

State of Vermont
DISTRICT 5 ENVIRONMENTAL COMMISSION
5 Perry Street, Suite 60
Barre, Vermont 05641

RE: North East Materials Group, LLC Application – 5W0966-7
21711 103rd Avenue Court East, Findings of Fact; Conclusions of Law, &
Suite 302, Graham, WA 98338 Order - 10 V.S.A. §§ 6001-6093
 (Act 250)

&

Rock of Ages Corporation
560 Graniteville Road
Graniteville, VT 05654

I. INTRODUCTION

On September 30, 2016, North East Materials Group, LLC (NEMG) and Rock of Ages Corporation (ROA) filed an application for an Act 250 permit for a project generally described as a rock crushing operation in ROA Quarry. The tract of land consists of approximately 1200 acres with approximately 5 acres of leased land involved in the proposed crushing operation. The Applicant's legal interest is ownership in fee simple described in a deed recorded on 2012 in the land records of Graniteville, Vermont.

Procedural History

- On November 9, 2016, the District 5 Environmental Commission (Commission) held a Prehearing Conference on the above-mentioned application pursuant to Act 250 Rule 16;
- The Commission conducted a site visit of the crushing operation on December 7, 2016;
- On December 15, 2016, a hearing was held on Criterion 5 (Transportation);
- On January 23, 2017, a hearing was held on Criterion 5 (Transportation);
- On January 26, 2017, a hearing was held on Criterion 1 (Air); and
- On February 1, 2017, a final hearing was held on Criterion 8 (Aesthetics).

The Commission held several hearings, and conducted a site visit. At the end of the hearings the Commission recessed the proceeding pending the submittal of additional information – as requested in Hearing Recess Orders – dated January 10 and February 21, 2017 – and a Prehearing Conference Report – dated November 23, 2016.

The Commission adjourned the hearing on May 1, 2017 after receipt of the additional information, an opportunity for parties to respond to that information, and the completion of Commission deliberations. The Commission held deliberations on April 20, 2017 and June 7, 2017.

As set forth below, the Commission finds that the Project does not comply with 10 V.S.A. § 6086(a) (Act 250).

II. JURISDICTION

As determined by the Supreme Court of Vermont on appeal from the Superior Court, Environmental Division on the matter regarding *In re North East Materials Group LLC Act 250 JO #5-21* (2016 VT 87), jurisdiction attaches because the Project is a substantial change to a pre-existing development and requires a permit pursuant to 10 V.S.A. § 6081 and Act 250 Rule 2(C)(7).

III. AMENDMENT APPLICATION – RULE 34(E)

The threshold question on an amendment application is “whether the applicant proposes to amend a permit condition that was included to resolve an issue critical to the issuance of the permit.” Act 250 Rule 34(E)(1).

In this application, the applicant does not seek to amend such a critical permit condition, so the Commission may consider the merits of the amendment application without conducting the rest of the Rule 34(E) analysis.

IV. PARTY STATUS AND FRIENDS OF THE COMMISSION

A. Parties by Right

Parties by right to this application pursuant to 10 V.S.A. § 6085(c)(1)(A)-(D) who attended the hearing are:

- The Applicants, by Jim Goss, Esq.
- The VT Agency of Natural Resources (ANR), by Elizabeth Lord, Esq.
- The VT Agency of Transportation (VTrans) through and Entry of Appearance dated November 8, 2016, by Christopher G. Clow, PE, Transportation Engineer.

B. Interested Parties

Any person who has a particularized interest protected by Act 250 that may be affected by an act or decision of the Commission is also entitled to party status. 10 V.S.A. § 6085(c)(1)(E).

i. Preliminary Party Status Determinations

Pursuant to Act 250 Rule 14(E), the District Commission made preliminary determinations concerning party status at the commencement of the hearing on this application. The

following persons requested party status pursuant to 10 V.S.A. § 6085(c)(1)(E), and were either admitted as parties or denied party status, as indicated below:

- Neighbors for Healthy Communities (Neighbors), pursuant to Act 250 Rule 14(C), represented by Ed Stanak:
 - Lori Bernier granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Marc Bernier granted under Criteria 1 (Air); 5 (Transportation); 8 (Aesthetics); and 9K (Public Investments);
 - Russell Austin granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Melyssa Danilowicz granted under Criteria 1 (Air); 5 (Transportation); 8 (Aesthetics); and 9K (Public Investments);
 - Padraic Smith granted under Criteria 1 (Air); 5 (Transportation); 8 (Aesthetics); and 9K (Public Investments);
 - Suzanne Smith granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Suzanne Bennett granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Gustave Osterberg granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Julie Barre granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics);
 - Rock Pariseau granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics); and
 - Pamela Austin granted under Criteria 1 (Air); 5 (Transportation); and 8 (Aesthetics).
- Lee Larson granted under Criteria 1 (Air); 5 (Transportation); 8 (Aesthetics); and 9K (Public Investments).
- Alice Cloud granted under Criteria 1 (Air); 5 (Transportation); 8 (Aesthetics); and 9K (Public Investments)

ii. Final Party Status Determinations

Prior to the close of hearings, the District Commission re-examined the preliminary party status determinations in accordance with 10 V.S.A. § 6086(c)(6) and Act 250 Rule 14(E) and found no reason to change its preliminary determinations.

V. FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Applicant has met the burden of proving compliance with the following Criteria through submittal of the application:

1 - Water Pollution	8 – Historic Sites
1(A) - Headwaters	8(A) - Wildlife Habitat & Endangered Species
1(B) - Waste Disposal	9(A) - Impact of Growth
1(C) - Water Conservation	9(B) - Agricultural Soils
1(D) - Floodways	9(C) - Productive Forest Soils
1(E) - Streams	9(D) - Earth Resources
1(F) - Shorelines	9(E) - Extraction of Earth Resources
1(G) - Wetlands	9(F) - Energy Conservation
2 - Water Supply	9(G) - Private Utility Services
3 - Impact on Existing Water Supplies	9(H) - Costs of Scattered Development
4 - Soil Erosion	9(J) - Public Utility Services
6 - Educational Services	9(L) – Settlement Patterns
7 - Municipal Services	10 - Local and Regional Plans
8 – Natural Areas	

Therefore, the application shall serve as the Findings of Fact on these Criteria.

The Findings of Fact are based on the application, Exhibits # 1 – 170, and other evidence in the record. Findings made in this decision are not limited to the specific Criterion in which they appear, and may apply to other sections of the decision. To the extent that any proposed findings of fact are included in this decision, they are granted; otherwise, they are denied.

Under Act 250, projects are reviewed for compliance with the Criteria of Act 250, 10 V.S.A. § 6086(a)(1)-(10). Before granting a permit, the District Commission must find that the Project complies with these Criteria and, therefore, is not detrimental to the public health, safety or general welfare. The burden of proof under Criteria 1 through 4 and 9 and 10 is on the applicant, and on the opponent under Criteria 5 through 8, and 9A if the municipality does not have a duly adopted capital improvement program.

General Findings:

1. The proposed crushing operation is located within the ROA storage yard on the south side of Graniteville Road in the village of Graniteville. [Exhibit 001]
2. The proposed crushing operation – a rock crushing and screening plant – is located on 3.46 acres of land leased within the interior of the ROA quarry in the Towns of Barre and Williamstown. [Exhibit 001 and 003]
3. Graniteville is an unincorporated village within the Town of Barre. It consists of two residential communities known as Upper and Lower Graniteville. The village has a combined population of more than 700 residents per the 2010 U.S. Census. [Testimony of Lori Bernier]

4. ROA, and its predecessors in interest, has conducted quarrying operations on its tract for more than 100 hundred years. During much of the 20th century, the ROA industrial activities, consisting of a quarry and production plant, were largely centered in Graniteville surrounding the primary active extraction site that was known locally as the Boutwell quarry. ROA administrative offices and a visitors' center were also located at this site. *Id.*
5. The Project is in an "Industrial" district under the Barre Town Zoning Regulations and Town Plan and is immediately adjacent to a district denominated "Earth Extraction" under both documents. Intensive industrial operations overwhelmingly define the context of the Project area. The Crusher itself is located immediately adjacent to the ROA stone trimming and cutting yard, inventory storage and loading area, the operating Adams stone quarry, innumerable piles of grout waste rock and a previously permitted hot mix plant. This immediate Project area is characterized by industrial operations and the operation of heavy equipment. Trucks from ROAs existing operations also use the driveway that also accesses the Project. [Exhibits 001; 005; and 012]
6. The crushing plant is currently located approximately 1,560 feet southwest of Graniteville Road, and is accessed via an access road that intersects Graniteville Road near the NEMG office at 751 Graniteville Road. [Exhibit 082]
7. The nearest residence to the plant (743 Graniteville Road) is approximately 1,500 feet to the northeast, near the entrance to the site. There are also residences to the east, northeast, north, west, and southwest of the crushing plant; the closest in each direction being approximately 1,530' (769 Pirie Road), 1,115' (28 Pearl Street), 1,820' (700 Graniteville Road), 2,500' (4 Barclay Quarry Road), and, 2,900' (34 Cogswell Street). [Exhibit 082]

Criterion 1 - Air Pollution:

8. Crushing and the conveyance of crushed material will occur from 6:00AM to 4:00PM from Monday through Saturday – which is consistent with ROA's general operational hours. [Exhibit 001]
9. The ANR Air Quality & Climate Division issued Air Pollution Control Permit (Air Permit) AP-14-007 on February 19, 2014 authorizing construction and operation of the Project. [Exhibit 007]
10. The Project is a "Minor Air Pollution Source" under the Vermont Air Pollution Control Regulations. [Exhibit 007]

11. The Air Permit requires opacity testing on visible emissions. The opacity of emissions from the NEMG Crushing Plant and similar operations is measured at an emission point by a trained and certified observer following specified methods. Field Staff from the Air Quality Climate Division are certified every 6 months to ensure they can accurately determine visible emission opacity. [Exhibit 160]
12. Compliance with the applicable opacity limit is determined in accordance with the test method specified for that limit. These test methods are contained in 40 CFR Part 51 Appendix M and Part 60 Appendix A. The test methods provide specifications as to where the measurements are to be taken, where the observer must be in relation to the sun and the emission source, how frequently to take readings, and how to reduce the readings. The methods allow for higher emissions in the short-term provided the longer-term emissions are lower. In the case of the State's visible emission standard in 5-211(2) of the Vermont Air Pollution Control Regulations (stated as condition (11) of Air Permit #AP-14-007), emissions from any point may not exceed 20% opacity for more than a period or periods aggregating 6 minutes in any hour and at no time shall emissions exceed 60% opacity. [Exhibit 160]
13. A source can have emissions of up to 60% opacity for up to 6 minutes in an hour provided all the other readings for the hour were less than 20%. Readings are typically taken as a snapshot every 15 seconds; each reading represents $\frac{1}{4}$ of a minute. Observations for an entire hour are not necessary to document a violation once a source has more than 24 readings above 20%. The federal opacity standards of 40 CFR Part 60 Appendix A Method 9 referenced in conditions (12) and (13) of the Air Permit are measured in a similar way, however the readings are averaged for comparison to the standard. Short-term emissions may be increased, if longer-term emissions are low enough to ensure the average results in compliance. [Exhibit 160]
14. The Air Permit requires NEMG to achieve the "Hazardous Most Stringent Emission Rate" (HMSE) to control dust containing silica. [Exhibit 007]
15. The AQCD regulations do not require evaluation of cumulative health. There are no requirements for case-by-case cumulative health impact reviews through the permit process for emission sources of this size. Furthermore, the combined emission levels of the crushing plant and the asphalt plant would not trigger any additional regulatory requirements. [Testimony of Doug Elliott]
16. An Air Quality Impact Evaluation under Section 5-261(3) was not required for this facility. The Agency took into consideration the factors listed (degree of toxicity and emission rate proximity to residences and emission dispersion characteristics) and concluded an evaluation was not required. [Testimony of Doug Elliott]
17. The technical requirements to design an ambient study are significant. The ambient monitors must be sensitive and accurate enough to quantify trace levels of pollution

as opposed to the monitors used for higher concentrations expected at the emission point itself, such as in the emission stacks, or for exposed workers nearer the point of emissions. Worker exposure monitors do not likely have the necessary sensitivity to monitor off the site. [Exhibit 160]

18. Source specific ambient monitoring is not recommended by the AQCD. Monitoring must be conducted securely and for a long enough period to capture various operating scenarios, seasons, and meteorological conditions to get a statistical accurate representation of emission impacts. It can be difficult to trace the emissions back to a specific source. This would be even more difficult in the case of ROA and NEMG where emissions are intertwined. Samples are not directly comparable given the variability in weather, most notably wind speed and direction, but also rain and humidity that can impact emission levels, as well as the variability in operating levels at NEMG and ROA. [Exhibit 160]
19. The Applicant must take measures in accordance with conditions (2) and (15) of Permit #AP-14-007 to control fugitive particulate matter emissions. Also, the applicant must also ensure that any resultant emissions do not cause a public nuisance off the property in accordance with condition (16). [Exhibit 160]
20. Dust from the access road will be controlled thru sweeping and watering the surface. Also, calcium chloride will be applied to non-paved traveled portions of the Facility. [Exhibit 158c]
21. The Project site is located on a plateau and bordered to the east by a ridgeline running in a north-south orientation. Wind currents toward the site generally prevail from the west. [Testimony of Marc Bernier and Exhibit 170].
22. Co-applicant ROA's storage yard and two small quarries are also situated on this plateau and are sources of dust. However, ROA did not provide any threshold information about the levels and frequency of dust generated by these pre-existing land uses. [Testimony of Witherell]
23. The two NEMG industrial land uses on the plateau – the crusher and companion asphalt production plant- are significant sources of air pollutant emissions in the village of Graniteville. [Testimony of ANR; and Neighbors]
24. The potential sources of air pollutants at the Project site include the primary, secondary and tertiary crushers, the screens and the conveyor systems. Dust can also result from stockpiles. Significant dust is caused by equipment and trucks moving across the Project site and onto Graniteville Road. [Testimony of Witherell; Exhibits 082; 082A]

25. An emission inventory specific to the emissions generated by the crusher operation (all crushers, screens and conveyor systems) is provided in the NEMG application for an ANR Air Permit. [Exhibit 007]
26. Silica dust is released when granite is crushed. Testimony of Witherell and Hinckley.
27. NEMG concedes that silica “is likely present in the material processed by the crushing plant” and “can become airborne due to crushing operations.” [Exhibit 158c, at 20]
28. The amount of silica content in rock dust in Vermont ranges from 30% to 80%. *Id.* and [Testimony of Doug Elliott]
29. Silica dust is a serious public health contaminant that led to the creation of worker’s compensation laws. Silica dust is universally recognized as a hazardous pollutant. [Testimony of Witherell]
30. Because the winds at the crusher site are constantly changing direction, residents living near the site may be exposed to silica dust at all times. *Id.*
31. Due to the topography and the potential for thermal inversions, pollution becomes concentrated in residential areas, which is nearest the crushing operation. *Id.*
32. Air inversions “typically” happen at night and in cold weather, but not always. The crushing operation sometimes operates at night. Finally, the crushers operate in early spring and late fall when temperatures in Vermont may be cold. [Testimony of Hinckley]
33. There is no data on the amount of silica dust residents are breathing in. No monitoring was conducted to determine the actual air impacts, even though the crushers were operating for six years. [*Id.*; Testimony of Elliott]
34. There is no data on existing air quality in and around the crushing operation. ANR collects data at several monitoring stations around the state, but there is no monitoring station in Barre. A monitor was located in Barre until the 1990s but is no longer present. [Testimony of Doug Elliott]
35. ANR explained that the difficulty in evaluating source-specific ambient air quality is tracing the emissions back to a specific source when the emissions are intertwined, as with NEMG and ROA activities. [Testimony of Doug Elliott; Exhibit 160]
36. NEMG’s contention that wet suppression should capture approximately 91% of rock dust emitted from the crushing operation was calculated using industry standard

uncontrolled and controlled emissions factors developed by EPA and does not reflect actual emissions reductions at NEMG's plant. [Exhibit 158c, at 17]

37. The Air Permits does not impose restrictions on trucks owned or operated by entities other than NEMG, which account for 90% of the trucks driving to and from the crusher site. *Id.*; Exhibit 7, at 9. The ANR witness acknowledged that other than covering trucks with tarps, he is "not aware of much else" that would control the rock dust coming from the trucks. [Testimony of Elliott]
38. Based upon evidence provided by the parties pursuant to the terms of Act 250 Rule 19(F) and relevant case precedents, the District Commission ruled in its Hearing Recess Order dated February 21, 2017, that the evidentiary presumption established by the ANR Air Permit had been rebutted.
39. Prior to issuing its ruling under Rule 19(F), the Commission did not find it necessary to request written submissions from the parties and applicants relative to their positions under the Rule. The following summary of the parties' position is pertinent:
 - There are three sources of industrial air emissions on the ROA tract each of which include hazardous air contaminants (HACS),
 - The combined allowable emissions of particulate matter (PM) from the three sources is approximately 15 tons per year.
 - Each of the ANR Air Permits issued for the sources concluded that an ambient air quality impact evaluation was not required under ANR air rules because they are "not expected to cause or contribute to a violation of any ambient air quality standard or significantly deteriorate air quality."
 - The parties introduced evidence from both expert and lay resident witnesses that the PM emissions from sources on the ROA tract substantially increase the risk of undue air pollution.
40. The mitigation plan NEMG supplied in its response to the February 21st HRO does nothing to ensure compliance with Criterion 1. NEMG proposes three Act 250 permit conditions: (1) that it will comply with the Air Permit; (2) that it will not emit air contaminants that are a nuisance; and (3) that it will maintain the paved portion of the access road to minimize fugitive rock dust. Not only are these conditions already required under the Air Permit, the Neighbors have presented credible evidence that the Air Permit itself does not ensure compliance with Criterion 1. [Exhibit 158, at 2-3]

41. NEMG proposes to install a video camera at the Project site that will record visible rock dust emissions while the crushers are operating. This condition fails to account for non-visible, respirable particles. It will require that videos be retained for three days and does not provide parties with any access to the recordings. [*Id.*; Exhibit 158c, at 26]
42. The photographs and videos provided by Neighbors indicate that the measures for reducing rock dust emissions are either not being used or are ineffective. [Testimony of Witherell]
43. The ANR witness acknowledged that had he seen the dust coming off the trucks, he would have issued a violation. He also acknowledged that it takes “a lot of diligence” on the part of NEMG to control emissions. [Testimony of Elliott]
44. The photographs and videos provided by NEMG do not credibly refute Neighbors’ evidence of rock dust emissions from the rock crushing operation and aggregate trucks. The photographs and videos were captured over a two-day period in December 2016 and are not necessarily indicative of operations during the remainder of the year. In addition, it is not clear from the photographs or videos what equipment is operating and at what capacity. [Exhibits 159-159z-7]
45. NEMG’s air expert is not a human health expert. His expertise is limited to knowledge of the air pollution control regulations and the preparation of Air Permit applications. [Testimony of Hinckley and Exhibit 36]
46. NEMG’s expert testified that he relied on visual emissions testing at the Project site, but did not conduct any monitoring or air dispersal modeling to determine if emissions are traveling beyond the property line. He conceded that such monitoring and modeling are possible but were not done. [Testimony of Hinckley]
47. NEMG’s expert conceded that visual emissions testing accounts for only “some degree” of respirable particulates. As he explained, when the particulates are present in a “substantial quantity at a substantial concentration,” they work to scatter light and become visible. He did not quantify “substantial quantity” or “substantial concentration” or explain whether smaller, more dispersed quantities, which may not be visible, pose a threat to human health. [Testimony of Hinckley]
48. Lori Bernier lives at 11 Park Street. Her home is located 3000 feet southeast from the crushing operation. She previously lived at 5 Park Street. She has lived in Graniteville for 54 years. [Testimony of Lori Bernier; Exhibit 18]
49. Since the crushers started operating, the rock dust in and around Ms. Bernier’s home has substantially increased. It covers her deck and patio furniture, which she constantly has to wipe down. The cuttings from her garden are covered in a “silvery,

slimy dust.” When it rains and the spring snow melts, the dust turns into sludge on the road and grass. Inside her home she has observed shiny silica particles and fine grit on the furniture. She does not remember this amount of dust with the quarry operations in the past and even remembers walking barefoot outside without picking up dust on her feet. [Testimony of Lori Bernier]

50. Marc Bernier lives at 11 Park Street. His home is located 3000 feet from the crushing operation. [Testimony of Marc Bernier]
51. Since around 2010, Mr. Bernier has been experiencing rock dust on his house, windowsills, patio furniture, and plants. He constantly wipes dust off the windowsills. He knows the dust is coming from the crushing operation because he can see it from his property. He also sees trucks bringing the dust down from the site and kicking it up as they drive back and forth. *Id.*
52. Due to the operation of the crusher plant he must leave his home. [Testimony of Bernier; Exhibit 144]
53. Suzanne Bennett lives at 5 Park Street. Her home is located 2977 feet southeast from the crushing operation. She has lived in Graniteville for 56 years. [Testimony of Bennett; Exhibit 23]
54. In the last five years Ms. Bennett has been seeing a lot of rock dust near and around her home. She had never experienced this before the crushing operation. Her yard, car, lawn furniture, and windowsills are covered with a fine gray, shiny dust. She wipes down her windowsills every day, but the dust continues to accumulate. She sees the dust inside if her windows are open. She also sees dust covering Graniteville Road throughout the village. Sometime the dust is so thick she cannot see the license plate numbers. *Id.*
55. Pamela Austin lives at 735 Graniteville Road. Her home is located 1325 feet from the crushing operation. She has lived in Graniteville for 48 years. [Testimony of Pamela Austin; Exhibit 28]
56. Ms. Austin can see, smell, and taste the rock dust on her property. Before the crushing operation, the dust was nothing like it is now. Her yard is covered in a gritty, gray, silvery dust. She can see a cloud of dust coming over the trees and into her back yard from the crushing operation, and the passing trucks send a cloud of dust into her front yard. The dust is present the whole time the crushers are operating. She sees big clouds of dust when the trucks enter and exit the property. The dust covers her porch, her grill, her tent, and her plants. She wipes down her outdoor furniture in the morning, but it is covered with dust again by noon. She sees dust clouds when she mows the lawn, and her plants are gritty to the touch. [Testimony of Pamela Austin, Jan. 23, 2017]

57. Russell Austin lives at 735 Graniteville Road. His home is located 1325 feet from the crushing operation. [Testimony of Russell Austin; Exhibit 24]
58. Mr. Austin did not see any rock dust like this before the crushers started operating. He sees a fine, granular, gray powder covering his home, lawn, car, grill, tent, and plants. He must keep sweeping his porch to keep the dust down. It also accumulates on the road when the aggregate trucks drive through town. Dust comes off the trucks and onto his lawn. When he is outside he can smell, and taste the dust. He worked in the granite industry for 24 years and is very familiar with the smell of granite dust and how it “chokes you out.” *Id.*
59. Padraic Smith lives at 2 Pearl Street. His home is located 2107 feet from the crushing operation. He has lived in Graniteville for 30 years. [Testimony of Padraic Smith; Exhibit 29]
60. Mr. Smith began seeing rock dust five or six years ago when the crushers started operating. He sees a “fine grayish dust with shiny bits in it” from the silica. It covers his house, porch, lawn, and plants. The dust comes inside when the windows are open. He must continuously wipe the porch and clean the dust around the house and is forced to spend less time outdoors using the porch and yard. The dust accumulates every time the crushers are operating. The aggregate trucks bring the dust from the crusher site and churn it up when they drive down the road. He no longer recreates around Graniteville, biking or hiking the trails, like he used to. This is more dust than he has experienced in his prior 30 years in Graniteville. *Id.*
61. Suzanne Smith lives at 2 Pearl Street. Her home is located 2107 feet from the crushing operation. [Testimony of Suzanne Smith; Exhibit 22]
62. Ms. Smith did not experience any rock dust like this before the crushers started operating. The impact from the crushers has been “immense.” The dust covers her porch and her plants. She gets it on her skin and tracks it inside on her shoes. The dust is so thick on her porch; she must wipe it down three times to get it clean. She no longer sits on her porch or goes outside much. She can smell the dust outside. She sees the dust coming from the crusher site and from the trucks that drive to and from the site. [Testimony of Suzanne Smith, Jan. 23, 2017]
63. Melyssa Danilowicz lives at 856 Graniteville Road. Her home is located 2695 feet easterly from the crushing operation. [Testimony of Melyssa Danilowicz; Exhibit 21]
64. Ms. Danilowicz began seeing a lot of rock dust a few years ago when the crushers started operating. Dust accumulates on her windowsills, porch, and inside and outside of her car. It collects on the trees and grass. She can see it floating inside her house when the sun streams through the windows. When she works outside, it

collects on her skin. The dust covers the road and is kicked up by passing vehicles.
Id.

65. Julie Barre lives at 38 Cogswell Street. Her home is located 2721 feet southerly from the crushing operation. She has lived in her home for 23 years. [Exhibit 87]
66. Ms. Barre has experienced more rock dust in and around her home since the crushers started operating. *Id.*
67. The Neighbors presented numerous photographs and videos that show rock dust on their properties, dust coming off aggregate trucks, and dust billowing around the crusher site. NEMG provided no testimony to discredit Neighbors' photographs and videos.
68. Graniteville resident Lee Larson did not present any credible testimony to rebut Neighbors' testimony. Her testimony that the dust on the road comes not from the crushing operation but from the town is not credible because it does not account for Neighbors' statements that the dust was not present before the crushers started operating and that they can see the dust billowing around the crusher site. [Testimony of Larson]
69. NEMG presented evidence of other rock crushing operations located near residential neighborhoods in Vermont. This evidence says nothing about the ability of NEMG's operation to comply with the Act 250 Criteria because the character of the locations and nature of the operations are distinct. [Exhibit 158c, at 3, 9-16]

Conclusions of Law

NEMG bears the burden of showing the Project complies with Criterion 1. In *re* R.E. Tucker, Inc., 149 Vt. 551, 558 (1988) (citing 10 V.S.A. § 6088(a)). The District Commission must deny the permit if NEMG fails to satisfy its burden. 10 V.S.A. § 6086(a)(1). Because Neighbors rebutted the presumption created by the Air Permit, the burden shifts back to NEMG to show compliance with Criterion 1. *Id.* § 6086(d); Act 250 Rule 19(F).

A Project fails to comply with Criterion 1 if it results in "undue" air pollution. 10 V.S.A. § 6086(a)(1). Whether a pollutant is "undue" depends on such factors as "the nature and amount of the pollution, the character of the surrounding area, whether the pollutant complies with certain standards or recommended levels, and whether effective measures will be taken to reduce the pollution." *Re: N. Country Dairy Supply, Inc.*, No. 1R0898-EB, at 8 (Vt. Envtl. Bd. Nov. 16, 2004). No one factor is determinative; pollution may be undue even if it meets federal and state air quality standards. *In re Rivers Dev. Act 250 Appeal*, Nos. 7-1-05 Vtec, 68-3-07 Vtec, at 14-15 (Vt. Envtl. Ct. Mar. 25, 2010). Air pollution is undue if it is "more than necessary—exceeding what is appropriate or normal." *Id.* at 14.

In cases where the Environmental Board and Environmental Division have found no undue air pollution with respect to dust, diesel fumes, and other contaminants, the applicants presented evidence sufficient for the tribunals to make affirmative findings on the existing air quality and the quantity of pollutants that will be generated by the Project. See, e.g., *Goddard Coll. Act 250 Reconsideration*, Nos. 175-12-11 Vtec, 173-12-12 Vtec, at 9

Act 250 Rule 19 indicates that certain permits from State agencies create an evidentiary presumption of compliance under certain Act 250 Criteria. NEMG offered the ANR Air Permit for the crusher operation as such proof under Criterion 1(Air). As discussed above, the District Commission concluded that the presumptive value of the Air Permit had been rebutted based upon the evidence provided by the parties' expert and lay witnesses. Rule 19(F) states that "Upon rebuttal of the presumption, the applicant shall have the burden of proof under the relevant Criteria...". There is substantial case law over the decades of the administration of Act 250 that reinforce this aspect of the Rule. See, e.g., *In re Wildlife Wonderland Inc* 133 VT 507 (1975); *Burlington Street Department*, 4C0516-1EB (1983); *In re Hawk Mountain Company* 149 VT 179 (1988).

The applicant purported to provide additional evidence to meet its burden of proof under Criterion 1 by means of its March 21st submittals. The applicant did not request a reconvened hearing in order to further develop or buttress these submittals. As the parties pointed out in their April 5th replies, the March 21st submittals did not provide new evidence and instead were merely a rearming of evidence already in the record along with a slew of proposed conditions for inclusion in a land use permit.

The Environmental Board consistently held that "conditions subsequent," that is conditions in a permit that require later actions to demonstrate compliance with the Criteria, are not allowed under Act 250 and are not acceptable alternatives for adequate evidence to meet the evidentiary burdens of proof under the Criteria prior to the issuance of a land use permit. See, e.g., *Town of Stowe*, No. 100035-9EB (1998); *Killington, Ltd and International Paper Realty Corp.* No. 1R0584-EB-1; *Paul E. Blair Family*, No. 4C0388-EB (1980).

NEMG has failed to meet its burden of demonstrating that the crushing operation will not result in undue air pollution. Absent from the record is any data on the existing air quality in and around the Project site and the residential neighborhoods in Graniteville. NEMG did not prepare an air quality impact evaluation, did not conduct any air dispersal modeling or air quality monitoring, and did not prepare any health risk assessments. Rather, NEMG relies solely on visible emissions testing, which its air expert conceded accounts for only "some degree" of respirable particulates and which is designed merely to reduce rather than limit emissions of particulate matter. There is no information on the effectiveness of visible emissions testing at this site. Per the above-cited cases from the Environmental Board and

Environmental Division, this information is necessary for assessing compliance under Criterion 1.

While NEMG's Air Permit suggests mitigation in the form of wet suppression and truck covers, these mitigation measures lack the specificity required under *Elwood & Louise Duckless*, No. 7R0882-EB at 5-7 (Vt. Env'tl. Bd. June 11, 1993). The Air Permit leaves the method and frequency of wet suppression to the discretion of NEMG, and NEMG has provided no additional specifications other than to note that it will maintain the access road. Furthermore, a substantial amount of rock dust is generated by trucks driving in and out of the Project site. The Air Permit requires mitigation of dust from haul trucks "owned and operated" by NEMG, but 90% of the trucks are customer owned and operated. There are no provisions for customer trucks in the Air Permit, and NEMG has proposed no specific mitigation measures. However, it is long-standing precedent that trucks used in an operation subject to Act 250 are subject to Act 250 regulation even when owned or controlled by independent companies.

NEMG relies heavily on the results of the visible emissions testing and the mitigation measures in the Air Permit, but Neighbors' testimony, photographs, and video footage demonstrate that a significant amount of silica dust is still being generated by the crushers and aggregate trucks. NEMG had every opportunity to demonstrate compliance with the conditions of the Air Permit but failed to do so. It is evident that the Air Permit is not protecting Neighbors from hazardous silica dust emissions, which are adversely affecting their health.

While the Project is located in an industrial zoned area, the Project relies on areas outside of its borders to absorb its substantial air pollution. No reasonable person should be subjected to the excessive amount of granite dust that the crushing operation generates.

This application is unique from other applications that have been reviewed by the District Commission which involve the assessment of potential impacts under the Criteria. In the matter now before this Commission, the record presented by the parties is primarily based on evidence of actual undue impacts from the operation the crusher plant during a 7-year period when this industrial land use proceeded without a land use permit. Thus, the Commission is in a good position to base its findings on real life evidence as opposed to speculation.

The record clearly shows that NEMG has failed to satisfy its burden of demonstrating that the crushing operation will not result in undue air pollution under Criterion 1.

The Neighbors relied upon a credible expert and produced credible evidence demonstrating that a significant amount of silica exists in the areas surrounding the Project and opined that such amounts could create serious health consequences. The expert credibly explained that the Air Permit does not adequately control for impacts outside the Project area.

Documentary evidence – pictures and videos – showed large amounts of dust and the neighbors testified that they observed significantly more dust after the crusher went into operation. ANR observed the videos and stated that if they witnessed in person what they observed in the photos and videos, a violation would have occurred. While the photos/videos may show only a small-time frame, they showed substantial dust regardless.

The Air Permit grants the applicant discretion in various areas that do not ensure that all proper measures are being taken to prevent an unreasonable amount of dust from leaving the site.

ANR acknowledged that it has not done any actual monitoring at the neighboring areas but could in its discretion. ANR also acknowledged the challenges with identifying whether the silica comes from the crusher or other places. ANR's permit acknowledges that silica is a toxin.

The standard for rebutting a presumption is the preponderance of the evidence. *RE: Pittsford Enterprises, and Joan Kelley*, 1R0877-EB, FCO at 24 (12/31/02) [EB 800].

We have a preponderance of evidence that shows that the Air Pollution Control Permit is not resolving all the issues related to undue air pollution.

Evidence of undue air pollution may include, but is not limited to, a showing that the air will be unduly harmed even at permitted levels, that the permitted levels will cause adverse health effects, or that another chemical will be emitted for which the Project is not permitted. [Act 250 Rule 19]

When a presumption is rebutted, the burden of proof with respect to the applicable Criteria shifts back to the applicant and the permit which created the presumption serves only as evidence that the Project complies with the applicable Criteria. *Herbert and Patricia Clark*, 1R0785-EB (4/3/97) [EB 652]; *Hawk Mountain*, 3W0347-EB (8/21/85) – aff'd in part/rev'd in part [EB 251].

The Commission concludes that the presumption – under Criterion 1 (Air) – has been rebutted.

The burden of persuasion lies always with the applicant. The applicant must produce additional evidence sufficient to persuade the Commission that the Project will not result in undue air pollution.

Sufficient evidence was not provided to show that the proposed conditions and/or mitigation measures would bring the Project into compliance with the Criterion.

The Commission concludes that this Project does not comply with Criterion 1(Air).

Criterion 5 – Transportation / Criterion 9K – Public Investments:

70. The Project is situated in the interior of the ROA Quarry, approximately 1200 feet south of Graniteville Road. Primary access to the Project is through the existing

main ROA Access Road off Graniteville Road in Barre. A secondary access and exit for the Project is proposed through the ROA Quarry to the south onto Pirie Road in Williamstown. [Exhibit 001, Overview; Exhibit 010, Traffic Study; Testimony of Erica Wygonik, P.E., PhD]

71. The Project will make aggregate of various sizes available to third party purchasers entering onto the site and will not involve trucks owned by the Applicant hauling rock to other locations. Loaded trucks departing the Project will have the option of exiting onto Graniteville Road from the main ROA access, turning left and following a designated truck route along Graniteville Road, Websterville Road and Quarry Street in the Town of Barre, or proceeding through an internal quarry road, exiting the quarry onto Pirie Road in Williamstown and then proceeding to Vermont Route 14. *Id.*
72. All the roads referred to above are maintained town highways or are State maintained highways. As noted, the route to be followed by trucks in Barre Town is an officially designated truck route. This means that truck weights attributable to the largest trucks accessing the Project can use Graniteville Rd. for that purpose. The designation also informs the expectations of persons living adjacent to and travelling on those highways regarding types and levels of vehicles using that route. [Testimony of Erica Wygonik, P.E., PhD and Christopher Clow of VTrans; Cross-examination of Oman]
73. Truck traffic from the Crusher will operate during normal ROA business hours. The Project seeks a maximum of 70 loaded trucks per day prior to the planned Quarry Street/Route 14 Intersection Improvement Project. This would increase to a maximum of 150 loaded trucks per day after the Intersection Improvement Project is completed. Annual average truck traffic would be limited to 75 truckloads per day over the calendar year. [Exhibit 010, Traffic Study; Testimony of Erica Wygonik]
74. Typical hours will not include the coldest winter months so that in fact traffic will be more than 75 per day as NEMG does not run through the calendar year. [Testimony of NEMG]
75. The traffic to be generated by the Crusher is below the level which would require a full traffic study under VTrans guidelines. Nonetheless, the Applicant conducted a full traffic impact analysis even though one was not required. *Id.*
76. The Applicant retained Resource Systems Group, Inc. (RSG) to conduct the comprehensive traffic safety and congestion analysis for the Project using methodologies approved by VTrans and endorsed by the Act 250 process for many years. They are the methods commonly relied upon by traffic engineering professionals in assessing traffic generation, safety and impacts on highways. [*Id.*; Testimony of Christopher Clow]

77. The traffic analysis for the Project was conducted if the Project Crusher was generating its maximum level of requested truck trips, that the NEMG Hot Mix Plant was also generating its maximum level of permitted truck trips and that background traffic, including ROA traffic, was occurring all at the same time. The study was thus conducted under a “worst case scenario” of Project and Hot Mix Plant operations as testimony indicated that these two facilities have almost never produced their maximum level of traffic at the same time. [Exhibit 001, Overview; Exhibit 010, Traffic Study; Testimony of Erica Wygonik, P.E., PhD; Testimony of Eric Morton]
78. RSG analyzed Project traffic for the two busiest peak hours (AM and PM) in the year of Project construction and five years thereafter as is required by VTrans. [Exhibit 010, Traffic Study; Testimony of Erica Wygonik]
79. As noted, Project traffic will have the option of exiting onto Graniteville Road through the main ROA access or through the quarry onto Pirie Road in Williamstown depending on the ultimate destination of the truck and the shortest route to a particular job site. Using a standard density analysis, RSG determined that it is likely that 50% of Project truck traffic will use Quarry Street, 20% will use Websterville Road and 30% will exit onto Pirie Road in Williamstown. However, RSG determined that its conclusions regarding lack of traffic congestion or unsafe conditions and absence of adverse impact on public investments and highways would not change even if all the traffic generated by the Project and the Hot Mix Plant at their maximum level of operation exited through the main ROA access onto Graniteville Road in Barre. *Id.*
80. RSG considered the build and no-build condition in 2016 and 2021 and assumed that the Quarry Street/Route 14 Intersection Project would be completed for the 2021 analysis with the Project generating its higher level of its requested traffic then. *Id.*
81. The Quarry Street/Route 14 intersection will add a dedicated southbound left turn lane on Route 14, striping for separate right and left turn lanes exiting Quarry Street, and will signalize the intersection. While concern was expressed by the Neighbors that this Project may not be built, the Applicant has agreed to limit its truck traffic until these improvements are completed. *Id.*
82. Level of service (LOS) during the AM and PM peak hours at the Route 14/Quarry Street intersection will not change with Project traffic in either the build or no-build condition. *Id.*
83. Average maximum vehicle queues at the Quarry Street / Route 14 intersection will increase by one vehicle in the AM peak hour and two vehicles in the PM peak hour prior to the intersection improvement Project. After the improvement Project and

with the increase in Project traffic a one vehicle increase in these queues are projected in both the AM and the PM peak hours. *Id.*

84. Stopping and corner sight distances were observed all along the access routes to Vermont Route 14 and measured at the Project access / Graniteville Road, Pirie Street and the site access and Route 14 and Quarry Street intersection. All were found to exceed design standards except that brush cutting on the north side of the access to Pirie Road would need to be maintained to achieve minimums. *Id.*
85. The Applicants' traffic expert, the VTrans' traffic engineer who appeared at the hearing and the Neighbors' traffic engineer at the hearing all concurred that the Project would not cause or contribute to undue traffic congestion. Accordingly, testimony at the hearing focused entirely on potential unsafe conditions from Project trucks. [Testimony of Wygonik; Clow; and Oman]
86. The testimony regarding traffic safety from the Project focused almost entirely on a third of a mile section of the Graniteville Road Truck Route which has been designated a High Crash Location ("HCL") by VTrans. This segment includes a curve at the intersection of Graniteville Road and Baptist Street. *Id.*
87. Under VTrans standards, an HCL is defined as a 0.3-mile segment of road which has at least five crashes over a five-year period and where the actual crash rate exceeds the critical crash rate, meaning that the crash rate in the segment exceeds what would normally be expected for such a road segment. [*Id.*; Exhibit 010, Traffic Study]
88. The designation of a road segment as an HCL does not mean that the segment is per se unsafe. Rather, the HCL designation is a screening mechanism indicating that further examination is necessary to determine whether any trends or conditions exist in the crashes which would indicate an underlying traffic safety problem. [Testimony of Erica Wygonik; Testimony of Clow; and Oman]
89. The six crashes occurring in the Graniteville Road HCL segment are as follows: 1) vehicle backed into a parked motorcycle in the Graniteville Store parking lot; 2) vehicle backed into a utility pole at the Graniteville Store; 3) rear-end caused by a vehicle following too closely; 4) single vehicle driving off the road too fast for conditions; 5) two-vehicle crash where one driver failed to maintain control of their vehicle (speed and inexperience may have been contributing factors); and 6) single vehicle driving too fast for conditions drove off the road. [Exhibit 010, Traffic Study; Testimony of Wygonik]
90. None of the documented crashes involved a heavy truck and no common pattern indicating any inherent safety problem in the road segment is apparent in those accidents. [*Id.*; Testimony of Clow]

91. None of the Neighbors, the witnesses from ROA and NEMG, Ms. Cloud or Ms. Larson, many of whom had lived in the Project area for thirty or more years, were aware of or could recall a crash involving a rock haul truck in Lower Graniteville.
92. The Neighbors expressed concern regarding potential conflicts between school buses and heavy trucks. However, no evidence was produced of any unsafe truck or school bus encounter occurring, including during the Hurricane Irene recovery effort when trucks from the Crusher were operating 24 hours a day/7 days a week. [Neighbors Testimony; Testimony of Eric Morton]
93. No evidence was introduced that the Towns of Barre or Williamstown are concerned about trucks from the Crusher or about conditions in the Graniteville Road HCL. No evidence was produced that school authorities have ever complained about or been concerned about conflicts between trucks on the Graniteville Truck Route and school busses. No evidence was introduced that the Town of Barre has undertaken any effort to revoke the Truck Route designation of the Graniteville Road segment.
94. The Neighbors introduced a series of videos showing some tractor trailer sized trucks momentarily going over the centerline in order to negotiate the curve in Lower Graniteville. None of those videos show any collisions between trucks and other vehicles but they did show vehicles adjusting speed and timing to avoid conflicts in the curve.
95. It was undisputed that normal dump trucks have no difficulty staying in their lane while negotiating the Graniteville curve. The testimony was that the overwhelming majority of trucks accessing the Crusher are normal dump trucks. [Testimony of Erica Wygonik; Testimony of Michael Oman; Testimony of Eric Morton]
96. The Vermont Commercial Driver's License Manual, which is the official Vermont publication regarding the safe way in which truck drivers should operate their vehicles, specifically indicates that the proper way to make a sharp turn is to temporarily go over the centerline of the road in order to make the turn. The Applicants' traffic expert testified that there is no difference from a safety perspective between a truck momentarily going over the centerline to make a sharp curve and a truck momentarily going over the centerline to make a sharp turn as long as the sight distances through the curve are adequate. [Exhibit 091, CDL Manual; Testimony of Erica Wygonik]
97. Testimony was undisputed that the sight distances through the curve in Lower Graniteville are more than adequate to allow approaching vehicles to adjust speed and timing to avoid an unsafe condition. [Testimony of Erica Wygonik]
98. Using VTrans approved methodology and standards, RSG determined that no traffic congestion or unsafe conditions would result from or be aggravated by the addition

of Project traffic onto the surrounding road network. Sight distances and geometry of intersections in the Project area were found to be satisfactory. The Applicant will clear brush at the Pirie Road/Site access intersection, and with this improvement no undue traffic congestion or unsafe conditions or adverse impact on the public investment in roads or highways would result from the Project. [Exhibit 010, Traffic Study; Testimony of Wygonik; Exhibit 158e, Supplemental Traffic Submittals of Wygonik]

99. The VTrans traffic engineer who appeared at the hearing in this matter testified that the RSG Traffic Analysis is what is typically done to assess traffic safety and unsafe conditions in Act 250 proceedings and otherwise. He concurred in RSG's conclusion that the Project would not result in undue traffic congestion or unsafe conditions on the local road network. [Testimony of Christopher Clow]
100. The Neighbors did not identify any portion of the Applicant's traffic analysis which did not follow proper VTrans methodology or which had significant technical errors. The Neighbors submitted no evidence suggesting that truck traffic from the Project would be any less safe than existing truck traffic using the local road network.
101. The Neighbors suggested a "mitigation" measure with respect to truck traffic which would involve trucks from the Crusher exiting the Project access, crossing Graniteville Road, using ROA internal quarry roads to reach the ROA Visitor Center parking lot and then exiting onto Graniteville Road through that parking lot towards the Route 14/Quarry Street intersection. [Testimony of Oman]
102. The Commission questions whether the Neighbors' proposal is "mitigation" or a proposal for an entirely different Project. However, testimony indicated that the internal roads in question are sometimes impassible, are used for dedicated ROA's vehicles for loading and transport of blocks, are periodically closed during blasting periods and are limited for liability and legal reasons to ROA vehicles. Testimony further indicated that access through these roads by members of the public or non-ROA personnel trying to access to the Crusher would be unsafe and unreasonable. [Testimony of Donald Murray]
103. Trucks accessing the Crusher using the routes suggested by the Neighbors would also have to pass through the ROA Visitor Center parking lot, which during the warm weather months is routinely traversed by pedestrians visiting the ROA Main Plant. Trucks exiting that parking lot would then have to make a turn into a three-way intersection to get onto Graniteville Road which is sharper than the curve in Lower Graniteville. *Id.*
104. NEMG and ROA testified that the use of the Pirie St exit from the ROA property had existing limitation in terms of the town road weight limits. It did not address the opportunity to significantly reduce traffic volume in downtown Graniteville by

rerouting to Pirie Rd exit, turning right and leaving Graniteville via Baptist Road, which would eliminate the sharp corner on Graniteville Rd at the corner with Baptist Road. The cumulative reduction of impacts to Graniteville might justify the improvement of the Pirie/Baptist Rd route.

105. Overall, the Commission does not find that the internal quarry road option to be a better or safer option than trucks using a designated truck route on a maintained, paved town highway passing through Lower Graniteville.
106. The Neighbors expressed concern regarding the spillage of aggregate material out of trucks leaving the Crusher onto the local road network and adjoining properties. [Neighbors' Testimony]
107. Neighbors testified the aggregate materials is regularly found spilled along the sides of the road and on lawns. The aggregate is cleaned up by town trucks a few times a year.
108. The General Manager of NEMG testified that spillage of material occasionally happens when a truck's tailgate is not latched properly and indicates that whenever they are made aware of spillage a crew is sent to clean the same up. The General Manager further testified that other spillage due to improper loading of material can be avoided by proper filling of the trucks at the site. [Testimony of Eric Morton]

Conclusions of Law

Under Criterion 5 of Act 250, the Commission must determine that a Project will not cause unreasonable congestion or unsafe conditions with respect to use of highways and other means of transportation. 10 V.S. A. §6086(a)(5). Pursuant to 10 V.S.A. §6088, the burden of proof is on the Project opponents with respect to Criterion 5 and the Commission cannot deny a permit based upon Criterion 5 alone. The Applicant retains the initial burden of production with respect to Criterion 5 and the Commission can impose reasonable conditions upon a Project with respect to Criterion 5. *Id.* Criterion 9(K) states that a permit will be granted for development adjacent to governmental and similar facilities and services, such as highways, when it is demonstrated that the development will not unnecessarily or unreasonably endanger the public or quasi-public investment in those facilities. 10 V.S.A. §6086(a)9(K).

In this case, the Applicant has more than satisfied its initial burden of production with respect to Criterion 5, Highways. The Applicant's Traffic Study followed normal VTrans standards and methodology routinely accepted in Act 250 proceedings and concluded that the Project would not cause traffic congestion or unsafe conditions with respect to local roads and highways even under a worst case operational scenario. A VTrans Traffic Engineer concurred in this conclusion at the hearing. As result, the burden of proof now shifts to the

Opponents to demonstrate that undue traffic congestion or unsafe conditions will result from the Project. *In re: Route 103 Quarry*, No. 205-10-05 Vtec, Decision at 22 (Nov. 22, 2006) aff'd, *In re: Route 103 Quarry*, 2008 VT 88 (2008); *In re: John Flynn Estate*, No. 4C0790-2-EB, Findings and Conclusions at 20 (May 4, 2004).

In this case, all the parties agreed that the Project traffic did not have the potential to cause or contribute to undue traffic congestion in the Project vicinity. Accordingly, our focus is upon whether the Project will cause unsafe conditions or exacerbate an existing unsafe condition in the Project area. The testimony concerning potential unsafe conditions revolved around two issues, firstly, the fact that additional truck traffic will be passing through the Graniteville Road HCL and secondly that the largest trucks accessing the Project may have to momentarily pass over the centerline of Graniteville Road to negotiate the curve at the Baptist Street / Graniteville Road intersection. With respect to the HCL, the Commission finds significant the testimony from all parties that an HCL does not mean that a road segment is unsafe. Rather, it means that further scrutiny is required in the segment to determine whether there are patterns or road conditions which would contribute to an unsafe condition. Here, the six crashes in question do not display any common pattern in that most resulted from either driver error or weather conditions unrelated to road geometry or other specific conditions in the area. In addition, none of those crashes involved or was contributed to by a rock haul truck or involved vehicles negotiating the curve in Lower Graniteville. Accordingly, the Commission concludes that the Graniteville Road segment is not presently unsafe despite the HCL designation.

No evidence or testimony was introduced indicating that a crash of any kind has occurred between a rock haul truck and other vehicles in Lower Graniteville during the thirty to fifty-year collective memory of those persons testifying at the hearing. No testimony was introduced why Project trucks would be any less safe than existing trucks already travelling the area. Indeed, Crusher trucks have been using the Graniteville Road segment with no problems whatsoever for almost seven years, including the three-month period during the recovery from Hurricane Irene when truck traffic from the Crusher alone proceeded through this road segment 24 hours a day/7 days a week with no crashes or incidents whatsoever. While we understand the concerns of the Opponents regarding truck traffic, no evidence was presented that trucks travelling to and from the Project will be any less safe or more dangerous than trucks presently using the local road network. The Commission therefore concludes that Project traffic will not cause unsafe conditions and will not exacerbate an existing unsafe condition in the surrounding road network.

The Commission does note the concerns of Neighbors regarding spillage of material from crusher trucks onto the local road network and adjoining properties. Were we issuing a Land Use Permit we would impose conditions to address this specific issue in the Act 250 Permit for the Project.

We do not concur that the proposal of the Neighbors to route Project truck traffic through internal ROA quarry roads and out through the Visitors Center parking lot represents reasonably feasible or safe mitigation of Project traffic. Firstly, we believe that this proposal is a significant enough change from the application before us that it represents an entirely new Project, not simply mitigation. Secondly, there are inherent safety and logistical problems in having truck drivers who are members of the general public and who may have no specialized training drive unescorted over ROA haul roads that are being used as part of active earth extraction, which are periodically shut down due to blasting, which are impassable at certain times of the year and which involve trucks driving through a visitor center parking lot and exiting into a three-way intersection in order to get back to a public highway. This is particularly the case where the proposed route in the application is over a designated truck route on a paved public highway where truck traffic has been experienced for decades. We therefore decline to endorse this “mitigation” proposal from the Opponents. See, e.g., *In re: Rinkers, Inc. d/b/a Rinkers Communications and Beverly and Wendell Shepard*, No. 302-12-08 Vtec, Decision and Order on Motion to Reconsider at 4 (10/20/10), *aff’d*, 2011 VT 78 (Mem.) (“for a mitigating step to be considered ‘generally available’ it must be reasonably feasible and cannot frustrate either the purpose of the project or the goals of Act 250.”)

The Project will also not unnecessarily or unreasonably endanger the public or quasi-public investment in roads and highways and so complies with Criterion 9K. No specific evidence was introduced regarding any unusual impact which Project trucks or traffic would cause to local highways. Indeed, the Truck Route designation of Graniteville Road specifically contemplates that trucks of a size equal to the maximum size operating to and from the Crusher have permission to operate in this segment. In addition, the requested number of trucks from the Crusher has been reduced until the Quarry Street / Route 14 intersection is improved by VTrans. The VTrans representative attending the hearing did not indicate any problem regarding the surrounding road network or the Quarry Street / Route 14 intersection and concurred in the Applicants’ traffic study that no endangerment to the public or quasi-public investment in roads and highways will result. Aside from the foregoing, the Commission again notes that all the roads to be used by Project traffic are public highways and that the roads to be used by the Project in Barre Town have been officially designated as a truck route. Third parties traveling to and from the Crusher will either have to comply with local weight limits or must obtain overweight permits from the local municipalities. The Commission thus concludes that the Project complies with Criterion 9K with respect to roads and highways.

If the Commission were issuing a Land Use Permit for this matter, and to ensure compliance with Criterion 5 and 9K, Traffic and Highways, the Commission would condition the Permit as follows:

Truck trips exiting the Project shall be limited to a maximum of 70 loaded trucks per day until the signalization project at the Quarry St./Rt. 14 intersection is completed.

Thereafter, truck trips exiting the Project shall be limited to a maximum of 150 loaded trucks per day. The average number of loaded trucks per day exiting the Project shall not exceed 75 as measured over any calendar year. The foregoing truck limitations may be exceeded in the event of special jobs or public necessity upon obtaining the permission of the District Coordinator or District Commission, as appropriate.

Trucks from the Project may utilize the access onto Graniteville Rd. or onto Pirie Rd. The Permittee shall maintain a "Turn Left for Truck Route" sign at the intersection of the Project access road and Graniteville Rd. Trucks exiting onto Graniteville Rd. shall use designated truck routes to access the general road network unless local construction projects necessitate otherwise. The Permittee shall maintain a sign at the Project exit onto Pirie Road directing trucks not to use Cogswell Street in Williamstown.

The Permittee shall implement measures at the Crusher to ensure that loaded trucks leaving the Crusher are either covered or are not excessively loaded in a manner that would readily cause spillage onto local roadways.

The Permittee shall clean up any spills of aggregate from trucks exiting the Crusher onto Graniteville Road between the Crusher access road entrance and the limits of Lower Graniteville upon request by the Barre Town Road Foreman. The Permittee shall further clean up any aggregate spills on private property from trucks exiting the Crusher upon request by the property owner.

The Commission concludes that the Project will comply with Criterion 5 / 9K with respect to traffic congestion and unsafe conditions and impacts on public investments related to roads and highways.

Criterion 8 - Aesthetics, Historic Sites and Rare and Irreplaceable Natural Areas:

Aesthetics, Scenic or Natural Beauty

Criterion 8 (Aesthetics) - Noise from Crushing Operation:

109. RSG conducted sound propagation modeling and Long Term Sound Monitoring to evaluate the Project. [Exhibit 082]
110. The RSG Sound Monitoring focused on understanding the impact of the Crusher Operation to the overall background sound levels from normal ROA operations in the area. Sound monitoring was done at 4 sites at or near the edge of ROA property. All multi-day measurements were recorded as 10 minute averages with resulting conclusions focused on Leq and L90. [Exhibit 082]

111. The results from the monitoring stations as described in NEMG's Noise Assessment are Leq sound levels summarized in 10-minute intervals, and its conclusions are based on these results, which say nothing of the change in extent and frequency of instantaneous noise events (Lmax) with and without the crushers operating. [Exhibit 082]
112. Monitoring periods were multi-day periods in the Fall and Winter of 2016. [Exhibit 082]
113. Monitoring results indicated 4-8 dBA (Leq) increases at the North-West monitor during crushing operations but little or no impact at other monitoring sites. [Exhibit 082]
114. In general Monitoring showed that "on the days when the crusher was operating there is less of a difference between the Leq and the L90 though, indicating that the sound levels were more consistent during crushing and less influenced by transient sounds." [Exhibit 082]
115. Mr. Duncan's sound propagation monitoring results were Leq 10 minute and were used to characterize the long-term sound levels at the site. They did not provide Lmax, as required by Barre Granite. Thus, there is no Lmax monitoring data provided for any of the Fall and Winter test periods. *Id.* at 4.
116. The RSG Computer Model evaluated sound levels using the 1 second Lmax criteria defined in Barre Granite. The highest sound level from the Crushing Operation Only scenario was 54.5 dBA Lmax at 718 Graniteville Road. *Id.* The highest sound level from the Crushing Operation and Asphalt Plant scenario was 56.3 dBA Lmax at 4 Barclay Quarry Road. *Id.* at 21. Seven other residences experienced sound levels between 55 and 56 dBA Lmax. *Id.* at 26. The highest sound level from Rock Hammer from the Crushing Operation and Asphalt Plant scenario was 55.3 dBA Lmax at 4 Barclay Quarry Road. *Id.* at 22.
117. The Lmax graphs provided in NEMG's Response to the Hearing Recess Order present background 1-second Lmax levels during the fall period and 1-second Lmax levels with the crushers operating during the winter period. Because there is no information on Lmax background levels during the winter period and no information on levels while the crushers are operating in the fall period, it is not possible to gauge the change in extent and frequency of instantaneous noise events with and without the crushers operating. [Exhibit 084]
118. The Applicant did not model the rock hammer in conjunction with the crushing operation, and did not test the actual rock hammer used at the crushing operation.

Mr. Duncan conceded that sound levels from rock hammers vary based on what type of material is being crushed. He also conceded that the rock hammer is one of the loudest sources in the aggregate industry and that if it is operating at the same time as the asphalt plant and crushing operation, the cumulative sound levels likely would exceed the 55-dBA threshold. [Testimony of Eddie Duncan, Feb. 1, 2017]

119. Mr. Duncan conceded that the truck traffic noise was not tested together with the crushers. *Id.*
120. As documented in the Noise Assessment, the sound levels at eight residences exceeded the 55 dBA Lmax *Barre Granite* standard. Exhibit 082, at 26. Appendix D to the report also documents dozens more residences where the sound levels exceeded 50 or even 53 dBA. *Id.* at 45-51.
121. The noise levels of trucks on the NEMG leased property exceed the 70 and 55 dBA criteria on the Neighbors' properties to the north of the facility. [Exhibit 166]
122. The sound propagation modeling software has an accuracy of plus or minus 3 dBA. Thus, a reading of 53 dBA may actually be a reading of 56 dBA. [Testimony of Les Blomberg, Feb. 1, 2017]
123. Mr. Blomberg recommended a 6-dBA margin of error since the design just barely meets the Barre Granite standard, even with mitigation. Thus, a reading of 50 dBA may be a reading of 56 dBA, [*Id.*; Exhibit 166]
124. Mr. Duncan conceded that the Project does not meet the standards without mitigation, but the mitigation measures proposed have not been implemented and tested. The vast majority of permits do not rely on post-construction monitoring because it is uncertain and places the entire burden on post-operation enforcement rather than appropriate permitting. [Testimony of Les Blomberg, Feb. 1, 2017; Testimony of Eric Duncan]
125. NEMG's Noise Assessment recommends several mitigation measures. The report relies heavily on barriers, including horseshoe grout pile and mobile noise barriers, screens, panels, and other enclosures. Mr. Duncan concluded that these mitigation measures may, in some combination, achieve a noise reduction of 8 dBA, which was used in the modeling. *Id.* at 24.
126. Barriers, especially mobile ones, cannot be relied on for consistent noise attenuation. They require constant maintenance for continued performance *Id.*; Exhibit 166, at 4. NEMG's barriers are even more problematic because they are not permanent barriers. Rather, they are stockpiles that are constantly changing. [Exhibit 166, at 4]

127. Mr. Duncan's need to rely on barriers, panels, and screens as mitigation to reduce the noise levels below those which would violate the Barre Granite standards of 70 dBA instantaneous L_{max} at the property line and 55 at residences and places of frequent human use indicates that the setbacks and location for this Project are clearly incompatible with the primarily residential surroundings. *Id.*

Noise from Truck Traffic:

128. To gauge noise associated with truck traffic, Mr. Duncan conducted sound-level monitoring and traffic counts at a single location on Graniteville Road. The monitoring location was not near the property lines of nearby residences. He reported the results based on the hourly equivalent sound level (Leq_{1-hr}) [Exhibits 011 at 2; 166 at 5]
129. At a distance of 78 feet, the hourly equivalent sound level (Leq_{1-hr}) ranged between 59 and 62 dBA. The maximum sound level from heavy trucks ranged from 64 and 79 dBA. Exhibit 11, at 2-3. Mr. Duncan explained that the sound levels at the average residential setback distance of 53 feet would be approximately 2 to 3 dB higher than those monitored at a distance of 78 feet. *Id.* at 3
130. To estimate the sound level at homes along Graniteville Road, Mr. Duncan conducted sound propagation modeling for several baselines and build scenarios. Modeling was conducted for the highest total traffic volume hour, which was 7:00 AM, and the lowest total traffic volume hour, which was 10:00 AM. *Id.*
131. Mr. Duncan conducted sound-level monitoring on only a single day at a single location. NEMG's sales manager explained that the business is market-driven and the traffic is variable from day to day. [Testimony of Eric Morton, Feb. 1, 2017]
132. Although the Truck Noise Assessment reports a maximum 1-hour average sound level range of 64 to 79 dBA for heavy trucks, it does not provide a detailed account of these instances. Thus, there is no information to indicate how often the trucks exceeded 70 dBA. [Exhibit 11, at 3]
133. For the Crushing Scenario, sound levels would increase 2 to 6dB over the baseline scenarios. For comparison, a "substantial noise increase" is defined by the VTrans Noise Analysis and Abatement Policy as an increase in "15 dB(A) above the existing noise level." In all scenarios, sound levels are below the VTrans standard for residential uses. [Exhibit 11 at 4]
134. The sound propagation modeling used an average setback of 53 feet for residences, even though many homes are located closer to the road. Exhibit 11, at 3. For example, Russell and Pamela Austin live at 735 Graniteville Road, and their home is

located only 29 feet from the road. Exhibit 148. The modeling similarly failed to consider areas of frequent human use, such as the playground or the businesses in Lower Graniteville village where residents gather. These areas may be set even closer to the road.

Testimony of Neighbors on Noise:

135. Lori Bernier sees aggregate trucks going to the site as early as 5:30 a.m. She is frequently woken up by the noise of the crusher at 6:00 AM and the noise is constant during the day. She hears it frequently at night and on Saturdays. She also often hears the rock hammer during the day. She describes it as a “sharp and intrusive noise.” She knows the rock hammer is coming from the crushing operation because she can hear the direction of the sound, especially when the leaves are off the trees. She can no longer sit outside on her porch or converse on the phone without interruption. *Id.* [Testimony of Lori Bernier, Feb. 1, 2017]
136. Lori Bernier’s log that she kept over several months in 2014, 2015, and 2016 documented several instances of the crushing operation running as early as 5:30 or 6:00 AM. [Exhibits 145-147]
137. Prior to the crushing operation, Marc Bernier did not hear much from ROA aside from the occasional blast. Since the crushing operation started, he can no longer relax in his yard or sit on his deck and he hears a lot of work happening on Saturdays. He can see the rock hammer and jaw crusher operating with his binoculars from his home. He can easily distinguish the crusher sounds from the quarry operation. [Testimony of Marc Bernier, Feb. 1, 2017]
138. When Padraic Smith first moved to Graniteville, he did not hear much background noise from the quarry and only the occasional sharp noise. Around 2010 he started hearing a lot louder noise. He hears it as early as 6:00 AM and at least once or twice a month on Saturdays. He is no longer comfortable sitting on his porch and is no longer able to have conversations outside. [Testimony of Padraic Smith, Feb. 1, 2017]
139. Suzanne Smith hears noise from the quarry constantly. She can hear the aggregate trucks going up the hill as early as 5:00 or 5:30 AM, sometimes two or three at a time. The crushing operation runs past 4:00 PM and into the evening and often on Saturdays. She can hear the crushers inside over the sound of the TV and stereo. [Testimony of Suzanne Smith, Feb. 1, 2017]
140. Melyssa Danilowicz hears “giant cracking noises” coming from the direction of the crushing operation, and often feels her home shaking on the inside. The aggregate trucks are also very loud when they pass by. She can no longer have her windows

open or take walks in her neighborhood or on the trails. She even hears the crushers on the weekend. She has a studio in her home, but the noise is so constant, she often must leave her home and work elsewhere. She can easily differentiate the crushing operation from the other quarry sounds. [Testimony of Melyssa Danilowicz, Feb. 1, 2017]

141. Pamela Austin's home is located only 29 feet from Graniteville Road. The crushers run almost every day from the morning into the late evening and some Saturdays. The noise often keeps her up at night. The crushers sound like steel or granite against iron. She can see the crushers from the rear of her property and can hear the noise coming from that direction. The trucks going by her property are also very loud. [Exhibit 148]
142. Russell Austin's home is located only 29 feet from Graniteville Road. He worked at a quarry in Barre for 12 years and then at ROA for 11 years, so he is very familiar with the sounds of quarries. He hears the crushing operation all day and into the evening and even some Saturdays. He hears it with the windows closed and must run the fan or air conditioner at night to drown out the sound. The rock hammer is the worst sound. The sound of the granite going through the crusher is extremely loud. He knows the noise he hears is coming from the crusher site because he can hear it coming from that direction. The truck noise is also continual throughout the day. He recognizes the ROA trucks as distinct from the aggregate trucks going to and from the crushing operation, and he can see the access road to the crusher site from his property. [Exhibit 149]
143. Before the crushing operation, Suzanne Bennett heard few sounds from the ROA site, except for the occasional whistles or blasting. It was a quiet rural setting. Around 2011, she started hearing a lot of new machinery and new sounds that were "very loud and almost unbearable." She hears the crushing operation almost every day from early spring until late fall. It starts as early as 6:00 AM and often runs late into the evening and on Saturdays. She hears the noise inside even when the windows are closed and is often woken up in the morning. [Exhibit 150]
144. Audio clips recorded at the Berniers' home demonstrate a noise that sounds like a rock hammer coming from the direction of the crushing operation. [Exhibits 155-156]
145. Graniteville resident Alice Cloud's testimony that she has not experienced excessive traffic or noise since the rock crushers have been operating does not contradict NEIGHBORS' testimony. Ms. Cloud conceded that she leaves for work early in the morning and returns home in the evening after the operations have closed for the day. [Exhibit 39]

Rock Dust from Crushing Operation and Truck Traffic:

146. The District Commission incorporates by reference those findings made above in connection with Criterion 1.

Historic Sites

147. There are no historic sites or rare and irreplaceable natural areas which will be affected by this Project. [Exhibits 001; Overview].

Conclusions of Law

Based upon the long-standing Quechee Lakes test, a Project violates Criterion 8 if it (1) will have an adverse aesthetic impact and (2) that impact will be undue. *In re Application of Lathrop Ltd. P'ship I*, 2015 VT 49, ¶ 74. Although Neighbors bear the burden of showing an undue adverse effect under Criterion 8, NEMG retains the initial burden of producing evidence sufficient for the District Commission to make affirmative findings. *Re: Times & Seasons, LLC*, No. 3W0839-2-EB at 38 (Vt. Env'tl. Bd. Nov. 4, 2005). If Neighbors succeed in showing an adverse effect under Criterion 8, the District Commission must deny the Act 250 permit. 10 V.S.A. § 6086(a)(8).

An impact is adverse if it does not "fit" in its surroundings. *Times & Seasons* at 39; *Re: Barre Granite Quarries, LLC*, No. 7C1079 (Revised)-EB at 80 (Vt. Env'tl. Bd. Dec. 8, 2000). As described in the General Findings and related findings under Criteria 1 and 5, above, the neighborhoods surrounding the crusher operation, as well as the neighborhoods through which crusher trucks pass, are primarily residential.

There can be no serious dispute that the area surrounding the crusher and the roads used by the trucks have experienced and would again experience a significant increase in noise, traffic, and dust. Because the crusher has been operating illegally for some years, the Neighbors have been in the position of already experiencing the impacts of this operation. While the Project falls within an industrial area, surrounded by residences, the documented impacts from past crusher operation exceed historic and reasonable acceptable levels. Neighbors have testified extensively about how out of context with the residential area the Project is. The severe impacts that the residents of Graniteville have experienced and would continue to experience from the crusher are inconsistent with the character of the area and are therefore adverse.

An adverse impact is undue if:

- (1) it violates a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area;
- (2) it offends the sensibilities of the average person; or

- (3) the applicant has failed to take generally available mitigating steps that a reasonable person would take to improve the harmony of the proposed Project with its surroundings. *Lathrop* at ¶ 74.

A permit must be denied if the Commission determines any one of these (3) Criteria is met. *In re Times & Seasons, LLC*, 2008 VT 7, ¶ 8; *Barre Granite* at 80.

With respect to the second factor, noise impacts offend the sensibilities of the average person when they exceed 70 dBA Lmax (1 second) at the Project boundary or 55 dBA Lmax (1 second) at residences and outdoor areas of frequent human use. *Lathrop* at ¶ 80 (citing *Re: Barre Granite Quarries, LLC*, No. 7C1079 (Revised)-EB (Vt. Env'tl. Bd. Dec. 8, 2000)). The Supreme Court in *Lathrop* reiterated that the *Barre Granite* standard is measured in terms of instantaneous 1 second Lmax, as opposed to Leq or fast 1/8 second Lmax. *Id.* ¶¶ 77-88; see also *Re: McLean Enters.*, No. 2S1147-1-EB at 22 (Vt. Env'tl. Bd. Nov. 24, 2004) (“Lmax is the maximum instantaneous sound level measured.”).

The instantaneous 1 second Lmax which has been consistently applied and upheld in Act 250 decisions concerning noise standards.

With respect to truck traffic the Court rejected using average noise levels because “when evaluating the real effect on people from the noise of passing trucks, it is more appropriate to consider the instantaneous noise from trucks as they pass because that is what people experience.” *Lathrop*, 2015 VT 49, ¶ 86; *In re OMYA, Inc.*, No. 9A0107-2-EB at 15 (Vt. Env'tl. Bd. May 25, 1999). Importantly, the Supreme Court in *Lathrop* rejected the Environmental Division’s rationale that if it “were obligated to apply the 55 dB or 75 [sic] dBA noise-level standards to traffic as it crossed the border . . . there would be no large development that would receive a permit in the State of Vermont.” *Id.* ¶ 86.

NEMG argued that the VTrans standard, 67 dBA Leq (1 hour) was the required standard for the evaluation of truck traffic. Furthermore, NEMG’s evidence did not attempt to show that its truck traffic is compatible with the ACT 250 standards of 70 dBA at property lines and 55 dBA (1 second Lmax) at residences and outdoor areas of frequent human use.

NEMG recognized that residents will experience more periods of truck noise due to the increase traffic generated by the Project.

Mr. Duncan gathered data from a single location on a single day, and the data from the sound propagation modeling were presented in terms of Leq, not instantaneous Lmax, as required by *Barre Granite*, which even RSG acknowledged would result in higher decibel readings. There is no data on the change in level, timing, and frequency of peak noise events. For example, there is no data with which to determine whether there would be an increase in the frequency of peak noise events through Lower Graniteville village, where residents gather in outdoor spaces and where properties are located near the roadway. In fact, the sound

propagation modeling assumed an average 53-foot setback for residential properties even though several properties, including the home of NEIGHBORs Pamela and Russell Austin, are located much closer to Graniteville Road. Furthermore, the noise modeling did not consider outdoor areas of frequent human use, such as the playground and the public spaces around the buildings in Lower Graniteville village.

NEMG provided no credible testimony to rebut Neighbors' testimony that the rock hammer has been operating on a regular basis along with the crushers.

The Supreme Court in *Lathrop* also emphasized that the frequency and timing of noise events must be considered in determining whether an impact is undue. In *Lathrop*, the Court rejected the applicant's argument that because the noise generated from the additional truck traffic would not exceed the average noise levels recorded at nearby monitoring stations, it would not be undue. *Id.* ¶¶ 79, 88. The Court held that a complete analysis under Criterion 8 involves determining whether the peak noise levels will increase in frequency, whether the peak noise events will occur at times when existing traffic is low, and whether more peak noise events will occur during warm weather "when windows and doors are open and people spend more time outdoors." *Id.* ¶ 79; see also *John A. Russell Corp.*, 2003 VT 93, ¶ 33 (the Environmental Division erred in failing to consider increase in frequency of loud noises emitted by proposed asphalt plant even though plant would not emit noise in excess of preexisting decibel levels). Therefore, as these decisions make clear, Project noise may be undue even when added to preexisting noise from truck traffic and quarry operations.

Furthermore, when determining whether noise is undue, it is necessary to consider the type of noise. *Re: George & Diana Davis*, No. 2S1129-EB at 8 (Vt. Env'tl. Bd. Dec. 15, 2004). The Board observed that "impact or quality of noise is not entirely reflected by a decibel rating," *Re: Bull's Eye Sporting Ctr.*, No. 5W0743-2-EB at 17 (Vt. Env'tl. Bd. Feb. 27, 1997), and thus the "duration and intermittency" of the noise must also be considered. *George & Diana Davis* at 8. For example, "[i]mpulse noises" and "[s]harp, intermittent or high frequency noises" are often considered "noisier or more unwanted" than non-impulsive or low-frequency continuous noises. *Id.*; *Bull's Eye Sporting Center* at 17.

The Board also stated "that there must be different standards for daytime and nighttime operations for Projects whose sound will impact on residential areas." *Re: Hannaford Bros. Co. & Southland Enters., Inc.*, No. 4C0238-5-EB, at 25 (Vt. Env'tl. Bd. Nov. 27, 2002).

Here, NEMG failed to present sufficient evidence for the District Commission to conclude that the noise generated by the Project do not create an undue adverse aesthetic impact. With respect to the noise from the crushing operation, NEMG's noise consultant testified that the noise levels at eight properties would exceed the 55 dBA *Barre Granite* standard. Mr. Duncan concluded that the noise levels would not be undue because they present only a minor increase over the existing sound levels and fit the industrial context of the area. But as the Supreme Court in *Lathrop* held and the Environmental Board has explained, a more

thorough analysis is required. For example, Mr. Duncan monitored sound levels at only five locations over a limited time and did not gather any data on the extent, frequency, and timing of peak noise events with and without the crushers operating.

Most significantly, as discussed above, Mr. Duncan did not capture instantaneous L_{max} readings during the noise monitoring study, as required by *Lathrop, Barre Granite*, and *McLean Enterprises*.

In addition, the data provided by NEMG does not account for the type of noise. Neighbors testified to sharp, intermittent noises from the rock hammer and other crushing equipment. As the Environmental Board held in *Bull's Eye Sporting Center* and *George and Diana Davis*, such noises are more of a nuisance than low-frequency continuous noises. As Neighbors explained, the distant sounds from ROA's quarry are merely background noises, while the sounds from the crushing operation are sharp and intrusive and spread over 10 hours a day, six days a week. Thus, considering Neighbors' testimony and the audio clips they presented at the hearing, even the 1-second L_{max} 55 and 56 dBA sound levels are undue. Moreover, the sound levels from the crushing operation will exceed the 45-dBA nighttime standard established by the Board in *Hannaford Brothers*.

NEMG is now proposing certain mitigation measures, such as barriers, screens, and panels, that – theoretically - may lower noise levels by as much as 8 dBA. But, NEMG's noise expert provided no evidence that these mitigation measures would lower sound levels to an acceptable degree. As noted above, noise may be undue if an applicant “failed to take generally available mitigating steps that a reasonable person would take to improve the harmony of the proposed Project with its surroundings.” *Lathrop*, 2015 VT 49, ¶ 74 (quotation omitted).

Furthermore, NEMG failed to take these mitigating steps, even though it had every opportunity to do so while the crushers were operating between 2010 and 2016. Had they done that, they now would be able to provide definite information about the effectiveness of the various proposed mitigation measures. But without any evidence that the proposed mitigation would succeed in reducing the noise, and, if so, to what extent, NEMG's assertions that it can mitigate the noise and dust are pure speculation. Based on the lack of evidence that any of the proposed mitigation measures would be effective, the District Commission cannot make affirmative findings on the effectiveness of the proposed mitigation measures and must therefore disregard them.

NEMG seeks positive findings from the Commission prior to demonstrating that the crusher noise will not have an undue adverse impact, based upon its future implementation of certain measures. However, issuance of a permit that authorizes a Project to operate contingent upon future actions to attempt to demonstrate compliance with the Criteria violates both the plain language of Act 250 and Environmental Board precedent. See 10 V.S.A. § 6086(a) (“Before issuing a permit, the district commission shall find that the subdivision or development . . .

(8) will not have an undue adverse effect on . . . aesthetics. . . .”; *Re: Killington, Ltd. & Int’l Paper Realty Corp.*, No. IR0584-EB-1, at 24-25 (Vt. Envtl. Bd. Sept. 21, 1990) (explaining that applicant must demonstrate mitigation plan will ensure compliance with Criterion 8 before permit is issued); *Berlin Associates*, No. 5W0584-9-EB at 6 (Vt. Envtl. Bd. 4/24/90); *Sherman Hollow*, No. 4C0422- 5-EB (Revised) at 10-11 (Vt. Envtl. Bd. 2/17/89).

Furthermore, the evidence demonstrates that the current location of the crushing operation, in close proximity to residences, is not suitable, yet NEMG has offered no credible evidence that it cannot locate the crushing operation elsewhere on Co-Applicant ROA’s 1100-acre tract, or use the internal haul roads, that are already used for trucks associated with ROA - rather than the public roads - for the trucks. See *In re Rinkers, Inc.*, No. 302-12-08 Vtec, at 23 (Vt. Envtl. Ct. May 17, 2010) (explaining that potential for alternative sites “relates to determining whether the applicant has taken reasonable mitigating steps to improve the Project’s harmony with its surroundings”); *Re: Mirkwood Group*, No. 1R0780-EB, (Vt. Envtl. Bd. Aug. 19, 1996) (stating that applicants must show that no other reasonable sites are available). See also *In re Goddard College*, 2014 VT 124 (2014), where the Court indicated that the review of any alternative site involves evaluation of whether such a site is “reasonably feasible.”

With respect to the truck traffic noise, NEMG’s noise consultant gathered data only from a single location on a single day, and the data from the sound propagation modeling was presented in terms of Leq, not instantaneous Lmax, as required by *Barre Granite*. There is no data on the change in level, timing, and frequency of peak noise events. For example, there is no data with which to determine whether there is an increase in the frequency of peak noise events through Lower Graniteville village, where residents gather in outdoor spaces and where properties are located near the roadway. In fact, the sound propagation modeling assumed an average 53-foot setback for residential properties even though several properties, including the home of Neighbors Pamela and Russell Austin, are located much closer to Graniteville Road. Furthermore, the noise modeling did not consider outdoor areas of frequent human use, such as the playground and the public spaces around the buildings in Lower Graniteville village.

As discussed above, the applicant has the burden of production on all Criteria, including Criterion 8. In this case, the applicant has failed to produce sufficient evidence on which the Commission can make positive findings that the truck traffic will not create an undue adverse impact upon aesthetics. Nevertheless, to meet its burden of persuasion, the Neighbors have shown – through their own testimony and relying on legal precedent – that the noise from the crusher and from trucks both on the site and offsite has exceeded and would continue to exceed the maximum noise standards and be shocking and offensive for the many Graniteville residents at their homes and in the Village’s public spaces. Noise can result in undue air pollution under Criterion 1 if it causes impacts rising above annoyance and aggravation to cause adverse health effects such as hearing damage. *Talon Hill Gun Club*, No. 9A192-2EB (Vt Envt’l Bd. 1995).

The Applicants have failed to provide sufficient evidence to show that the crushing operation will not result in undue adverse noise impacts. The testimony of the Neighbors starkly demonstrates that the crushing operation has already resulted in impacts that are shocking and offensive. Accordingly, this Project violates Criterion 8 and must be denied.

Based on the above, the Commission concludes that the Project will have an undue adverse effect on the aesthetics or natural and scenic beauty of the area.

VI. SUMMARY CONCLUSION OF LAW

Based upon the foregoing Findings of Fact, the Commission concludes that the Project does not comply with Criterion 1 (Air) and Criterion 8 (Aesthetics). 10 V.S.A. § 6086(a).

VII. ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law, Land Use Permit 5W0966-7 is hereby denied.

DATED at Barre, Vermont, June 14, 2017.

By /s/Jito Coleman
Jito Coleman, Chair
District #5 Environmental Commission

Commission:

Ginny Callan
Joslyn Wilschek

Any party may file a motion to alter with the District Commission within 15 days from the date of this decision, pursuant to Act 250 Rule 31(A).

The applicant may file an application for reconsideration with the District Commission within six months of this decision, pursuant to Act 250 Rule 31(B).

Any appeal of this decision must be filed with the Superior Court, Environmental Division within 30 days of the date of this decision, pursuant to 10 V.S.A. Chapter 220. The Notice of Appeal must comply with the Vermont Rules for Environmental Court Proceedings (VRECP). The appellant must file with the Notice of Appeal the \$295.00 entry fee required by 32 V.S.A. § 1431.

The Applicants have failed to provide sufficient evidence to show that the crushing operation will not result in undue adverse noise impacts. The testimony of the Neighbors starkly demonstrates that the crushing operation has already resulted in impacts that are shocking and offensive. Accordingly, this Project violates Criterion 8 and must be denied.

Based on the above, the Commission concludes that the Project will have an undue adverse effect on the aesthetics or natural and scenic beauty of the area.

VI. SUMMARY CONCLUSION OF LAW

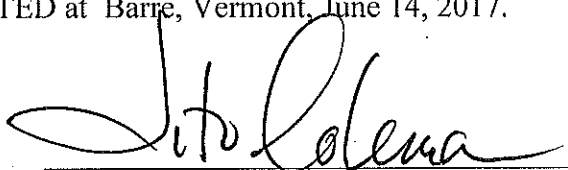
Based upon the foregoing Findings of Fact, the Commission concludes that the Project does not comply with Criterion 1 (Air) and Criterion 8 (Aesthetics). 10 V.S.A. § 6086(a).

VII. ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law, Land Use Permit 5W0966-7 is hereby denied.

DATED at Barre, Vermont, June 14, 2017.

By



Jito Coleman, Chair
District #5 Environmental Commission

Commission:

Ginny Callan
Joslyn Wilschek

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Findings of Fact, Conclusions of Law, and Order #5W0966-7
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The appellant must also serve a copy of the Notice of Appeal on the Natural Resources Board, National Life Dewey Building, Montpelier, VT 05620-3201, and on other parties in accordance with VRECP 5(b)(4)(B).

For additional information on filing appeals, see the Court's website at: <http://www.vermontjudiciary.org/GTC/environmental/default.aspx> or call (802) 828-1660. The Court's mailing address is: Vermont Superior Court, Environmental Division, 32 Cherry Street, 2nd Floor, Suite 303, Burlington, VT 05401.

CERTIFICATE OF SERVICE

I hereby certify that I sent a copy of the foregoing **FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER 5W0966-7 (NORTH EAST MATERIALS GROUP, LLC AND ROCK OF AGES CORPORATION)** by U.S. Mail, postage prepaid, on this 14th day of June 2017, to the individuals without email addresses and by electronic mail, to the following with email addresses:

Note: Any recipient may change its preferred method of receiving notices and other documents by contacting the District Office staff at the mailing address or email below. If you have elected to receive notices and other documents by email, it is your responsibility to notify our office of any email address changes.

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