (Reclamation Plan AM-4) mentions

- Slope monitoring for a period of 5 years. What is the annual cost anticipated for this activity and the number of hours annually?
- Reclamation (vegetation) monitoring for a period of 3 years. What is the annual cost anticipated for this activity and the number of hours annually?
- Stormwater monitoring for a period of 5 years. What is the annual cost anticipated for this activity and the number of hours annually?

*(RESPONSE) Estimated cost and hours for inspections included within Exhibit L.*

18. Section 3.0 Reclamation Plan states that "Overburden and intraburden from each successive mining stage would be backfilled and stockpiled in the area of the depleted stage above the area of active mining." Based on the current mining configuration of the lower pit this does not appear to be the case. Backfill material will be transported from other pits as available. Clarify stockpile locations, type and volumes available on site for reclamation purposes.

*(RESPONSE) Clarifying text added within section 3.0 with supporting stockpile locations, types, and volumes provided within previously reviewed maps with TR-10 (Figures 1-3) and AM-04 (Drawings 11-13).*

**Additional Adequacy 3 Questions/Comments Follow.**

AR3-17. For the purposes of reclamation cost estimating the Division has broken the site up into several areas so that features may be added or removed as the site progresses through time. Please ensure that figures correlate to the follow areas. Additional sub areas may be added if deemed necessary by the Operator.

- Stockpile Staging Area
- Lower Pit
- Upper Pit

- d. Main Haul Road (Gate to Fork)
- e. Lower Pit Road (Fork to Lower Pit)
- f. Sediment Pond M201 and Road
- g. Sediment Pond M601 and Road
- h. Upper Pit Road (Fork to Upper Pit Current Road)
- i. Upper Pit Road 6900 (Modified Upper Pit Road)
- j. East Pit Road (Access from Upper Pit to East Pit)
- k. East Pit

*(RESPONSE) Provided in Exhibit L*

AR3-18. Table 6.2 does not account for continued mining in the Lower Pit , nor reclamation of such. Please revise this table to include all required information under Rule 6.4.4(e).

*(RESPONSE) Table 3.1 in Exhibit D has been amended to incorporate the Lower Pit and provide additional detail.*

AR3-19. The worst-case scenario presented is not consistent throughout the provided materials.  
a. Based on Attachment 3 – Tabulated Mine Plan Quantities 2024 appears to be the highest liability over the next 5 years. While revised text of section 6.2 states 2028 is the worst-case scenario.

b. Additionally, the Tabulated Quantities do not match the areas identified as being disturbed in 2028, it only shows the Upper Pit. Based on the narrative in section 6.2 all three pits will be opened up.

c. Worst-case scenario backfill volumes in the AR-2 cover letter do not correlate to the Tabulated Quantities.

*(RESPONSE) Review of the integrated Mining Plan as described in Exhibit D and detailed in Table 3.1, with consideration to the current status of the mine rather than the scope defined in the Plan of Operations has shown as explained elsewhere the worst case scenario is the current year during the 5 year period. The cut/fill volumes for regrading are estimated in Exhibit L.*

AR3-20. Based on Table 6.1 the East Pit is expected to be affected within the next 5 years. Please provide backfill/grading information for the East Pit. Specifically revise the table provided in response to #5 and incorporate this information into the reclamation plan.

*(RESPONSE) As discussed in the response to AR3-19, the updated Table 3.1 of Exhibit D*

*shows the East Pit development is not planned to commence within the next 5 years.*

AR3-21. Pursuant to Rule 6.4.12 provide a reclamation cost estimate. The Division is amenable to a 5-year liability period for the worst-case scenario. Provide information on the following tasks:

- a. Break reclamation tasks up based on area as referenced in #17.
- b. Provide all grading volumes, material type, push distances, Push slopes, hauling volumes, hauling slopes. For backfill grading and growth medium material.
- c. Identify areas which require decompaction, state acreages and ripping depths anticipated
- d. Areas to be revegetated (acres)
- e. Demolition and off-site disposal of man-made features
- f. Include post reclamation site maintenance (slope monitoring, reclamation monitoring and stormwater monitoring)
- g. Abandonment of 20 exploratory drill holes
- h. Ad Hock Remediation Solutions "Rock Vortex Weirs"
- i. Purchase and delivery of Riprap
- j. Mobilization

*(RESPONSE) A detailed breakdown of reclamation tasks and associated cost estimates are provided in Exhibit L.*

AR3-22. Section 6.2 states " The expected maximum disturbance area of mining operations in the next 5 years is approximately 7,100,00 ft<sup>2</sup>, or 163 acres." According to the most recent annual report 198 ac is affected with approx. 4 acres seeded to date. Clarify by mining area the total affected lands (current and 5 yr. anticipated).

*(RESPONSE) Maximum disturbance area estimates are included in Exhibit L.*