

Scotian Materials Grounds for Appeal #2

Ground #1:

1. The Administrator erred in granting the Approval in that the proposed quarry does not comply with the Environment Act and the "Environmental Assessment Regulations", in that:

- a) **The proposed quarry is contrary to S. 52 (2) of the Act in that the location is patently unacceptable and the likely adverse side effects are similarly unacceptable. These adverse side effects are set out in detail below under the headings "Blasting Impacts", "Impact on Wells", "Impact on Groundwater and Area Lakes", "Economic Impact on the Aerotech Business Park and Area Residents", and "Impact on Health of Area Residents". The Administrator prior to granting an approval, and the Minister in a review pursuant to S. 137, must consider S. 52 of the Act. It is mandatory, as noted in *Acheson & De Wolfe v. Nova Scotia (Environment and Labour)*, 2006 NSSC 211 at paras 58-59, and *Margaree Environmental Association v. Nova Scotia (Environment)*, 2012 NSSC 296 at paras 63 and 80.**
- b) **The Administrator erred in granting the Approval in that she did not consider or give the appropriate weight to S. 2 of the Environment Act, namely:**
 - 1. She did not consider the main purpose of the Act is to " ... promote the protection, enhancement, and proper use of the environment..."**
 - 2. "Maintaining environmental protection as essential to the integrity of ecosystems, human health, and the socio-economic well-being of society."**
 - 3. "The precautionary principle will be used in decision-making so that where there are threats of serious or irreversible damage, the lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation."**
- c) **The proposed quarry based on the footprint as outlined in the Application, which does not include an access road, is in excess of 4 hectares, and, therefore, requires a full environmental assessment before being permitted, as outlined in the "Environmental Assessment Regulations", and as further stipulated in S. 3 (n) of the Approval. The appellants estimate that the access road constructed to this quarry site is, in itself, approximately 1 to 1.5 hectares. Both the Regulations and the Approval make clear that the quarry, including the associated works and the access road, are required to be under 4 hectares unless the quarry is registered under Part IV of the Act.**

Ground #2

2. The Administrator erred in granting the Approval in that the proposed quarry does not comply with the "Pit & Quarry Guidelines", specifically:

- a) The proposed quarry is within 800 meters of both the Nova Scotia Department of Transportation weigh scales, and the Maritimes and Northeast Pipeline, and neither party have waived in writing the requirement for an 800 meter setback.**
- b) The blasting profile as set out by the proponent in its application exceeds the maximum concussion and ground vibrations as set out in the "Guidelines".**
- c) The sound levels of the proposed quarry will exceed the maximum levels as set out in the "Guidelines".**

Ground #3

3. The Administrator erred in granting the Approval in that the public consultation conducted by the Applicant was deficient:

- a) The footprint of the quarry displayed by the Applicant at the public consultation was moved to accommodate wetlands, and the public were not informed of this until after the public consultation.**
- b) The Applicant advised the public, both in writing and orally, that it would not quarry below the water table, whereas the Applicant revised its Application and has been approved to quarry below the water table. Again, the public were not informed of this until after the public consultation.**

Ground #4

4. The Administrator erred in granting the Approval in that she failed to consider and give weight to the expert evidence of Dr. R. F. Favreau, whose report is on file herein, and which was uncontradicted by any credible evidence, that:

- a) Although it will not occur in every blast, flyrock will regularly reach Highway 102, which is only 133 metres away from the boundary of the quarry. This is the most traveled highway in Nova Scotia, thereby creating a risk of injury or death to the traveling public using this highway.**
- b) As noted above, the footprint of the quarry was substantially moved after public consultation had concluded. The new location of the quarry is only 300 +-metres away from Highway 102.**
- c) For further detail on this risk, please refer to the attached CBC News article from September 22, 2016. In this incident, flyrock from the Gateway Materials quarry on Crusher Road (near Kearney Lake) flew about 1.8 km and caused significant damage to an apartment building. A stop-work order was subsequently issued. The article notes that there was another very similar incident involving the same quarry 13 years prior. It is not reasonable to permit blasting to occur at the Scotian Materials site, which is only 300 +-metres away from the highway in light of these demonstrated significant risks.**
- a) The level of ground vibrations will likely exceed the Pit & Quarry Guidelines, thereby causing risk of damage to homes, businesses, and the MNE pipeline. This is also illustrated in the blasting scenario filed by the Applicant.**
- b) The ground vibrations, over time, will cause a settling or rupture of the MNE gas pipeline, causing risk of injury or death, and interrupting the flow of gas to the populated metro area.**
- c) The flyrock, turbulence from blasting, and dust created by blasting and crushing result in unnecessary risk to aircraft using Runway 5 of the Stanfield International Airport, which runway is directly in the path over the proposed quarry. This risk, again, could result in injury or death.**

Ground #5

5. The Administrator erred in granting the Approval in that she failed to consider or properly weigh the impact the proposed quarry will have on area wells. Specifically,

- a) Blasting will likely impact on the flow rates and chemical composition of well water. Miller Lake subdivision and Schwartzwald subdivision, the two closest residential subdivision, are already stressed with low flow rates. When there was one episode of blasting at the Sobey's mall in Fall River, next to the Schwartzwald subdivision, seven wells went dry. This was a singular blast, and a much smaller blast than a quarry blast.**
- b) Given that the Applicant is allowed to quarry below the water table, which, we understand, is the first time such approval has been granted to a quarry in Nova Scotia, this further increases the risk to flow rates of area wells, and also increases the risk of the water table becoming contaminated.**
- c) In addition to the risk of chemicals from the operations of the quarry leaching into the water table, there are exceedingly high levels of dangerous chemicals found during the testing of the site by the Applicant's consultants. The chemicals I am referring to include arsenic, uranium, calcium, aluminum, and lead. The readings are outlined in Mr. Tom Mills' (Shubenacadie Watershed Environmental Protection Association) letter of 10 February 2017 to Katherine MacLeod, NSE, on file herein. At page 2 Mr. Mills recites:
"All 16 test sites have at least 4 parameters and MYI 6-2A has 10 [parameters] which exceed the CDWQ guidelines. MW16-2A has results which are some of the highest readings that we've seen. Aluminum is 110,000, arsenic - 190, lead - 3,400, etc "**

It should be noted that some of these readings are higher than the Harrietsfield readings, which NSE declared as a "contaminated site".

Should area wells run dry or become contaminated, the cost for extending the serviced water boundary has been estimated by HRM to exceed 100 million dollars. In addition to the risk of disruption to homeowners and businesses of a potable water supply, the risk to taxpayers of having to bear the burden of extending the water boundary and providing city water is too great. Initially, the Applicant was requested by NSE to do a survey of area wells, to establish baseline data and to determine the risk to well water supply. However, NSE did not follow through with this and no assessment of area wells was done to establish baseline data and properly assess risk. Instead, the Applicant accessed well drilling records which in many cases were incomplete and which were in some cases decades old. These early records when the subdivisions were just being established and there were fewer homes tapping into the ground water aquifer cannot be relied upon to accurately portray the present status of area wells.

Ground #6

6. The Administrator erred in granting the Approval in that she failed to consider and weigh the likely impact of the operation on the quality or quantity of groundwater which will flow into brooks and streams which ultimately flow into downstream lakes, the nearest being Soldier's Lake and Miller Lake.

- a) The Department of Natural Resources has already recognized that the lakes forming the Shubenacadie lakes system, including Soldier's Lake and Miller Lake, are stress and environmentally fragile. The significant increased water flow from this site into brooks and streams leading to Soldier's Lake and Miller Lake, and ultimately through the Shubenacadie lake system, can carry with it increased sedimentation and harmful chemicals, both from the operation and naturally incurring in the area bedrock, into the lakes to the detriment of the lakes' ecology.**
- b) It should be noted that Soldier's Lake serves as a source of water supply for Dartmouth.**
- c) It should also be noted that Miller Lake has a number of residents who take their domestic water directly from the lake.**
- d) And, it should also be noted that whatever flows into Soldier's Lake and Miller Lake, ultimately flows into the other downstream Shubenacadie lakes.**
- e) While the Applicant is required to install one settling pond, it is unrealistic to expect that one pond will capture all of the runoff from the site. Furthermore, given the weather changes in the last few years, existing settling ponds in other quarries have been inadequate to contain runoff during significant weather events.**
- f) The increased sedimentation and chemical runoff, particularly nitrates, from this operation is likely to cause accelerated eutrophication of the lakes and challenge their health in years to come. We have examples of this with Rocky Lake in Bedford (adjacent to the Rocky Lake Quarry) and with Kearney Lake in Halifax (adjacent to the Gateway Materials Quarry).**

Ground #7

7. The rationale used to approve or reject blasting at quarries must be consistently applied by NSE. NSE and NS Labour and Advanced Education have now prohibited further blasting at the Gateway Materials site due to concerns of flyrock hitting passing vehicles on the highway. The Gateway Materials quarry is approximately 340 metres from Highway 102. How, therefore, can NSE approve a quarry that is approximately 300 +metres away from Highway 102 when the same blasting company and the same blasting techniques are to be used at both sites?

Ground #8

8. The rationale used to approve or reject blasting below the water table must be consistently applied by NSE. As mentioned earlier in this submission, Scotian Materials advised the residents that blasting would not occur below the water table. After public consultation had concluded, they changed their position as they wanted to extract more material from the site.

Ground #9

9. To the appellants' knowledge, this is the only quarry permit ever issued in Nova Scotia that permits blasting below the water table at a site under 4 hectares in area. A full environmental assessment must be required before permission is given to blast below the water table.

Ground #10

10. The Administrator erred in granting the Approval in that she failed to consider or properly weigh the economic impact of the proposed quarry on the Aerotech Business Park (in which the quarry is situate) and the nearby residents.

- a) The detailed business survey of the Aerotech Business Park tenants, done by Group ATN Consulting Ltd., led by Mr. Ron L'Esperance (a former Deputy Minister of Environment and Deputy Minister of Economic Development), dated October 13th, 2015, on file herein, outlines the concerns of the Aerotech businesses and the risks to not only losing some existing anchor tenants, but also making it more difficult to attract new high tech industries if this quarry is to proceed.**
- b) Several existing high-tech industries, who rely on precision testing and manufacturing equipment, are concerned with the impact on their businesses if blasting vibrations and dust interfere with their operations. Those most vulnerable are L-3 (formerly Litton Industries), Pratt & Whitney, and IMP Aerospace. Should any or all of these industries be forced to relocate due to the incompatibility with quarry operations, the loss of employment will be hundreds of times greater than the 10 or 12 jobs this quarry is expected to generate. And, the relocation of these businesses will result in a loss of tax base to HRM, and, possibly the Province, should these industries relocate outside the Province.**
- c) Not only is this proposed quarry incompatible with existing Aerotech businesses, it also will likely dissuade potential new high tech businesses from locating in the Aerotech Business Park, given the operational difficulties that being next to a quarry creates.**
- d) The Aerotech Business Park has recently upgraded its water and sewage systems to be better able to cater to its existing tenants and to be in a position to attract new tenants. It does not need this roadblock to future development.**
- e) The proposed quarry, even though it has yet to start operations, has already had a deleterious impact on residential home prices in the Miller Lake subdivision. Many homes have sold for less than their appraised or assessed values, have taken much longer to sell, and homeowners who have appealed their assessments citing the proposed quarry have been successful in lowering their assessments. It is estimated by Mr. Larry Matthews, a local appraiser, that Miller Lake residents can expect a 10 to 25% reduction in value of their home, the higher average belonging to those closest to the quarry. This has already resulted in a loss of tax revenue to HRM, and, once the quarry is in operation, it is likely to increase significantly.**

Ground #11

11. The Administrator erred in failing to consider or properly weigh the risk to health of the quarry operations on area residents. Specifically,

Should any of the harmful chemicals enter the water table, this could cause significant risk and harm to area residents. We have the example of arsenic in Waverley which resulted in sickness and death to some residents before the Province stepped in and extended the water boundary and provided city water to Waverley.

The increase of airborne dust particles will also create a health risk to those who suffer from respiratory illnesses and conditions. We already know that a large number of young people in area schools suffer from asthma. Increased airborne dust, from blasting and crushing operations, will only exacerbate such conditions.

Ground #12

12. For all of the above reasons this quarry should never have been granted an Approval to proceed in this present location. The Applicant could have chosen a location that would not present the risks that this location does to area residents, the airport, the traveling public using Highway 102, the Aerotech Business Park, and the ecology of the area streams and lakes. Further, the proposed quarry and access road are in excess of four hectares, and the quarry application must be rejected until there has been a full environmental assessment as a Class 1 undertaking under the *Environmental Assessment Regulations* along with all other requirements of Part IV of the Act.