

**New York State Department of Environmental Conservation  
Environmental Permits, Region 8**

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Alexander B. Grannis  
Commissioner

22 December 2009

John Hellert  
Continental Placer, Inc.  
11 Winners Circle  
Albany, New York 12205

**Received**

DEC 24 2009

Dear Mr. Hellert:

Re: **dEIS Review and Comments**  
DEC 8-3436-00033/00001 MLR 80823  
Frontier Stone LLC, Proposed Shelby Quarry  
Shelby (T) Orleans County

Department staff have completed a preliminary review of the draft environmental impact statement (dEIS) and mined land use plan (MLUP) that we received on November 23, 2009. We have determined that the dEIS is insufficient and we offer the following comments on both documents:

1. Several factors significantly constrained our review of the resubmitted dEIS and mining application for this proposal. Three copies were not adequate for review by five of the Department's Divisions and at two locations. I acknowledge the receipt of the dEIS (Vol. 1) in a digital format. I requested (via email November 25, 2009) but did not receive additional copies of the MLUP (Vol. 2) and the Appendices (Vol. 3). Future submissions must include five printed copies (see below) and a digital version of all documents.

We recommend that your next submittal include three copies of the amended maps and revisions of specific narrative/text pages as needed and two additional complete copies. We will replace those pages and maps in our three copies of the dEIS or MLUP received on November 23, 2009. Please include an index of the pages/maps etc. to be replaced. You should additionally be preparing to have the documents associated with the dEIS placed on your website for public review when the Department accepts the dEIS and deems the application complete.

2. The influence of quarry activities on the Iroquois National Wildlife Refuge (Refuge) and the NYS Wildlife Management Areas (WMA), located immediately south and contiguous to the proposed quarry, is the most significant potential impact associated with this proposal. In general terms, the dEIS does not adequately analyze those impacts. Staff suggest that you create a map depicting the limits of disturbance, for example, noise and vibration overlaying habitat cover types. This map would be used to facilitate a discussion of a variety of issues including impacts to wildlife and to recreational users of the affected area. The discussion based on the map and overlays should address potential impacts to wildlife within the affected habitat types, possibly including forest, shrub-scrub, marsh, grassland and agricultural land. Impacts to nesting and migrating birds (raptors, songbirds, waterfowl, etc.) in these habitats should be included.

3. An Article 24, Freshwater Wetlands permit application may be needed to evaluate increases in size and other potential changes to the wetland. More information is needed, in addition to water quality data, which would describe how the wetlands would be expected to increase based on current wetland size, water discharge rates, and capacities or limits of culverts and control structures on the Refuge. See comments below for more detail.
4. An Article 11, Rare and Endangered Species permit application may be needed to address issues related to the potential take of threatened or endangered species or their habitat (related to Northern Harriers and Short-eared Owls). Staff will need additional information (below) prior to making a final determination on this issue.
5. It was difficult to verify that some of our comments provided in our June 13, 2008 and July 8, 2008 letters were addressed in your recent resubmission. Please provide an itemized response to those letters, the location of where they were addressed in the dEIS, and a brief summary of the rationale behind your response. I have examples that I can provide of similar response letters.
6. Item 3 of our June 13, 2008 letter was not adequately addressed. The estimates of impact were based on an annualized average of 1,142 gpm flow to the Refuge. This analysis doesn't account for the impact of seasonal flow rates on the downstream water impoundments in the Refuge and on Oak Orchard Creek at a time when they may be stressed by increased seasonal runoff rates. The analysis of impact should be augmented by a more concise estimate of those seasonal highs and a management plan developed jointly by Frontier Stone and the Refuge Manager. See comments below for more detail.
7. Item 3 also requested groundwater quality data. Other than the Johnston (1964) information provided, I was unable to find recent groundwater quality data. The data provided by Johnston (1964) suggests that groundwater from this geologic unit may not meet the discharge requirements of the Multi-Sector SPDES Permit. A comparison with surface water characteristics is also necessary. This information is critical to our determination regarding the need for a site-specific Industrial SPDES permit. See comments below for more detail.
8. The dEIS (Vol. 1) should include more summary information on impacts and analysis from the Appendices. In some instances, the statements in Vol. 1 did not support the analyses in the Appendices. Additionally, the possible impacts discussed in the Appendices should be summarized and discussed as necessary in the dEIS (Vol. 1). For example:
  - a. "Noise and vibrations that result from blasting can potentially affect wildlife. Loud abrupt can startle animals, causing them to flush from a perch, leave a foraging area or abandon a nest. This can result in increased energy expenditure, reduced foraging time, and lowered reproductive output." This statement does a good job at summarizing some of the potential impacts to offsite wildlife, but none of these issues made it to Vol. 1 of the document.
  - b. The projected drawdown out to 7,000 ft. (page 14, Alpha Report) from the Frontier Stone quarry dewatering operation could affect private bedrock wells along Fletcher-Chapel Road, Sour Spring Road and Southwood Road. The water level analysis shows that water levels in the Lockport could be drawn down below the top of the rock at distances of between 2100

and 4800 ft. from the quarry limit when the quarry has reached its maximum extent (Plate 2). This impact is not discussed or analyzed in Section 4.1.2.2, page 92, of the dEIS section entitled Potentially Significant Environmental Impacts.

c. The statement (Vol. 3, Appendix 7A, page 5, Impact Analysis of Ecological Resources) "How this pump out will affect habitats down drainage from the quarry will depend upon the volume of pump-out water. It is anticipated that it potentially will add water to the system and may result in more wetland areas" is a key issue that needs a better analysis and discussion throughout this review.

Following are detailed comments on the dEIS, Volumes 1-3. In some instances, the comments may be duplicative because of the reoccurrence of the deficiency in each document.

### **dEIS Volume I**

- 1.2.2 Page 5:** Please provide confirmation from National Grid (Niagara Mohawk) that the proposed crossing construction details, and setbacks are adequate and acceptable to maintain transmission line and substation integrity as it relates to blasting and mining activities.
- 1.2.3 Page 6:** The Mining Plan Map referenced, included in Appendix I, requires updating. The Acreage Summary references a 2006-2011 permit term. A 2010-2015 reference would be more applicable.
- 1.2.3 Page 7, 8:** The mining hours and days are given in general terms, and there is a reference to operation outside these hours. The MLUP states that "The permittee shall notify the Department's Mined Land Reclamation Specialist, in writing, at least 24 hours in advance of operating outside the currently identified hours of operation." Language must also be included that states Department authorization must be obtained prior to operating outside the approved hours of operation.
- 1.2.4.1 Page 10:** Perimeter shallow sloping is only designed for 5 ft. of water depth. Seasonal fluctuations should be considered when determining this depth. What is the maximum anticipated seasonal lake level fluctuation?
- 1.2.4.2 Page 10:** Mulching specifications should be included along with the seed and fertilizer.
- 1.2.4.5 Page 11:** If concurrent reclamation is to occur, how will the berms remain in place to limit dust, noise, and visual impacts throughout the life of the project?
- 1.3.2 Page 12:** Potential impacts to wildlife and recreation should be added to this section.
- 1.3.2.2 Page 13:** Potential impacts to the Refuge from dewatering should be analyzed and discussed.

**1.3.2.5 Page 14:** The maximum or peak number of truck per hour should be specified, not the average.

**1.5.2.2 Page 18, 19:** The potential impact to residential water supply wells has been identified, and a mitigation plan has been proposed. This plan is unacceptable, and would eliminate an individual's ability to seek restitution in the event of an impact, if that individual decides not to consent to the permittee's arbitration agreement. This well arbitration agreement should be eliminated from the dEIS. Also, the proposal to deepen wells where public water is unavailable, does not take into water quality issues, which tend to decline with depth.

**1.5.2.2 Page 19:** Spill prevention measures are mentioned, but not specified. A plan containing specific details, should be included in the dEIS. Additional information must be provided regarding fuel storage, fueling of equipment and what precautionary procedures are to be incorporated to insure spill prevention and leakage minimization. Where will the fuel tanks be located and what is their maximum capacity? Is adequate secondary containment to be provided? Will there be an area designated for equipment re-fueling and maintenance? Will this area be constructed in such a manner (compacted clay surface, concrete pad, etc.) as to minimize potential leakage of fuels/lubricants or other contamination? Indicate in the plan that a portable storage unit that contains a spill kit including an adequate supply of absorbent material (diatomaceous earth and textile absorbent fabric and pads), a shovel and an impermeable container with a tight-fitting lid. In addition, indicate that the NYSDEC Spills Hotline number will posted in a weatherproof manner on the storage unit and all spills will be treated as emergencies, cleaned up immediately and appropriate notifications made within required time frames.

**3.0 Page 32:** This section should include a description of the adjacent Iroquois National Wildlife Refuge.

**3.1.2.2 Page 45:** Inadequate data and information is provided for the assessment of groundwater quality impacts offsite. The dEIS does not contain site specific water quality testing, and there appears to be quality issues in the monitoring wells on the property, as well as nearby residential sources, and offsite springs. Impacts from quarry dewatering to the Wildlife Refuge, as well as Oak Orchard Creek are a concern. Poor groundwater quality and a large discharge volume may have significant impacts on wetland vegetation, wildlife, and habitat areas. Without specific information and data, an appropriate review cannot be completed. The assessment in Appendix 7 does not rely on site specific data, and cannot provide an adequate assessment of quality (components, levels, etc.), and potential impacts. The updated analysis should include testing results which include: sulfates, chlorides, hardness, TDS, TSS, DO, pH, iron, manganese, barium, and H<sub>2</sub>S

**3.1.4 Page 55:** There is no mention of offsite surveys for Short-eared Owls or the presence of a known wintering area in the vicinity of the proposed site (it is briefly mentioned in the Appendices).

- 3.1.4 Page 55:** The report indicates that no potential bald eagle habitat exists on site, however, eagles could potentially use habitat on the refuge just to the south of the proposed site. Due to this species' need for "quiet solitude" as mentioned in this report, the quarry could make a section of the refuge unusable for bald eagles in the future, both for nesting and other activities.
- 4.1.1.2 Page 91:** The soil balance shows that there will be adequate amounts of material on site for reclamation. However, as stated in the question from 1.2.4.5 Page 11, how will concurrent reclamation occur if the berms remain in place to limit dust, noise, and visual impacts throughout the life of the project?
- 4.1.2.1 Page 92:** Additional clarification and detail relating to erosion and sedimentation control is required. There is a concern that there is a significant potential for the discharge of sediment laden water from the site. How will a sediment laden discharge be avoided during quarry construction? During this phase there are no retention areas, and sediment load from stripped soils is high. Additionally, there are no discussion or design details of the inflow and discharge location of the agricultural ditch once bisected by the excavation. Will these areas be rock lined, or will other structures be used to prevent erosion and sedimentation. There is a concern that free flowing water out of a bare soil cutoff ditch or pumping of water to the receiving ditch will cause significant erosion and sedimentation.
- 4.1.2.1 Page 93:** No mention is given to what will be done with the agricultural drainage ditch (that will be cut off by the quarry) at the time of final reclamation. It is anticipated that the drainage ditch will be allowed to continue to flow into the reclaimed quarry lake. Based on the ground surface elevations, compared to the reclaimed lake level elevation, the flow that originally continued on to the Refuge will be permanently cut off. An assessment of the quantity of water that will no longer flow to the Refuge, or an alternative to rerouting the ditch around the lake at final reclamation should be provided.
- 4.1.2.2 Page 93:** The statement that there appears to be little connection between the upper layers of bedrock and the deeper water bearing zone requires further clarification. It is apparent that there is some hydraulic connection between PW-1 and the barn well. The barn well is located approximately 1700 ft. from PW-1, and shows drawdown within hours after the start of the test.
- 4.1.2.2 Page 99:** Provide further explanation as to why drawdown away from the quarry will diminish when the confining layer of the aquifer is relieved.
- 4.1.2.2 Page 99:** The narrative indicates that the homeowner wells shown in Figure 12 are shallow wells and are not drawing from the same water bearing zone intercepted during the pump test. Approximately 42 wells are identified on Figure 12, seventeen water well surveys were distributed, and only three returned with well information. How was it determined that the wells on Figure 12 are shallow? The additional well information used to determine residential well depth should be provided.

**4.1.2.2 Pages 99-102:** Impacts associated with dewatering adjacent to quarries is dependent on site specific hydrologic conditions. While general conclusions can be drawn relating to a particular formation, they should not be relied upon as accepted site specific characteristics. Department files document a range of measurable drawdown from 50 to over 1200 ft. This section should be revised as to not leave the reader with the impression that there is no measurable impacts adjacent to other quarries, and that a cone of depression only extends 50 ft. from a highwall. Finally, data and information contained in the applicant's dEIS specifically show a significant area of influence surrounding the proposed quarry.

**4.1.2.2 Page 102:** Reference is made to monitoring wells, both existing and planned, to be checked on a regular basis. A monitoring plan should be included which outlines wells to be monitored, and frequency. Construction details for newly installed wells should be included.

**4.1.2.2.3 Pages 104-106:** The flow through basin 1 is characterized as increasing from 169.91 gpm to 1092.06 gpm. This estimate is an annualized average, and does not accurately portray the maximum flow through increase at a given time. The maximum flow through increase should be provided (for a given period of time, presumably spring) to allow for an adequate impact assessment to the Refuge. It is unclear if the marsh design, and outfall structures would be adequate to handle the maximum increase in flow, especially during the spring. Also, it is unclear if the maximum increase in flow to the refuge would potentially impact the wetlands, wildlife, and habitat areas. Finally, there is mention that water could be pumped at a desirable level to benefit the Refuge, but no specifics are offered. There is no plan which outlines what this would be, no evaluation of maximum flow impacts, or its acceptability to the Refuge.

**4.1.2.2.3 Pages 104-106:** Inadequate data and information is provided for the assessment of groundwater quality impacts. The dEIS does not contain water quality testing. Quality issues are apparent in the monitoring wells on the property, as well as nearby residential sources. Quality issues are anticipated to be worst with depth. Impacts to the Wildlife Refuge, as well as Oak Orchard Creek are a concern. Poor groundwater quality and a large discharge volume may have significant impacts on wetland vegetation, wildlife, and habitat areas. Without specific information and data, an appropriate review cannot be completed. The assessment in Appendix 7 does not rely on site specific data, and cannot provide an adequate assessment of quality (constituents, levels, etc.) and potential impacts.

**4.1.4.1 Pages 109, 110:** Please provide detailed methods from field surveys. In particular, include the methods used for bird surveys including both on and offsite Short-eared Owl surveys (time periods surveyed, survey methods, survey locations etc.). Also provide details from the walking survey of the Refuge. Spring bird surveys should be completed in the area of the refuge adjacent to the proposed quarry.

**4.1.4.1 Pages 109:** The report states that "Field studies confirmed that wildlife of special concern such as the endangered Short-eared Owl are not found on site, nor was there suitable breeding habitat." Please provide the details regarding the methods

used for the field studies. This statement also appears to contradict the earlier section where use of the site by Northern Harrier (state threatened) and Horned Lark (state special concern) are discussed.

- 4.1.4.1 Pages 109, 110:** A discussion and analysis of impacts to recreational users on the wildlife areas is needed. Include hunting, trapping, fishing, hiking, bird watching, canoeing etc.
- 4.1.4.1 Pages 109, 110:** It is evident that human activity and wildlife can coexist to some degree, however: the article discussed from the Journal Register regarding use of a Quarry's crusher as a nesting site is a popular account that lacks widespread validity that can apply to this mining operation. It should be deleted. Similarly the comments relating to the NYS Thruway and the Montezuma National Wildlife Refuge did not include a valid scientific approach to analyzing the conclusion offered and should not be included in the dEIS.
- 5.1.2.3 Page 167:** The mitigation plan (Arbitration Agreement) is unacceptable, and should be removed as part of the proposed mitigation. As is the case with other quarries, the Department's special condition contains acceptable language for potential impact mitigation. Also, the company's proposal to deepen wells where public water is unavailable, does not take into water quality issues, which tend to decline with depth.
- 5.1.2.3 Page 168:** Spill prevention measures are mentioned, but not specified. A plan containing specific details, should be included in the dEIS. Additional information must be provided regarding fuel storage, fueling of equipment and what precautionary procedures are to be incorporated to insure spill prevention and leakage minimization? Where will the fuel tanks be located and what is their maximum capacity? Is adequate secondary containment to be provided? Will there be an area designated for equipment re-fueling and maintenance? Will this area be constructed in such a manner (compacted clay surface, concrete pad, etc.) as to minimize potential leakage of fuels/lubricants or other contamination? Indicate in the plan that a portable storage unit that contains a spill kit including an adequate supply of absorbent material (diatomaceous earth and textile absorbent fabric and pads), a shovel and an impermeable container with a tight-fitting lid. In addition, indicate that the NYSDEC Spills Hotline number will posted in a weatherproof manner on the storage unit and all spills will be treated as emergencies, cleaned up immediately and appropriate notifications made within required time frames.
- 5.1.4.2 Page 170:** Please provide a reference for the statement: "For example, as Dupont's attenuation curves have demonstrated, there is effectively no vibration caused by blasting beyond 1600± feet." Additionally, a conservative worst case scenario should be provided for incorporation into the mapping, analysis, and discussion related to item #2, above.
- 5.1.4.2 Page 170:** The statement: "no significant adverse impacts will occur to wildlife outside the project area" is not supported by the document and the materials provided in the Appendices (Vol. 3).

**5.1.4.2 Page 171:** The articles cited here do have some relevance to the dEIS, however, they do not necessarily fully support the statement that "blasting and firing activities had little effect on abundance, behavior, and nestling success."

**5.1.4.3 Page 171:** The statement "No significant impacts to the wetlands have been identified" is not supported by the data in the Appendices (Vol. 3).

**5.2.3 Page 175:** A plan for implementing the traffic engineer's report recommendations is not provided.

**5.2.6.1 Page 177:** A Pre-Blast Survey will be required for all structures within 1000 ft. of the Life of Mine boundary. Please an outline for the survey, and indicate how it will be implemented.

### **dEIS Volume 2 – Mine Land Use Plan (MLUP)**

**Note:** All dEIS changes shall be incorporated into the MLUP where applicable.

**Note:** Surface water and the agricultural drainage ditch are not adequately addressed, or included in the MLUP.

**Note:** Blasting is not adequately addressed, or included in the MLUP.

**Note:** Additional information must be provided regarding fuel storage, fueling of equipment and what precautionary procedures are to be incorporated to insure spill prevention and leakage minimization? Where will the fuel tanks be located and what is their maximum capacity? Is adequate secondary containment to be provided? Will there be an area designated for equipment re-fueling and maintenance? Will this area be constructed in such a manner (compacted clay surface, concrete pad, etc.) as to minimize potential leakage of fuels/lubricants or other contamination? Indicate in the plan that a portable storage unit that contains a spill kit including an adequate supply of absorbent material (diatomaceous earth and textile absorbent fabric and pads), a shovel and an impermeable container with a tight-fitting lid. In addition, indicate that the NYSDEC Spills Hotline number will posted in a weatherproof manner on the storage unit and all spills will be treated as emergencies, cleaned up immediately and appropriate notifications made within required time frames.

**2.4.2 Page 12:** The MLUP states "The permittee shall notify the Department's Mined Land Reclamation Specialist, in writing, at least 24 hours in advance of operating outside the currently identified hours of operation." Language must be included that states Department authorization must be obtained prior to operating outside the approved hours of operation.

**3.0 Page 19:** No mention is given to what will be done with the agricultural drainage ditch (that will be cut off by the quarry) at the time of final reclamation. It is anticipated that the drainage ditch will be allowed to continue to flow into the reclaimed quarry lake. Based on the ground surface elevations, compared to the reclaimed lake level elevation, the flow that originally continued on to the Refuge will be permanently cut



off. An assessment of the quantity of water that will no longer flow to the Refuge, or an alternative to rerouting the ditch around the lake at final reclamation should be provided.

### dEIS Volume 3 Appendices

#### Appendix 4 – CPI Report

- 6.0 Page 10:** The statement that there appears to be little connection between the upper layers of bedrock and the deeper water bearing zone requires further clarification. It is apparent that there is some hydraulic connection between PW-1 and the barn well. The barn well is located approximately 1700 ft. from PW-1, and shows drawdown within hours after the start of the test. Also, provide further explanation as to why drawdown away from the quarry will diminish when the confining layer of the aquifer is relieved. This request was made in the June 13, 2008, dEIS Review and Comment letter, and has not been adequately addressed.

#### Alpha Report

- 3.3.2 Page 11, 12:** How will the water pumped back to basin 1 be controlled and monitored? A plan needs to be included in the dEIS, and developed with the refuge which outlines what will be done.
- 3.3.3 Page 14:** Only the annualized average rate is given. The flow through basin 1 is characterized as increasing from 169.91 gpm to 1092.06 gpm. This estimate is an annualized average, and does not accurately portray the maximum flow through increase at a given time. The maximum flow through increase should be provided (for a given period of time, presumably spring) to allow for an adequate impact assessment.
- 4.0 Page 16:** The flow through basin 1 is characterized as increasing from 169.91 gpm to 1092.06 gpm. This estimate is an annualized average, and does not accurately portray the maximum flow through increase at a given time. The maximum flow through increase should be provided (for a given period of time, presumably spring) to allow for an adequate impact assessment to the Refuge. It is unclear if the marsh design and outfall box structures would be adequate to handle the maximum increase in flow. Finally, there is mention that water could be pumped a desirable level to benefit the Refuge, but no specifics are offered. There is no plan which outlines what this would be, or its acceptability to the Refuge.
- 4.0 Page 16:** Retaining water in the western quarry is offered as a potential mitigation technique. However, what will be done during the development of the western quarry when a reservoir isn't available? When the western quarry is developed, discuss the feasibility of using this as a retention area due to the existence of the horizontal fractures at the base of the aquifer (between 56 and 89 ft.) which appear to be the main water bearing feature at this location. Please evaluate the volume of water would be reintroduced back to the eastern quarry through this feature with only an approximate 600 ft. separation between the excavations.

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- 4.0 Page 17:** No mention is given to what will be done with the agricultural drainage ditch (that will be cut off by the quarry) at the time of final reclamation. It is anticipated that the drainage ditch will be allowed to continue to flow into the reclaimed quarry lake. Based on the ground surface elevations, compared to the reclaimed lake level elevation, the flow that originally continued on to the Refuge will be permanently cut off. An assessment of the quantity of water that will no longer flow to the Refuge, or an alternative to rerouting the ditch around the lake at final reclamation should be provided.

**Appendix 9 – Transportation Impact Study**

- V.B. Page 3:** We were unable to find a response to Item 8 of our June 13, 2008 letter: Does the traffic survey and levels of traffic generated by the facility include estimates of traffic levels associated with ancillary processing facilities (concrete batch plants, etc.)? Also, please specify the maximum or peak number of trucks per hour.
- VII. Page 6:** The traffic study includes recommendations to reduce traffic impacts. What time frames and mechanism do you propose to complete those recommendations?

**Appendix 10 – Phase 1 Archaeological Report**

**OPRHP letter dated March 5, 2007** covers mining phases 1 and 4. What are your plans to complete the surveys for the entire site?

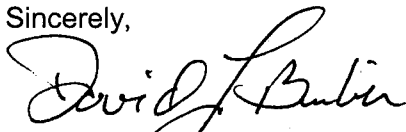
**Appendix 14 – Stormwater Pollution Control Plan**

**Page i:** The Stormwater Pollution Control Plan must be authorized and certified.

Staff review continues and additional comments will be provided as they become available.

Please contact me at 585-226-5401 or email at [dlbimber@gw.dec.state.ny.us](mailto:dlbimber@gw.dec.state.ny.us) if you have any question relating to the status of this application or the information discussed in this letter. You can also contact Joe Bucci, Division of Minerals, at 585-226-5471. Thank you for your time and assistance in this matter.

Sincerely,



David L. Bimber  
Deputy Regional Permit Administrator  
Division of Environmental Permits

cc: Joe Bucci, Division of Minerals  
Steve Army, Division of Minerals  
Scott Jones, Bureau of Habitat  
Heidi Kennedy, Bureau of Wildlife

Mr. John Hellert  
DEC 8-3436-00033/00001 MLR 80823

22 December 2009

Dixon Rollins, Division of Water  
Diane Kozlowski, USACE, Buffalo District Office  
Tom Roster, Iroquois National Wildlife Refuge  
David Mahar, Frontier Stone LLC  
David Schubel, Town Attorney, Town of Shelby  
Daniel Spitzer, Hodgson Russ Attorneys LLP