

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 5  
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January 26, 2024

Bernard Melewski, Esq.  
32 Fryer Lane  
Altamont, NY 12009

**Re: Notice of Incomplete Application and Technical Comments  
DEC Application # 5-5230-00002/00002 (ML)  
Barton Mines Ruby Mountain Quarry  
Johnsburg (T), Warren (Co.)**

Dear Bernard:

Staff with the New York State Department of Environmental Conservation (DEC or Department) have reviewed the referenced permit application received in our office on December 8, 2024 and provide the following comments:

## **Narrative**

1. The symbol on several of the figures indicating vegetation to remain is not visible on portions of the northern life of mine (LOM) boundary. Please state that vegetation outside the LOM boundary within the Barton property line will remain in place throughout the life of the mine.

## **Groundwater**

2. The response to item number 13 and 14 of the letter states that well locations have been included on the cross-sections. Please provide these updated cross sections. The groundwater elevation provided on the cross sections is 1700 feet AMSL throughout the entire site. Is this an accurate representation of the groundwater elevation provided by monitoring wells? Monitoring location RUB-1 indicates a groundwater elevation of 1982 feet, monitoring location RUB-6 indicates a groundwater elevation of 2,023ft, RUB-2 shows groundwater at elevation 2,104ft. The groundwater elevation indicated on the cross sections should reflect the groundwater elevation indicated by the map on page 10 of the narrative and the well data.
3. Wells RUB 1, 2, 4, 5, and 6 may be mined through as proposed mining progresses. Please address. Will these wells be replaced? What wells will remain throughout the life of the mine for continuous monitoring?
4. Please provide tables with the updated depth-to-water data and associated hydrographs for all the wells in the network.

## **Reclamation**

5. Please discuss how the RM Pile will drain after final reclamation. If the current/proposed under drains of the tailings pile drain into basin three or basin 2, and currently the water in those basins is used in a closed loop system to be reprocessed through the mill, discuss the RM Pile drainage for when those basins are no longer drawn from and are subsequently reclaimed as grassland.
6. Phase 4 Reclamation Plan Map: The Phase four reclamation plan map indicates areas such as basins and building locations not within the reclamation/revegetation area. Please include these areas as to be reclaimed during this phase. All areas affected by mining must be reclaimed at the time of final reclamation. Please provide an acreage summary on this map indicating acreages of areas to be reclaimed with various plantings. Does the permittee intend to plant trees throughout the entire site and on the high wall benches? Please label and provide an acreage summary for areas where vegetation is to remain in place within the LOM area on the phase 4 reclamation plan map. It may be helpful to discuss acreages with the DEC prior to submission.

## **Noise**

7. Change in Methodology:
  - a. The November 2023 Sound Study utilizes a different methodology than the prior two sound studies that were submitted to regulatory agencies for this project. Specifically, the prior two sound studies used the straight-line projection method. The current November 2023 sound study utilizes “industry standard software modeling program dBMap, which is International Standards Organization -compliant (ISO 9613 1,2,3). The dBMap modeling tool is a more comprehensive sound propagation analysis method than the previously straight-line projection method and accounts for surface reflection and absorption, atmospheric absorption, geometric divergence, weather conditions, topography, source sound power level, and additive effects of all on-site sources.” The paragraph further states “The straight-line projecting method used previously is more conservative and subsequently yields high projected sound levels than those projected from the dBMap software, which more accurately reflects sound attenuation resulting from the site conditions mentioned above.” Section 3.6.1 Methodology provides additional details that include “assumed downwind propagation (wind direction within an arc of 90 degrees with the wind blowing from the source at 11 M.P.H.), and ground-based temperature inversion. A ground factor of 0.7 is used to be conservative. Sound pressure levels are A-weighted and shown in the form of isolines in 5 dB intervals from 25 dB(A). Modeled sound levels at each monitoring location are labeled; each received is modeled 5 feet above ground surface.” The model output provides modeled sound pressure levels across the site under the eight modeled scenarios utilizing the Sound Power Levels of different operations taking place at the site (Table 19). The maps (Figures 3 to 10) show the sound propagation in 5dB intervals. Sections 3.6.3.1 through 3.6.3.4 provide the sound pressure level from each scenario in table format at the monitoring locations including modeled Sound Pressure Levels and rise over ambient. However, few details are provided regarding the model

- inputs, assumptions and constraints, e.g., Temperature, Humidity, barrier attenuation parameters, reflection details, isoline and map outputs. The model also includes aspects not typically seen in sounds studies submitted to DEC for Mined Land Reclamation permit applications or modification, e.g., surface reflection and absorption, atmospheric absorption, geometric divergence and weather conditions. It might be helpful to discuss input variables with the regulatory agencies prior to using in the model.
- b. It is unclear from the sound pressure level maps (and tables) which model input features or constraints are affecting attenuation at certain monitoring locations, i.e., how much is attributable to distance attenuation, barrier, etc. Furthermore, the use of specific model input values (e.g., temperature, humidity, and ground factor) likely only generated output for the eight scenarios under specific seasonal conditions that are not necessarily the same during other times of the year, i.e., winter versus summer. Please provide detailed receiver output calculations along with other model output to allow for a detailed review and understanding of the model.
  - c. It is unclear what the accuracy of the model is given the number of input values, assumptions and limitations. As stated in the Section 1. Executive Summary, paragraph four (page 1), this method [dBMap] is less conservative than the straight-line projection method. DEC generally prefers the straight-line projection method as it is (i) readily replicable and (ii) conservative as it typically limits attenuations to distance and barrier, and occasionally some vegetation.
8. Ambient: The current model utilizes the 2023 measured ambient sound levels to determine future sound levels at the various monitoring locations under the eight modeled scenarios. However, as noted below, the 2023 ambient sound levels are generally higher than those used in 2022 sound study and therefore, the resultant modeled sound levels show a lesser riser over ambient compared to earlier studies and provide a more favorable outcome.
- a. Section 3.3, Monitoring Location Sound Levels and Table 5 provides updated ambient sound level readings (mill and quarry not in operation) taken during August 17, 2023 and August 18, 2023. However, for M-6a (Brown Pond) only readings were taken on August 17, 2023. Please explain why no readings were taken on August 19, 2023, as the lowest ambient sound level between the two readings (August 17 and August 19) was used in the sound study for all other locations.
  - b. Location M-6 and M-6a: M-6 was relocated to M-6a to be more representative of the wilderness area. However, currently no monitoring or receptor location exist to the west of the RM Pile. Please consider including M-6 as a western reference point.
  - c. Measured Sound Levels, Tables 4 and 5: The August 17, 2023 and August 19, 2023 ambient sound level readings were taken when the mill and quarry was not in operation as requested by regulatory agencies and provided in Table 5. Table 4 provides the ambient and operating sound levels from 2022. Section, 1.0 Executive Summary, 6<sup>th</sup> paragraph provides “The results of the August 2023 sound

recordings demonstrate no correlation between mill operations and mill not operating at the monitoring locations. [...] The variations in environmental sources were far more significant factor in the ambient levels than sound generated from the mill across both the 2022 and 2023 studies.” Given the statement in Section 1 and considering the lowest sound level readings at the various locations (see below table), please explain why the lowest sound levels measured between 2022 and 2023 for each location were not chosen as a conservative ambient sound level as it appears that the 2022 readings with the mill operating (or even the quarry and mill operating) resulted in lower sound levels when compared to the ambient readings in 2023. To be conservative, please provided an updated sounds study that uses the lowest sound levels measured at the monitoring locations.

- d. The table below shows the lowest reading for each location from 2022 and 2023 under the measured conditions, bold indicates lowest reading.

Monitoring Location	2022 - Lowest ambient (3:30 pm to 7:00 am), only mill in operations	2022 – Lowest operating (7:00 am to 3:30 pm), quarry and mill in operation	2023 – Lowest ambient (7:00 am to 3:30 pm), quarry and mill not in operation	2023 – Lowest ambient (3:30 pm to 7:00 am), quarry and mill not in operation
Usage:	Used as ambient in 2022 sound study.	Used as current approved operating sound levels in 2022.	Used as ambient in 2023 sound study to project sound levels experienced for proposed expansion modification.	Used as ambient in 2023 sound study for proposed expanded operating hour.
	dBA Leq	dBA Leq	dBA Leq	dBA Leq
M-3	<b>32.2</b>	34.9	45.2	45.0
M-4	51.3	<b>41.1</b>	48.4	47.4
M-5	<b>35.6</b>	41.0	36.6	35.7
M-6	<b>37.1</b>	43.2	--	--
M-6a	--	--	<b>44.1</b>	44.7
M-7	<b>40.5</b>	48.5	44.5	41.0
M-8	<b>42.0</b>	50.6	48.6	45.1
M-9	<b>33.8</b>	39.3	40.7	37.9

9. Section 3.5.3 Sound Power Level: This section provides Table 7 Operation Sound Power Levels for the different aspects of the operation. Sound Power Levels are used in the dBMap Model. Please also include in the table the recorded Sound Pressure Level, ground condition and distance used to calculate the sound power levels as provided in “The recorded sound pressure levels, ground conditions, and the distance from the operating equipment were used to calculate the sound power level of each operation taking place on site (Table 6)”. Please also include the formula to convert sound pressure level to sound power level.

10. Page 85 of the narrative states, Under worst case operating conditions, the highest projected increase in sound levels will occur at receptor M-5 near the end of Phase 1, for a period of less than two weeks, when a portion of the upper highwall is stepped back to accommodate mining. A worst case sound level increase will never last more than 2-3 weeks for a given occurrence (Table 5). This rise over ambient is 6.5 db. Is there any additional sound dampening that can be done during this worst case scenario to mitigate noise impacts during this time frame?
11. Section 3.7 Modification of Operating Hours: This section describes the approach taken to determine modeled sound levels at monitoring locations M-3 to M-9 for the additional one hour from 3:30 pm to 4:30 pm (summarized in Table 19). It is DEC's understanding that for each monitoring location (i) the 1-hour (in Leq 1-sec interval) from 3:30 to 4:30 PM (ambient 2023) and (ii) the worst-case sound projection from the four scenarios (Tables 7, 10, 13 and 16) were used to model ambient sound levels for the proposed additional hour of operation (Modeled Ambient in Table 19). The output was then compared to the ambient (2023) sound levels. Please provide the min., max., and dB(A) Leq for each location for the hour from 3:30 pm to 4:30 pm. Also, should the ambient for the additional hour (3:30 to 4:30 pm) be used rather than the Leq from 3:30 pm to 7:00 am). Please use the lowest ambient (3:30 pm to 4:30 pm or 3:30 pm to 7:00 pm) to be conservative.

### **Geotechnical Engineer Letter of Certification**

12. Is the RM pile currently monitored for slope stability? Please implement the use of slope inclinometers which measure any subsurface deformation to ensure that the embankments are indeed stable.
13. Does Barton agree to submit reports completed by a qualified geotechnical engineer and complete periodic evaluations of existing conditions to confirm that the assumptions utilized in the letter remain consistent with actual field behavior and to provide ongoing geotechnical guidance? Does Barton agree to implement continual planning, evaluation, design adjustments, and proper implementation of all recommendations included in the geotechnical analyses?
14. Does Barton agree to construct under drainage in key areas including lateral and downslope finger drains to aid the drainage of water from the sand portion of the pile?
15. Does Barton agree to modify Proctor testing needed to verify minimum dry density? Please provide specifications for the modified Proctor testing (spacing/frequency).
16. The letter response to #2 states, If the results indicate that modifications to the design or operation of the facility are required to meet design intent going forward, the assumption is that the modifications would be made within the confines of the proposed permit boundaries. Will Barton provide for engineering approval of ongoing design work, even if the revisions remain within the permitted footprint and maximum height of the proposed file? The design work and engineering approval should be submitted to the department for review. Changes in design should not be implemented until DEC provides written acknowledgement of receipt and review of the revision. The QA/QC that would be conducted for the final design should be provided in the narrative with generic discussion

of what will be required prior to the engineering approval. If significant construction induced pore pressures are indicated by future instrumentation, RM sand placement may need to be slowed or redirected to allow pore pressures to dissipate in the slimes, or additional analysis will be required to confirm adequate stability is maintained. Does Barton agree to this stipulation? Does Barton agree to cease placement of residual minerals on the pile if the geotechnical analysis indicates instability or that the conditions assumed in the Knight Piesold report are no longer representative of field conditions until the issues have been reevaluated and resolved?

17. The geotechnical analysis mentions a site investigation and piezometer installation program within the middle pond slimes expected to take place in 2023. Was this conducted? Please provide specifications for the vibrating wire piezometers (number of units, location, spacing, depth). If this was not done, does Barton agree to install vibrating wire piezometers into the slimes to confirm that no significant load induced pore pressures develop when RM are to be placed over existing slimes? If so, when will this be conducted?
18. Was the geotechnical report stamped by a PE who can practice in New York State? The reports filed should include a certification/statement by the qualified geotechnical engineer that the data has been reviewed and remains consistent with the assumption in the letter.
19. Please provide additional details concerning how pore pressures will be monitored during construction. How frequently will piezometers be downloaded, who will be reviewing the data, what pore pressure is significant (what is the trigger), what action will be taken? Will the DEC be notified of the significant pore pressure when it is detected and the remedial action be taken?
20. Please provide specifications for the under drains including design drawings, spacing, diameter, discharge locations, discussion of handling of discharge water, discussion of drainage following final reclamation, etc..
21. Please provide for regular visual inspection of the pile, with the process for documenting the inspection, issues identified, and remedial actions taken. The documentation should be included in the geotechnical reports.
22. Please include a closure plan with the geotechnical analysis including all anticipated and potential erosion and infiltration controls.
23. Please address how changes in precipitation due to climate change and the potential impacts on surface erosion and slope stability may impact the RM pile.

#### **SWPPP**

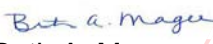
24. Given the recent flooding event on Monday, December 18, 2023, the SWPPP must be revised to provide an item-by-item evaluation that considers opportunities to implement the enhanced Best Management Practices (BMPs) as outlined in Part II.D.9 of the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP GP-0-23-001).

25. The Community Risk and Resiliency Act (CRRA) CRRA requires the applicant to demonstrate that they have considered future climate risk. The resubmission does not indicate that the applicant gave full consideration of future climate risks. Please provide specific information that indicates that flood risk has been considered, including discussion of designated flood zones, site elevations, past flooding or stormwater events that caused damage to stormwater control features or resulted in non-compliant discharges, future flood risks and climate risk mitigation measures or BMPs that were considered for implementation at the site. Please demonstrate that projected changes in temperature and precipitation were considered, utilizing the Observed and Projected Climate Change in New York document. Please identify any aspect of the operation of the mine or the reclamation that could be impacted by higher temperatures or precipitation rates and provide discussion of mitigation measures or BMPs considered for implementation at the site, including potential adaptation strategies for the planned reclamation (e.g. more resilient plantings, gentle grading, use of slope breaks, etc).
26. Pursuant to CP-49, a greenhouse gas (GHG) emission analyses is required for the project. Please submit a GHG emission analyses that quantifies the increase in upstream and direct GHG emissions resulting from all proposed modifications including the increase hours for quarry mining, the increase in greenhouse gas emissions from truck traffic as described in the traffic impact assessment, and the increase in hours of operation for supplier vehicles. Please also confirm that all other GHG emissions from the site will remain the same except those explicitly described.

All estimated greenhouse gas emissions calculations should be provided in metric tons per year and in units of carbon dioxide equivalent (CO<sub>2</sub>e) using the 20-year global warming potentials found in 6 NYCRR Part 496. These estimates should be inclusive of the full scope of applicable GHG emissions defined in 6 NYCRR Part 496. For upstream GHG emissions calculations, refer to the 2023 Statewide GHG Emissions Report Appendix: CLCPA Emission Factors available at <https://dec.ny.gov/environmental-protection/climate-change/greenhouse-gas-emissions-report#Report>.

Please be reminded that the DEC application is currently incomplete pending the Adirondack Park Agency having a complete application. Please feel free to contact Katherine Smith with our Division of Mineral Resources with any questions regarding these comments or myself with any questions on the DEC application review process.

Sincerely,

  
Beth A. Magee  
Deputy Regional Permit Administrator

Digitally signed by  
Beth A. Magee  
Date: 2024.01.26  
13:37:16 -05'00'

cc: Mario Cangemi – Barton Mines  
Kris LaPan – DEC  
Corrie Magee – APA  
Mike Polacco – H2H, a BOWMAN Co.  
Katherine Smith – DEC  
Trevor Thomas – H2H, a BOWMAN Co.

**From:** [Bernard Melewski](#)  
**To:** [Magee, Corrie \(APA\)](#)  
**Subject:** Re: Follow Up to Your Call  
**Date:** Friday, January 19, 2024 3:59:52 PM

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Corrie,

Again, I apologize for the delay in response. A root canal procedure is in my immediate future.

Below are the questions about the NIPA that we would like to discuss with you and your team. Barton Mines has not proposed a five- year permit. Barton is comfortable if agreed upon major reporting requirements in our permit would occur on a five- year cycle to conform with the practice of the NYSDEC. We understand the need to periodically confirm any assumptions or to document the need to modify the permit if such need arose.

The NIPA would appear to consider permitting only a portion of Phase One. Is this your intent and if so, why? Is Barton correct in our interpretation that the comments provided in the 3<sup>rd</sup> NIPA are not inclusive of all phases proposed in the permit documents? Segmentation of the entirety of the project is not appropriate for a number of reasons.

The proposed Phasing depicted in the permit documents are linked both in terms of mine plan sequence as well as economic investment. Barton developed the mine plan sequence to reduce the lateral and vertical extent of the pile through backfilling the excavated quarry with RM materials.

There is viable economic ore underneath the proposed backfilling locations that Barton would otherwise permit and extract if the southern advancement of the quarry were not to be approved. In this way Barton operations would be at significant risk if the remaining phases were not guaranteed in some fashion through the permitting process.

We were unaware of any requirements by the APA for sealing the Geotechnical Report by a NYS licensed PE. We are not aware of any past mining application/permit in the Adirondack Park that had a similar requirement. The consultant working on this project, for the past several years, is recognized internationally as an expert in the field of material stockpile management and engineering and is an engineering resource not common in NYS. Please advise us of the reasoning for this requirement. The oversight of the lack of a signature can easily be corrected.

Barton was also unaware of any requirements by the APA for sealing the Sound