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January 10, 2024

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John M. Burth  
Adirondack Park Agency  
PO Box 99  
Ray Brook, NY 12977

Beth Magee  
New York State Department of Environmental Conservation  
Region 5  
232 Golf Course Rd.  
Warrensburg, NY 12885

**RE: Comments on Barton Mines Expansion  
Town of Johnsburg, Warren County**

Dear Mr. Burth and Ms. Magee:

Protect the Adirondacks ("PROTECT") submits these additional comments concerning the application by Barton Mines Corporation, LLC ("Barton") for expansion of the Ruby Mountain Mine in the Town of Johnsburg, Warren County. PROTECT's additional comments are set forth in the attached report prepared by Sterling Environmental Engineering, P.C.

As described in the attached report and recognized by DEC, Barton is currently in violation of Clean Water Act requirements concerning control of stormwater discharge and individual point source discharges. These violations are in addition to the other significant environmental violations at the Barton mine site identified in PROTECT's January 4, 2024 letter.

We therefore reiterate our request that review by DEC and APA of Barton's expansion application be immediately suspended pending resolution of these violations.

On behalf of the Board of Directors of Protect the Adirondacks, please let me express our gratitude for the opportunity to submit these comments.

**Protect the Adirondacks**

PO Box 48, North Creek, NY 12853 518.251.2700

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Sincerely,

A handwritten signature in black ink, appearing to read "Chris Amato". The signature is fluid and cursive, with the first name "Chris" and last name "Amato" clearly distinguishable.

Christopher Amato  
Conservation Director and Counsel  
Protect the Adirondacks! Inc.  
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Sterling Environmental Engineering, P.C.

January 10, 2024

Mr. John M. Burth  
Adirondack Park Agency  
PO Box 99  
Ray Brook, New York 12977

Ms. Beth Magee  
Deputy Regional Permit Administrator  
NYSDEC – Region 5  
232 Golf Course Road  
Warrensburg, New York 12885

Subject: Barton Mines Company, LLC  
Ruby Mountain Garnet Mine  
Major Permit Modification  
NYSDEC Mine Permit #5-5230-00002/00002  
APA Permit #P79-140, P70-356, P87-39, P87-39A, P87-39B, P88-393, P88-393A  
STERLING File #2024-01

Dear Mr. Burth and Ms. Magee,

Sterling Environmental Engineering, P.C. (STERLING) has been retained by Protect the Adirondacks to evaluate potential environmental impacts associated with the Ruby Mountain Garnet Mine (the “mine”) and the mine’s application for a major permit modification. The enclosed comments focus on the December 2023 submission by Barton Mines Company, LLC (“Barton”) in response to comments by the New York State Department of Environmental Conservation (NYSDEC) and the Adirondack Park Agency (APA).

**Environmental Review:**

The permit process requires a full understanding of the proposed action and the potential for any significant adverse environmental impact, including long-term impacts. We recognize the value of the mine, both in terms of its mineral resources and local economic impact, but a mine of this magnitude must be operated in a manner that is protective of both human health and the environment. Several areas of potential impact are subjectively discussed by Barton in the application documents, and Barton reaches the conclusion that no significant environmental impacts are anticipated; however, no objective criteria supporting these statements are included (see discussion of dust and stormwater below).

The proposed action is Type 2 pursuant to 6 NYCRR 617.5(c)(45) solely for the reason that the Adirondack Park Agency Act establishes SEQRA-like review, record, and decision making standards for the APA. These standards are contained at Executive Law Sections 807, 808, and 809. Section 809 specifically requires the APA to determine that “the project would not have an undue adverse impact upon the natural, scenic, aesthetic, ecological, wildlife, historic, recreational or open space resources of the park...”

*“Serving our clients and the environment since 1993”*

The proposed action includes a 30% expansion in the Life of Mine and a 140% increase in lateral excavation boundary, which would classify as a Type 1 action if following the SEQRA process. Type 1 actions are those more likely to have a significant adverse impact on the environment. The baseline condition for this review is the original land prior to the mine's existence.

### **Stormwater & Industrial Process Water**

The application documents indicate that the mine holds two permits under the State Pollutant Discharge Elimination System (SPDES) program: 1) a Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity (Permit ID NYR00F623); and 2) an Individual SPDES Permit for the discharge of industrial process water (Permit ID NY0034959).

Recent inspections by the NYSDEC on August 17, 2022, and August 7, 2023, have noted "marginal" compliance with both permits. The inspection reports identify numerous "violations" with both permits; however, formal Notices of Violation do not appear to have been issued. The findings of both inspections conflict with current application documents.

#### *MSGP Permit:*

- In the 2022 inspection, NYSDEC noted that a Stormwater Pollution Prevention Plan (SWPPP) was not maintained onsite, did not include required inspection and reporting requirements, did not include preventative maintenance procedures, and did not reflect current site conditions. NYSDEC directed the mine to prepare a revised SWPPP. This is a significant violation considering that the SWPPP is the controlling document for implementing the industrial stormwater management systems and complying with the SPDES Permit.
- The April 2023 MSGP SWPPP included in the permit application documents is not a comprehensive update. As an example, the April 2023 MSGP SWPPP includes an Appendix D titled "Existing Industrial Stormwater Pollution & Prevention Plan (SWPPP)" that is also dated April 2023 and includes an Appendix G titled "Existing SWPPP Documents" that contains two additional SWPPPs. The entire document is extremely awkward to follow and difficult to understand. It is unclear what stormwater infrastructure currently exists on the site and if the infrastructure is effective in managing stormwater. A single SWPPP should be developed and submitted that reflects today's conditions and procedures for mine personnel to use in the day-to-day operation. A separate standalone document should be prepared that designs stormwater management features for the proposed expansion. The onsite SWPPP should then be updated as mining progresses and additional stormwater features are installed, modified, or discontinued.
- In the 2023 inspection, NYSDEC noted that stormwater within "Big Crusher Pond" and "Frog Pond" was observed to be gray, turbid, and actively discharging to Brown Pond Brook. Proper implementation of the MSGP SWPPP should have identified this as a deficiency requiring corrective action. The proposed permit modification includes significant construction and material handling activities on both the east and west sides of Brown Pond Brook that discharges directly to Thirteenth Brook. Locations of erosion and sediment controls and maintenance of stormwater basins are not clearly defined in the MSGP SWPPP.
- The mine is a regulated Petroleum Bulk Storage (PBS) facility (PBS ID 5-393827) with 26,775 gallons of onsite petroleum storage. The SWPPP does not include a discussion of petroleum storage and handling as a potential pollutant source. Based on the quantity of aboveground storage and

proximity to surface water, a Spill Prevention, Control, and Countermeasures (SPCC) plan is required.

#### *Individual Permit:*

- In the 2022 inspection, NYSDEC noted that an unauthorized discharge occurred with no notification to NYSDEC and no sampling of the effluent. The permit application documents indicate that discharge from ponds is authorized by the SPDES permit and occurs infrequently during significant storm events, which appears to conflict with the NYSDEC inspection report. The application documents should include a clear description of water sources, collection, treatment, and discharge associated with the Individual SPDES Permit.
- The Individual SPDES Permit indicates the use of a Water Treatment Chemical (WTC) that was approved for use in 1998. The application documents should confirm current operations use of the same WTC and in the same amount as originally permitted. Any change to the WTC type and quantity should include a SPDES permit modification and toxicity assessment.
- The Individual SPDES Permit requires development of a Best Management Practice (BMP) Plan that is reviewed and updated annually. The cover of the MSGP SWPPP references the Individual SPDES Permit, but the document contains no description of the industrial discharge or BMPs. A standalone BMP Plan should be developed that is specific to the Individual SPDES Permit.

#### **Solid Waste Management**

The issues regarding solid waste management at the mine site are fully discussed in the letter from Protect the Adirondacks to DEC and APA dated January 4, 2024 and will not be restated here.

#### **Dust**

The permit application documents includes a brief subjective narrative related to dust. The narrative states that dust can be generated during “unique conditions” including when wind exceeds 5 miles per hour. Supporting data should be included documenting the prevailing wind direction and speed probability (i.e., wind rose). 5 miles per hour is a low threshold to be considered a unique condition. Dust is stated to be mitigated through concurrent reclamation, hydroseeding, annual placement of biodegradable treatment, application of water, and installation of monitoring equipment. Most of these mitigation measures have long lead times to implement (e.g., reclamation). The mine includes acres of bare dust-generating material located on the elevated tailings pile. More detail is needed regarding the specific day-to-day material handling, monitoring, and mitigation measures. What parameters are actively being monitored and what are the action levels and responses? Offsite dust migration can be deposited in waterways and other sensitive areas. A fugitive dust control plan should be developed with clear criteria for determining when dust control measures must be employed.

The mine has an Air Facility Registration (NYSDEC ID 5-5230-00002) that was issued in 2007 with no expiration date. Air regulations have since been revised and include 10-year terms for Air Facility Registrations. Air emission sources, emission rates, and emission controls should be reviewed to determine if conditions have changed and if a registration continues to apply. A 10-year term should be applied to ensure air emissions continue to be reviewed over the duration of mine operations.

## Residual Materials Management

The permit application document refers to the October 30, 2023 geotechnical assessment letter by Knight Piesold as a “certification”. The geotechnical letter is clearly titled as an “assessment” and explicitly states in the conclusions that the assessment should not be taken as an engineering approval. The Knight Piesold assessment indicates that the tailings storage facility is likely to be geotechnically feasible, but is contingent on several key assumptions. Several assumptions are related to means and methods of site preparation and material placement with quality control testing. The authors rightly state that a qualified geotechnical engineer needs to be closely engaged with ongoing investigations, monitoring, and redesign, if necessary. The application documents provide insufficient detail about the ongoing investigation and monitoring program and do not clearly designate who will be managing, overseeing, and certifying the program. A design of the expansion needs to be included in the application documents that is stamped by a qualified geotechnical engineer licensed in the State of New York.

The geotechnical feasibility assessment appears to follow standard practices for slope stability analysis; however, the following comments are provided:

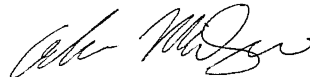
- Considering this is a feasibility level assessment and that construction is similar to a landfill, a minimum factor of safety of 1.5 should be required for both drained and undrained scenarios consistent with 6 NYCRR 363-4.3. Based on the construction assumptions, a sensitivity analysis should be required to assess if material properties have a significant impact on stability.
- The assessment states that the mine is in an area of low seismic activity; however, the mine is near the highest seismic hazard region in New York State as indicated on the USGS seismic hazard map. The assessment states that undrained behaviors (i.e., liquefaction) can be triggered by earthquake loading, even if only moderate in nature. Therefore, a seismic scenario should be required to demonstrate a minimum factor of safety of 1.0 consistent with 6 NYCRR 363-4.3.
- The Slope/W output shows deep seated failures that occur at the minimum safety factor and appear to be controlled by the assumed seepage conditions. Based on the size of the failures and the nature of the assumptions, a sensitivity analysis should be required to assess if different seepage conditions have a significant impact on stability.
- The Slope/W output shows only the single failure surface associated with the lowest safety factor. The output should be required to show the start and exit regions for the failure surfaces as well as the next 10 lowest safety factor failure surfaces. This will facilitate the review of the scenarios that show shallow veneer-like failures to determine if there are deeper seated failures with only slightly higher safety factors that need additional consideration.
- The assessment stresses the importance of the underdrain system for seepage control and long-term stability; however, no specific details are included related to engineering design, installation, monitoring, and maintenance. The application documents should include a design of the drainage and seepage control system.

**Environmental Monitor**

The mine has been in existence for 41 years and is requesting a modification to continue operating for another 67 years. This duration will span the careers and likely the lifetime of people currently involved in the design, review, and operation of the mine. As indicated in these review comments, written plans are only effective if they can be followed and are properly implemented. It is imperative that compliance oversight occurs more frequently than annual inspections and 5-year permit terms. STERLING recommends that the NYSDEC and APA require the mine to fund Environmental Monitors assigned specifically to the mine. Environmental Monitors are routinely assigned by NYSDEC to facilities regulated under Part 360. Key factors for determining the need for an Environmental Monitor are when: 1) the compliance history reveals the inability to comply with environmental laws and regulations; 2) the past or current practices have resulted in conditions that pose a significant threat to public health or the environment; and 3) the facility needs additional oversight due to exceptional circumstances related to its size, throughput, materials handled, or location. This is one of only two garnet mines in the United States and is located in the sensitive Adirondack Park. Based upon the compliance issues raised by the NYSDEC and the scale of the operations in such a sensitive environment, the use of independent monitors is particularly appropriate.

We appreciate your consideration of these comments.

Very truly yours,  
STERLING ENVIRONMENTAL ENGINEERING, P.C.



Andrew M. Millspaugh, P.E.  
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