

STATE OF VERMONT
SUPERIOR COURT - ENVIRONMENTAL DIVISION

In Re: North East Materials Group, LLC
Amended Act 250 Permit

DOCKET NO. 35-3-13 Vtec

NEIGHBORS FOR HEALTHY COMMUNITIES'
PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Neighbors for Healthy Communities hereby submit their proposed findings of fact and conclusions of law in the appeal of Act 250 permit #5W0966-6(Altered), after the merits hearing held at the Washington County Courthouse in Montpelier on May 4th, 5th, and 6th of this year.

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BACKGROUND

On April 11, 2012, North East Materials Group, LLC (NEMG) filed an Act 250 application for a project generally described as construction and operation of a hot mix asphalt plant and related fixtures and equipment on 3.46 acres of land leased within the existing Rock of Ages Quarry on the south side of Graniteville Road in the Town of Barre, Vermont, with a maximum operating level of 180 tons per hour and an average operating level of 50-75 tons per hour. The parcel is leased to NEMG pursuant to a Lease Agreement, notice of which is dated June 18, 2012, and recorded at Book 026, Page 221 of the Barre Town Land Records. State of Vermont District 5 Environmental Commission, Act 250 Application #5W-0966-6 Findings of Fact, Conclusions of Law, and Order (January 24, 2013).

The District 5 Environmental Commission convened public hearings on the matter on May 16, 2012, June 19, 2012, July 17, 2012, and December 3, 2012. Id. On February 26, 2013, the District Commission issued an Act 250 permit (Altered) to NEMG for construction and operation of the hot mix asphalt plant. *Exhibit F (NEMG Asphalt Plant Land Use Permit)*. On March 27, 2013, Neighbors for Healthy Communities (Neighbors) filed a timely appeal. Notice of Appeal, In re North East Materials Group, LLC (Vt. Super. Ct. Env'tl. Div. Mar. 27, 2013). Neighbors are Pamela Austin, Russell Austin, Julie Barre, Suzanne Bennett, Jane Berard, Lori Bernier, Marc Bernier, Charles Brown, Melyssa Danilowicz, Michael Danilowicz, Cathy DeGreenia, Forrest DeGreenia, Earl Everhart, Cynthia Fitzgerald, Kaley Grenier, Kirt Johnson, Victoria Johnson, Steve Martin, Frederick McGrath Jr., Gustave Osterberg, Rock Pariseau, Dana Robinson, Ricky Safford, Padraic Smith, Suzanne Smith, and Denise Viens-Kirkpatrick.

In October 2014, Neighbors amended their Statement of Questions. Motion to Amend Statement of Questions & Proposed Amended Statement of Questions, In re North East Materials

Group, LLC, No. 35-3-13 Vtec (Vt. Super. Ct. Env'tl. Div. Oct. 8, 2014); Entry Regarding Motion (granted), In re North East Materials Group, LLC, No. 35-3-13 Vtec (Vt. Super. Ct. Env'tl. Div. Oct. 20, 2014. At issue before the Court are Criteria 1 (Air Pollution), 5 (Traffic), 8 (Aesthetics), and 9K (Public Investment, Traffic Related).

I. AESTHETICS

A. Findings of Fact

i. The Setting

1. Graniteville is a small village in central Vermont comprised of “Upper Graniteville” and “Lower Graniteville.” Lower Graniteville is northwest of and downhill from Upper Graniteville. *Exhibit 1 (Graniteville Map from Google Earth); Neighbors’ Testimony (generally).*
2. Graniteville is home to many residences. *Exhibit 1 (Graniteville Map from Google Earth); Testimony of Melyssa Danilowicz, Suzanne Bennett, Marc Bernier, Lori Bernier, Pamela Austin, Denise Viens-Kirkpatrick, Padraic Smith, & Michael Oman; Testimony of Benjamin Oxender.*
3. Lower Graniteville is home to a general store, playground, senior center, post office, church, bike trail, elementary school bus stop, and private residences. Residents described Graniteville as having been a pleasant place for village living and a source of pride. *Testimony of Denise Viens-Kirkpatrick, Padraic Smith, & Michael Oman.*
4. Upper Graniteville is a cluster of residences southeast of and uphill from Lower Graniteville. *Exhibit 1 (Graniteville Map from Google Earth); Neighbors’ Testimony (generally).*
5. The Rock of Ages corporation (ROA) operates a stone quarrying operation in Graniteville, and has done so for over 100 years. The ROA tract is approximately 1100 acres. The ROA

quarrying operation generally involves production of dimensional granite products.

Presently, the granite is quarried from a deep hole roughly in the center of the ROA tract, and is processed at the ROA processing facility on the western edge of the tract. Granite blocks and piles of small stones are found throughout the ROA tract. *Site Visit (Dec. 4, 2013), N.E. Materials Group LLC A250 JO # 5-21 (Vt. Super. Ct. Envtl. Div.).*

6. In 2013, NEMG began operating an asphalt plant on the ROA tract in Graniteville. The asphalt plant is on the southern portion of the ROA tract between Upper and Lower Graniteville. *Exhibit 1 (Graniteville Map from Google Earth); Exhibit F (NEMG Asphalt Plant Land Use Permit); Exhibit 32 (NEMG Production Log: Weekly Truck and Tonnage Report).*

ii. The Plant and Its Impacts

7. The asphalt plant emits pollutants and steam into the air through a stack on one end of the plant and through other means, such as when asphalt trucks are loaded. *Exhibit G (NEMG Asphalt Plant Air Permit); Exhibit F (NEMG Asphalt Plant Land Use Permit); Exhibit HH-1 (photo of asphalt plant).*
8. Prior to the time that the asphalt plant began operating in 2013, there were no stack or other asphalt plant emissions on the ROA tract in Graniteville. *Testimony of Marc Bernier; Testimony of Benjamin Oxender.*
9. The asphalt plant is visible from points in Graniteville, including from roadways, the Bernier and Austin residences when leaves are thin, and the Town Forest. *Testimony of Marc Bernier, Lori Bernier, & Pamela Austin; Exhibit 14 (video with asphalt plant visible, 7.15.14); Exhibit 15 (video with asphalt plant visible, 9.8.14); Exhibit 20 (video with asphalt plant visible, 9.10.14); Exhibits 21 & 22 (videos with asphalt plant visible, 9.25.14);*

Testimony of Benjamin Oxender; e.g., Exhibits HH-10, HH-11, HH-12 (photos of asphalt plant).

10. The plume from the asphalt plant stack, and other asphalt plant emissions, is visible when the asphalt plant is operating. *Testimony of Marc Bernier; Exhibits 13 (video of asphalt plant plume, 9.25.14); Exhibit 14 (video of asphalt plant plume, 7.15.14); Exhibit 15 (video of asphalt plant plume, 9.8.14); Exhibits 21 and 22 (videos of asphalt plant emissions not from the stack).* Ms. Bennett can see the plume from the second floor of her home when the plant is operating. *Testimony of Suzanne Bennett.* Mr. Bernier can see the emissions from his home and from the Town Forest. It is a hazy, blueish-grayish color. *Testimony of Marc Bernier.* Emissions also can be seen from other areas of the plant, such as the truck loading area. *Id.* Appellees' witness Oxender did not assess the visual impacts of the plant while it was operating. *Testimony of Benjamin Oxender.*
11. Prior to the time that the asphalt plant began operating in 2013, neighbors of the plant did not repeatedly smell asphalt in Graniteville. Since the asphalt plant began operating, neighbors have repeatedly smelled asphalt at their homes and at other locations in Graniteville. *Testimony of Melyssa Danilowicz, Suzanne Bennett, Marc Bernier, Lori Bernier, Pamela Austin, Denise Viens-Kirkpatrick, & Padraic Smith.*
12. Sources of the asphalt fumes and smell include the asphalt plant when it is operating, vented storage tanks and truck loading on days the plant is not operating, and trucks carrying asphalt. *Testimony of Melyssa Danilowicz, Suzanne Bennett, Marc Bernier, Lori Bernier, Pamela Austin, Denise Viens-Kirkpatrick, & Padraic Smith; Testimony of John Hinckley; Exhibit 4 (Event Log, Lori Bernier); Exhibits 21 and 22 (videos of asphalt plant emissions not from the stack).*

a. **Melyssa Danilowicz**

13. Melyssa Danilowicz lives at 856 Graniteville Road in Upper Graniteville, and has lived there for fifteen years. She lives with her husband and daughter. She enjoys gardening, hiking, swimming, and walking in the area. She has been prevented from doing some of these activities because fumes and odors from the asphalt plant have forced her to stay inside.

Testimony of Melyssa Danilowicz; Exhibit 1 (Graniteville Map from Google Earth).

14. Ms. Danilowicz has smelled asphalt fumes on her front porch, her back yard, and beside her house. During May to November of 2014, she smelled asphalt approximately 15-20 times. The smells lasted about 5-20 seconds, and she would need to go inside if it lasted longer.

Testimony of Melyssa Danilowicz.

15. To Ms. Danilowicz, the asphalt smell is a dank, cloying, chemical smell, like the pit of hell. The asphalt fumes have caused her nausea, headaches, watering eyes, and sore throats. She has heightened sensitivity to smells. *Id.*

16. In an event log, Ms. Danilowicz recorded specific instances of smelling asphalt from July 24, 2014 to October 10, 2014. She recorded smelling asphalt 11 times. She did not record each time she smelled asphalt in 2014, nor did she record every symptom every time. Almost every time that she recorded, the fumes affected her by making her feel nauseous and have a headache, and she had to go inside. *Id.; Exhibit 2 (Event Log, Melyssa Danilowicz).*

17. Ms. Danilowicz specifically remembers having coffee on her front porch in the morning and having to go inside because of the asphalt fumes. Many times, she has had to run from her house to her car because the fumes and smells were so bad. *Testimony of Melyssa Danilowicz.*

18. On October 10, 2014, Dave Shepard from the Vermont Department of Environmental Conservation came to Ms. Danilowicz's home after she called to complain about the smell. As they stood in the backyard, Mr. Shepard stated that he could smell asphalt. During part of his visit, Ms. Danilowicz had to go inside to avoid the smell. *Id.*
19. The asphalt plant produced asphalt on 7 of the 9 days that Ms. Danilowicz recorded smelling asphalt in 2014:

Log Recording Date	Tons Production
July 17, 2014	No tons recorded
July 22, 2014	185.41
July 23, 2014	26.11
July 29, 2014	111.36
August 6, 2014	No tons recorded
August 28, 2014	7.97
September 8, 2014	46.09
September 24, 2014 (twice)	514.69
October 10, 2014 (twice)	389.66

Exhibit 2 (Event Log, Melyssa Danilowicz); Exhibit 32 (NEMG Production Log: Weekly Truck and Tonnage Report); Exhibit 33 (NEMG Weekly Truck and Tonnage Report).

b. Suzanne Bennett

20. Suzanne Bennett lives at 5 Park Street in Upper Graniteville. She has lived there for fifty-five years. Ms. Bennett cannot enjoy the outdoors like she used to because of the fumes and smells from the asphalt plant. *Testimony of Suzanne Bennett; Exhibit 1 (Graniteville Map from Google Earth).*
21. Ms. Bennett has smelled asphalt at her home almost every week that the plant has operated. She also has smelled asphalt fumes when she has followed asphalt trucks through Graniteville. Often the wind blows from the asphalt plant toward her home, which she can see based on the direction of a flag in front of her home. *Testimony of Suzanne Bennett.*

22. To Ms. Bennett, the asphalt smell is very strong; the fumes smell oily, and like chemicals.

Id.

23. The asphalt fumes and smells cause Ms. Bennett nausea and headaches, and her eyes run if the smell is particularly strong. When Ms. Bennett smells asphalt, she goes inside and closes the windows, so she has had to spend more time than usual indoors since the plant began operating. *Id.*

24. Ms. Bennett has considered trying to sell her house because of the asphalt plant and its impacts on her. *Id.*

c. Marc Bernier

25. Marc Bernier lives at 2 Park Street in Upper Graniteville with his wife Lori Bernier. He likes to do a lot of biking, hiking, and hunting. He has not been able to bike or hike as much as he used to, or even much at all, because of the asphalt plant. *Testimony of Marc Bernier; Exhibit 1 (Graniteville Map from Google Earth).*

26. Mr. Bernier has smelled asphalt at his home many times, and also while walking in the Town Forest and driving on the roads in Graniteville. If Mr. Bernier is driving when he smells the fumes, he will close his windows and call his wife to warn her to close the windows. When he smells the fumes, he sometimes goes to the plant to see if it is operating, and will drive in a loop around the plant to gauge the smell from the plant. He can usually smell the plant from the loop, depending on the wind. He has also smelled asphalt when the plant is not operating, with the smells coming from other activities at the plant. *Testimony of Marc Bernier; Aesthetics Finding 12, supra.*

27. To Mr. Bernier, the asphalt smell is a strong, annoying, offensive, pungent smell that you want to get away from. *Testimony of Marc Bernier.*

28. The intensity of the asphalt fumes and smells varies. For example, if the wind blows toward Mr. Bernier at his home or in the Town Forest, the smell is very strong. The smell causes Mr. Bernier headaches and sinus pressure behind the eyes. *Id.*
29. On September 25, 2014, after Mr. Bernier filmed the asphalt plume from the Town Forest (*Exhibit 21*), he traveled to Cogswell Street because the plume was blowing in the direction of Cogswell Street. It took him about 5-10 minutes to reach Cogswell Street, and he could smell the asphalt there. *Testimony of Marc Bernier.*
30. Mr. Bernier has thought about moving because of the asphalt plant. It would be very difficult because he and his wife built the house that they live in, and it is a “clean” house. It would be difficult to find another place to live, but the asphalt plant is making things very difficult where they are. *Id.*

d. Lori Bernier

31. Lori Bernier lives at 2 Park Street with her husband, Marc Bernier. She loves to spend time in the outdoors; it is her “fix.” She regularly cannot go outside of her house anymore because of the fumes and smells from the asphalt plant. *Testimony of Lori Bernier; Exhibit 1 (Graniteville Map from Google Earth).*
32. Ms. Bernier has smelled the asphalt at her house, when travelling down Graniteville Road, Baptist Street, or Cogswell Street, or at friends’ houses in town. *Testimony of Lori Bernier.*
33. The intensity of the asphalt fumes and smells is strong. It lingers on hot days, and she can taste it in her mouth. *Id.*
34. Ms. Bernier considers herself sensitive to smell, but she has been getting better. The asphalt smell causes watery eyes, burning nose and throat, nausea, and breathing difficulties in Ms. Bernier. It also causes dizziness when she is exposed for a long time. If Ms. Bernier is

outside when the smell comes, she goes inside and closes the windows. If she is inside with the windows open, the smell enters her home and she closes the windows. *Id.*

35. In an event log, Ms. Bernier recorded specific instances of smelling asphalt during 2014. She recorded asphalt fumes and smells on 25 days. She did not record all the times that she smelled asphalt, but focused mostly on the times that the smell was intense. *Id.*; *Exhibit 4 (Event Log, Lori Bernier)*.

36. For instance, on July 22, 2014, Ms. Bernier recorded smelling asphalt in the morning, and again while driving home past the Lower Graniteville playground. The smell grew in severity as she approached the plant and the smells penetrated her car. She stopped to observe the plant and saw the plume migrate toward Lower Graniteville. She experienced burning in her nose and eyes, mild nausea, and other sensations. Once home, the odor was faint outdoors at her house and she retreated indoors. *Id.*

37. On September 24, 2014, Ms. Bernier recorded that the asphalt odor was really strong and she described it was as if they were making asphalt in her yard. Ms. Bernier called John Wakefield in the morning to report the smell. The smell was so bad that Ms. Bernier could not leave her home to walk to her mother's; the smell was "so heavily pungent it saturated the air," including the air in her home. While doing errands in the afternoon, Ms. Bernier smelled asphalt all along Graniteville Road. The physical effects on Ms. Bernier included nausea, lightheadedness, a burning sensation in her throat, and shortness of breath. *Id.*

38. On September 25, 2014, Ms. Bernier smelled asphalt many times throughout the morning and early afternoon, and observed that the smell saturated the whole town. Beginning very early, Ms. Bernier smelled asphalt at her home, and then again when she returned home after driving in the area. The odors came in waves with 20-30 minutes of intensity followed by

lesser degrees of intensity. While driving in the area, Ms. Bernier noted an overwhelming asphalt smell at Barclay Quarry Road. On three occasions that day, she also came upon Newton long bed trucks in Lower Graniteville and near the Rock of Ages processing plant, and the asphalt odors from the trucks were immense. The physical effects on Ms. Bernier that day included nausea, burning throat, and residual taste of asphalt. *Id.*

39. The asphalt plant produced asphalt on 23 of the 25 days that Ms. Bernier recorded an asphalt smell in 2014:

Log Recording Date	Tons Production
May 19, 2014	125.72
May 27, 2014	200.25
June 5, 2014	2.06
June 18, 2014	47.34
July 14, 2014	64.92
July 22, 2014	185.41
July 23, 2014	26.11
July 29, 2014	111.36
August 1, 2014	11.01
August 5, 2014	15.09
August 6, 2014	No tons recorded
August 12, 2014	46.23
August 20, 2014	68.57
August 21, 2014	9.03
August 25, 2014	56.06
August 28, 2014	7.97
September 8, 2014	46.09
September 22, 2014	3.03
September 24, 2014	514.69
September 25, 2014	807.18
September 26, 2014	403.12
September 28, 2014	No tons recorded
October 3, 2014	850.6
October 6, 2014	652.75
October 9, 2014	357.84

Exhibit 2 (Event Log, Lori Bernier); Exhibit 32 (NEMG Production Log: Weekly Truck and Tonnage Report); Exhibit 33 (NEMG Weekly Truck and Tonnage Report).

40. For 95% of the days in a 22-consecutive-day observation of wind direction in April 2015, the wind near the Bernier and Bennett residences was blowing primarily from the westerly direction, from the asphalt plant toward the Bernier residence. *Testimony of Lori Bernier; Exhibit 38 (wind direction photos and summary)*. The Bernier and Bennett residences are west-northwest of the asphalt plant. *Exhibit 1 (Graniteville Map from Google Earth)*.

e. Pamela Austin

41. Pamela Austin lives at 735 Graniteville Road, approximately 1700 feet from the asphalt plant, with her husband Russell and their grandchildren. She has smelled asphalt many times at her home. She cannot use her yard or her porch during these times when the asphalt fumes and smells are present. She also has had the smell come into her home through her air conditioner. *Testimony of Pamela Austin; Exhibit 1 (Graniteville Map from Google Earth)*.

42. Ms. Austin smells asphalt at least once a week during the asphalt plant's operating season, and more frequently in August and September. The smell comes not just from the plant, but from asphalt trucks going by. *Testimony of Pamela Austin; Exhibit 3 (Event Log, Pamela and Russell Austin)*.

43. The asphalt fumes and smells are offensive to Ms. Austin and cause her headaches. These fumes and smells are stronger on hot days or when there is cloud cover. *Testimony of Pamela Austin*.

44. The smell of asphalt gives Ms. Austin a headache, and if she does not get away from the smell, it can cause nausea and vomiting. *Id.*

45. In an event log, Ms. Austin and her husband recorded specific instances of smelling asphalt during 2014. They recorded asphalt smells on 16 days. The log does not include all the times that Ms. Austin smelled asphalt. *Id; Exhibit 3 (Event Log, Pamela and Russell Austin)*.

46. On July 22, 2014, Ms. Austin recorded that there was a really strong asphalt smell, and no trucks going by. *Id.*

47. On September 24, 2014, the Austins recorded that the asphalt smell was bad all day. Ms. Austin got up and looked out the back door, and then did not step outside but shut the door instead because the smell gave her a headache. She called Dave Shepard about the smell, and he advised her to stay inside with the doors and windows shut if she did not want to smell the asphalt. *Id.*

48. On September 25, 2014, the Austins recorded that the asphalt smell again lasted all day and gave Ms. Austin a headache. *Id.*

49. The asphalt plant was producing asphalt on 14 of the 16 days that the Austins recorded asphalt smells in 2014:

Log Recording Date	Tons Production
July 22, 2014	185.41
August 1, 2014	11.01
August 5, 2014	15.09
August 12, 2014	46.23
August 15, 2014	10.3
August 20, 2014	68.57
August 21, 2014	9.03
September 8, 2014	46.09
September 23, 2014	No tons recorded
September 24, 2014	514.69
September 25, 2014	807.18
September 28, 2014	No tons recorded
October 3, 2014	850.6
October 6, 2014	652.75
October 9, 2014	357.84
October 13, 2014	10.32

Exhibit 3 (Event Log, Pamela and Russell Austin).

f. Denise Viens-Kirkpatrick

50. Denise Viens-Kirkpatrick owns a home at 22 McLeod Hill Road, and has for about the past 30 years. *Testimony of Denise Viens-Kirkpatrick; Exhibit 1 (Graniteville Map from Google Earth).*

51. Ms. Viens-Kirkpatrick has smelled asphalt in Graniteville approximately 20 times over the past two years. Before the asphalt plant began operating, she only smelled asphalt in Graniteville during a paving project on McLeod Hill Road. *Testimony of Denise Viens-Kirkpatrick.*

52. Ms. Viens-Kirkpatrick smelled the asphalt at her friend Suzanne Smith's home on Pearl Street, at other homes in Graniteville, and near the entrance to the asphalt plant. *Id.*

53. To Ms. Viens-Kirkpatrick, the asphalt smell is offensive, horrible, and overpowering. It coats her nose. *Id.*

54. Ms. Viens-Kirkpatrick is sensitive to smells. Generally, the smell of asphalt gives her nausea and migraines. In Graniteville, she has experienced nausea from the smell of asphalt. *Id.*

g. Padraic Smith

55. Padraic Smith's home is at 2 Pearl Street in Lower Graniteville, with his wife Suzanne Smith. The home is just off of Graniteville Road, and this has been his home since 1989. He has enjoyed gardening, hiking, and biking in Graniteville, but those activities are difficult to enjoy now because of the asphalt plant. Everything has gotten worse. *Testimony of Padraic Smith.*

56. Mr. Smith has smelled asphalt approximately 10-20 times in Graniteville in the past two years. He has smelled the asphalt from his porch and lawn, and while on a walk. He believes that sometimes the smells come from the asphalt trucks, which he sees coming down

the hill loaded, and also occasionally from his neighbor's driveway paving. The smell tends to last a few minutes; it comes and goes quickly, but when a truck drives by, the smell lasts longer. Mr. Smith is not home during the day on a regular basis, but does work from home sometimes and has days off at home. *Id.*

57. To Mr. Smith, the smell of asphalt is a very strong petrochemical smell, acrid and caustic. It reminds him of a salve his grandmother used to use, that smelled like a tar road. Mr. Smith does not have a very good sense of smell. If he can smell the asphalt, it is pretty bad. *Id.*

h. Correlations among Event and Production Logs

58. There are substantial correlations among the event logs of Lori Bernier, Pamela Austin, Melyssa Danilowicz, and the production records of NEMG. As shown in the table in the Appendix, the asphalt plant produced asphalt on 26 of the 30 days that one or more of the neighbors recorded an asphalt smell. On July 22 and September 24, all three neighbors recorded strong asphalt smells. *Exhibits 2 (Event Log, Melyssa Danilowicz), 3 (Event Log, Pamela and Russell Austin), 4 (Event Log, Lori Bernier), 32 (NEMG Production Log: Weekly Truck and Tonnage Report), and 33 (NEMG Weekly Truck and Tonnage Report).* As explained in *Aesthetics Finding 12, supra*, the plant does not need to produce asphalt in order for the facility to generate an asphalt smell, through activities including venting, loading, or trucks.

59. On September 24, one of the highest production days for the plant (514.69 tons), all three neighbors recorded an asphalt smell. *Exhibits 2 (Event Log, Melyssa Danilowicz), 3 (Event Log, Pamela and Russell Austin), 4 (Event Log, Lori Bernier), and 32 (NEMG Production Log: Weekly Truck and Tonnage Report).* Because 514.69 tons is below the average daily

limit for the plant, *see Aesthetics Finding 65, infra*, September 24 does not even reach likely exposure levels at the permitted production limit.

Wind

60. NEMG's evidence concerning prevailing wind direction was not persuasive or reliable because it was based on measurements and data from an airport approximately 6 miles away from the site of the asphalt plant, with topographical conditions that are different from conditions at the asphalt plant site. Neighbors presented credible evidence that, frequently, the wind blows from the asphalt plant toward their homes. *Testimony of John Hinckley; Testimony of Suzanne Bennett; Testimony of Lori Bernier; Exhibit 38 (wind direction photos and summary); Aesthetics Finding 40, supra.*

i. Mitigating Alternatives

61. There is no evidence that NEMG or ROA considered alternatives that would mitigate the aesthetic impacts from the asphalt plant, such as assessing alternative locations for the plant on ROA's 1100-acre tract that would minimize the plant's impacts on Graniteville residents, or lowering the elevation of the plant. *Testimony of Benjamin Oxender; Testimony of Marc Bernier; Testimony of John Hinckley.*

62. If the plant were at a lower elevation, the plume probably would not travel as far. *Testimony of John Hinckley.*

iii. Trucks

63. There are two types of trucks that haul asphalt from the plant: large, long, gondola-type trucks, and large dump trucks. *Testimony of Marc Bernier, Padraic Smith, & Michael Oman; Testimony of David Saladino.*

64. There is no limit on the number of truck trips in the Act 250 permit. There is no requirement that trucks be loaded to capacity before exiting the plant. *Exhibit 9 (NEMG Asphalt Plant Land Use Permit)*. Therefore, the number of truck trips used to haul a certain tonnage amount will be higher if the trucks are not filled to capacity.
65. The permit sets an average weekly production limit of 4,500 tons as measured over a 45-day period. *Exhibit 9 (NEMG Asphalt Plant Land Use Permit)*. This averages to about 643 tons per day, but some daily levels could be higher than 643 tons if other daily levels were lower than 643 tons, while still maintaining the average weekly production limit.
66. In 2013, the average number of truck trips per day the plant was operating was 12.5 (786 one-way trips/63 days). The highest number of truck trips in 2013 was on November 6, at 58 trips (29 truck loads \times 2 = 58 one-way trips). On November 6, the plant produced 506.49 tons of asphalt. *Exhibit 32 (NEMG Production Log: Weekly Truck and Tonnage Report)*. If the plant produced 643 tons per day, assuming the same level of truck loading as on November 6, the number of truck trips per day would be 73.6. Because the plant can produce more than 643 tons per day and still maintain its weekly average limit, the number of truck trips could be even higher; and 73.6 truck trips per day does not represent a maximum.
67. In 2014, the average number of truck trips per day the plant was operating was 9.8 (836 one-way trips/85 days). The highest number of truck trips in 2014 was on October 3, at 60 trips (30 truck loads \times 2 = 60 one-way trips). On October 3, the plant produced 850.6 tons of asphalt which, as explained above, still allowed NEMG to meet its weekly average limit. *Exhibit 33 (NEMG Weekly Truck and Tonnage Report); Aesthetics Finding 65, supra*.
68. Neighbors have noticed a marked increase in truck traffic since the asphalt plant began operating. *Testimony of Melyssa Danilowicz, Lori Bernier, Pamela Austin, & Padraic Smith*.

Neighbors can identify asphalt trucks based on their smell or their appearance; visually, the asphalt trucks are large dump trucks or longer gondola trucks, and not Rock of Ages trucks associated with the quarry. There may also be an asphalt haze visible from the truck.

Testimony of Melyssa Danilowicz, Lori Bernier, Pamela Austin, & Padraic Smith.

69. Exhaust and diesel fumes from the trucks are stinky, annoying, excessive, and strong.

Testimony of Melyssa Danilowicz, Denise Viens-Kirkpatrick, & Padraic Smith; Exhibit 2

(Event Log, Melyssa Danilowicz); Exhibit 3 (Event Log, Pamela and Russell Austin); Exhibit

4 (Event Log, Lori Bernier). The diesel smell is thick and damp, and would cause Mr. Smith to pull over if he had to sit behind a diesel vehicle for long. *Testimony of Padraic Smith.*

70. There is increased dust from the increased truck traffic associated with the asphalt plant.

Large asphalt trucks have created large dust clouds that linger in the area after the trucks have passed, close to the Austin's home. *Testimony of Pamela Austin; Exhibit 23 (video of asphalt truck, 10.8.14); Exhibit 24 (video of asphalt truck, 10.8.14).*

71. Truck noise has increased since the asphalt plant began operating. Noise from the trucks associated with the asphalt plant is disturbing, including downshifting, Jake brakes, and clattering noises. The noise reaches neighbors in their homes, along the bike path, and while walking in the village. *Testimony of Melyssa Danilowicz & Padraic Smith; Exhibit 2 (Event Log, Melyssa Danilowicz).*

72. Eddie Duncan measured noise levels of trucks on Graniteville Road on two days when the asphalt plant was not operating, March 31 and April 14, 2015. On March 31, there was snow on the ground, which would have lowered the measured sound levels. According to the measurements for March 31, the maximum sound level from a truck passing by, measured 65 feet from the road edge, was 73 dBA. The highest hourly average for that day was 58 dBA.

This would be an increase of 15 dBA. According to the measurements for April 14, the maximum sound level from a truck passing by, measured 65 feet from the road edge, was 79 dBA, which was caused by two trucks passing the monitor simultaneously. The highest hourly average for that day was 62 dBA. This would be an increase of 17 dBA. An increase from 62 dBA to 79 dBA is perceived as three or four times as loud. A substantial noise increase is defined as a 15 dBA increase over existing levels. *Testimony of Eddie Duncan; Exhibit DD (Offsite Sound Monitoring Results)*. Therefore, a person hearing an average truck level and then a maximum truck level on either of these days would perceive a substantial increase in sound.

73. At Monitor A, which measured background sound levels near the entrance to the plant, the L50 median sound level was 53 dBA. This means that, half the time, the sound level is above 53, and half the time the sound level is below 53. *Testimony of Eddie Duncan; Exhibit W (Pre-Construction Long-Term Background Monitoring Results)*. A sound level of 79 dBA (which was the maximum sound level for truck passby on April 14, *see Aesthetics Finding 72, supra*) is almost six times as loud as 53 dBA, and 26 dBA higher. *Testimony of Eddie Duncan*. Therefore, a person hearing background noise similar to that at Monitor A, and then hearing a similar maximum truck passby, would perceive a substantial increase in sound.

74. Jake brakes are engine brakes on trucks. None of the trucks that Mr. Duncan recorded were known to be using Jake brakes. Mr. Duncan describes the sound of Jake brakes as “relatively loud.” *Testimony of Eddie Duncan*. Trucks traveling from the asphalt plant to Lower Graniteville go downhill. *Testimony of Eddie Duncan; Testimony of Padraic Smith*. Therefore, it is reasonable to assume that trucks sometimes use Jake brakes when travelling downhill into the Lower Graniteville village. *See Aesthetics Finding 71, supra*.

B. Conclusions of Law

The Court concludes that NEMG has not presented sufficient information for the Court to make an initial finding that the asphalt plant will not have an undue adverse effect on the aesthetics of the area. Even if NEMG had met this burden, Neighbors have presented ample evidence to the contrary. The asphalt plant is causing an undue adverse effect on the aesthetics of Graniteville, primarily through the regular exposure of the residents to offensive asphalt fumes and odors.

i. General

Under Criterion 8 of Act 250, no permit may issue unless the factfinder makes an affirmative determination that a project “[w]ill not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas.” 10 V.S.A. § 6086(a)(8). The project applicant must present sufficient information for the factfinder to make this positive finding. See In re Eastview at Middlebury, Inc., No. 256-11-06 Vtec, slip op. at 5 (Vt. Env’tl. Ct. Feb. 15, 2008) (Durkin, J.) (“an applicant always carries the initial burden of production”); Watchtower Wireless Cell Tower, No. 21-2-06 Vtec, slip op. at 1 (Vt. Env’tl. Ct. Aug. 23, 2006) (Durkin, J.) (dismissing appeal where Applicant had not “submitted the minimally sufficient information in support of its application to allow [the] Court to render positive findings”); Act 250 Rule 21(F). If the applicant meets this initial burden, the opposing party has the burden to show an unreasonable or adverse effect. 10 V.S.A. § 6088(b); In re Eastview at Middlebury, Inc., *supra*, No. 256-11-06 Vtec, slip op. at 5.

As the Environmental Court has explained, aesthetics involves “all the senses, including sound, smell, and overall perception.” In re Rinker’s, Inc., No. 302-12-08 Vtec, slip op. at 8 (Vt. Env’tl. Ct. Aug. 19, 2009) (Wright, J.) (summary judgment order) (citation omitted); Re:

Lawrence & Diane Brown, Permit No. 5W1175-1, Findings of Fact, Concl. of Law, & Order, at 17-18 (Vt. Env'tl. Bd. June 19, 1995) (finding that commercial truck traffic caused undue adverse impact based on odor, noise, and visibility); Re: Moretown Landfill, Inc., JO 5-27, at 6 (Vt. Natural Res. Bd. Dec. 20, 2013) ("Odor is generally an aesthetic issue under Criterion 8."). Aesthetics encompasses "'the sense of place and the quality of life that a place affords.'" In re Rinker's, Inc., *supra*, No. 302-12-08 Vtec, slip op. at 8 (summary judgment order) (citation omitted). "'The aesthetics of a Vermont village environment include all of the qualities that make it attractive and desirable to live in and visit.'" Id. (citation omitted).

The Court follows a two-part test in determining whether a project will cause an undue adverse effect on these important aesthetic qualities. Re Quechee Lakes Corp., Permit Nos. 3W0411-EB & 3W0439-EB, Findings of Fact, Concl. of Law & Order, at 18-20 (Vt. Env'tl. Bd. Nov. 4, 1985); In re Times & Seasons, LLC, 2008 VT 7, ¶ 8, 183 Vt. 336, 950 A.2d 1189 (describing test). First, the Court determines whether a project will have an adverse effect. Id. Next, the Court determines whether any adverse effect is "undue." Id.

ii. Quechee Lakes Part I

Whether a project will have an adverse effect depends upon whether the project is "in harmony with its surroundings." Re Quechee Lakes Corp., *supra*, at 18. The relevant inquiry is whether the project will "'fit' the context of the area where it will be located." Id.; Re: Susan Dollenmaier & Martha Dollenmaier Spoor, Permit No. 3W0125-5-EB, Findings of Fact, Concl. of Law, & Order, at 10-11 (Vt. Env'tl. Bd. Feb. 7, 2005). Therefore, the Court must first determine the context of the area. Id.

In determining whether a project fits its context, the inquiry is not limited to a project's compatibility with the "character of the area" or with the area's scenic and natural beauty, but

includes a project's compatibility with all of the aesthetic qualities described above. See In re Rinkers, *supra*, No. 302-12-08 Vtec, slip op. at 6 (summary judgment order) ("the *Quechee Lakes* methodology shows that aesthetics is a broader and different category than scenic and natural beauty - depending on its surroundings, a project could have an adverse effect on aesthetics without having an adverse effect on scenic or natural beauty"); In re Rinker's Inc., No. 302-12-08 Vtec, slip op. at 5-6 (Vt. Env'tl. Ct. Sept. 17, 2009) (Wright, J.) (motion to dismiss order) ("the aesthetics or the 'fit' of a project in its context may relate . . . to a characteristic of the surroundings beyond the scope of the other subcriteria of Criterion 8"); Re: Talon Hill Gun Club, Inc. & John Swinington, Permit No. 9A0192-2-EB, Findings of Fact, Concl. of Law, & Order, at Part V.2.A (Vt. Env'tl. Bd. June 7, 1995) (finding that "level of noise generated by [changes at Gun Club] will not 'fit' into the surroundings in which [the noise is] generated"); In re Rinker's, Inc., No. 302-12-08 Vtec, slip op. at 13-14 (Vt. Env'tl. Ct. May 17, 2010) (Wright, J.) (decision and order), *aff'd*, In re Rinker's, Inc., 2011 VT 78, ¶ 9, 190 Vt. 567, 27 A.3d 334 (affirming Criterion 8 methodology of trial court).

In this case, the context of the area is a rural, residential village next to an historic granite quarry. Graniteville is home to numerous residents and includes two hubs, Upper Graniteville and Lower Graniteville. Upper Graniteville is mainly residences, and the Lower Graniteville village includes residences and a general store, post office, playground, church, elementary school bus stop, and senior center. The area also includes a Town Forest and biking trails. Graniteville residents enjoy many outdoor activities, including gardening, hiking, and biking. There is no dispute that ROA has been conducting quarrying operations on its tract in Graniteville for many years.

For many reasons, the NEMG asphalt plant does not fit the context of this area. There has never been an asphalt plant on the ROA tract. There has never even been a stack industry on the ROA tract. Emissions from the plant include pollutants that are not associated with a quarrying operation, but rather are associated with the petro-chemical smokestack industry. Emissions from the asphalt plant cause offensive fumes and odors that were not regularly present in Graniteville before the plant began operating, and those odors exist beyond the borders of the plant on a regular basis. There has never been a stack-industry plume on the Rock of Ages tract, and the plume from the asphalt plant is visible from various locations in Graniteville. The plant itself is also noticeable. Further, the plant has added a different type of truck traffic (asphalt trucks) to Graniteville that contributes additional asphalt odors as well as noise.

In sum, the asphalt plant fits neither the character of the area nor the area's aesthetic characteristics relating to smells, visuals, and noise. Therefore, it creates an adverse effect. The next step is to determine whether that effect is "undue."

iii. **Quechee Lakes Part II**

A project creates an undue adverse impact if it satisfies any one of three factors. Re Quechee Lakes Corp., supra, at 19-20; In re McShinsky, 153 Vt. 586, 591-93, 572 A.2d 916 (1990) (utilizing *Quechee Lakes* test). Here, the two relevant factors are whether the asphalt plant "offend[s] the sensibilities of the average person" and whether NEMG has taken "generally available mitigating steps which a reasonable person would take to improve the harmony" of the project with its surroundings. Id.

Under the "sensibilities" factor, the Court "need not poll the populace or require vociferous local opposition in order to conclude that an average person would consider the

project to be offensive.” McShinsky, 153 Vt. at 592-93 (noting that Board had “heard testimony that the proposed project was offensive”).

In this case, the overwhelming and undisputed evidence is that neighbors of the plant have repeatedly smelled asphalt and fumes at their homes and throughout Graniteville since the asphalt plant began operating, and that these fumes and odors from the asphalt plant and asphalt trucks are offensive. Ms. Danilowicz testified that the smell is a dank, cloying, chemical smell, and like the pit of hell. It causes her nausea on a regular basis, and frequently causes headaches, watery eyes, and sore throats. Ms. Bennett testified that the smell is very strong, that it smells oily and like chemicals. It causes her nausea and headaches, and her eyes run if the smell is strong. Mr. Bernier testified that the smell is strong, annoying, offensive, and pungent—a smell you want to get away from. It causes him headaches and sinus pressure behind the eyes. Ms. Bernier testified that the smell is strong and that it lingers in the mouth, and it causes her watery eyes, burning nose and throat, nausea, and breathing difficulties; it also causes dizziness if she is exposed for a long time. Ms. Austin testified that the smell of asphalt gives her a headache and that, if she does not get away from the smell, it will cause nausea and vomiting. Ms. Viens-Kirkpatrick described the smell as offensive, horrible, and overpowering, and it has caused her nausea. Mr. Smith described the smell as a very strong petrochemical smell, acrid and caustic.

Because of the asphalt plant, many of these Neighbors no longer enjoy outdoor activities at their homes in Graniteville. They have changed their behavior in order to avoid the fumes and smell of asphalt—avoiding outdoor activities including gardening, hiking, and drinking coffee on the front porch, coming inside instead of enjoying their yards, and closing windows that would otherwise deliver fresh air. Some neighbors have even considered trying to sell their homes because of the asphalt plant.

Though some of the Neighbors who testified are sensitive to smells and therefore, potentially, not “average,” the majority are not. Ms. Bennett, Mr. Bernier, Ms. Austin, and Mr. Smith are not highly sensitive, and Mr. Smith even testified that his sense of smell is not very good.

The Court concludes that the asphalt fumes and smells from the asphalt plant in Graniteville are offensive to the average person, particularly when experienced on a regular and ongoing basis. The Court notes that the repeated, offensive smells from the asphalt plant have occurred even though the plant has not produced at its maximum permitted production level.

The Court also concludes that the regular occurrence of the asphalt smell in Graniteville over the past two years is largely, if not entirely, attributable to the asphalt plant. Neighbors testified that they did not regularly smell asphalt in Graniteville before the plant began operating. The event logs of Ms. Danilowicz, Ms. Bernier, and Ms. Austin have significant overlap with NEMG’s production logs. Additionally, even on days when the plant is not operating, asphalt smells from venting and loading at the plant, or from the asphalt trucks, may reach the Neighbors.

NEMG did not present any evidence to contradict the Neighbors’ testimony that they regularly smelled asphalt, and that the asphalt fumes and smells were offensive. The fact that NEMG pointed out a few instances where Neighbors smelled asphalt, but the plant was not producing asphalt, is unpersuasive for the reasons described above. NEMG presented that its Act 250 and Air permits prohibit odors beyond the property boundaries of the project. However, NEMG may not hide behind a permit condition that it either cannot or is not complying with in order to claim that its asphalt plant causes no undue adverse impact. The facts from two years of

the plant's actual operation demonstrate that the plant causes undue adverse impacts on aesthetics, and the project therefore fails Part 2 of the *Quechee Lakes* test.¹

NEMG also has also failed to take generally available steps to mitigate the impacts of the asphalt plant on the Graniteville community; this is an additional and independent basis for failing Part 2 of the *Quechee Lakes* test. Re Quechee Lakes Corp., supra, at 19-20; In re McShinsky, 153 Vt. at 593. A “generally available mitigating step” is typically one that “is reasonably feasible and does not frustrate [either] the project’s purpose or Act 250’s goals.” In re Stokes Commc’ns Corp., 164 Vt. 30, 39, 664 A.2d 712 (1995) (noting that, if a mitigation step is “unaffordable” or “ineffective,” trial court has discretion to grant or deny permit).

The evidence suggested that NEMG could have placed the plant at a lower elevation to reduce the flow of asphalt fumes into the community. Given that the ROA tract contains many large holes, including multiple quarry pits, and that ROA has extensive expertise in excavation, in the ground, this measure would have been both available and reasonable. NEMG presented no evidence that this measure would have been unavailable or unreasonable, or would have frustrated the purpose of the asphalt plant. Additionally, NEMG and ROA could have, and should have, considered alternate locations for the asphalt plant on the ROA tract that could minimize the impacts of the plant on the neighbors, such as a location removed from the Village areas that maximized the plant’s distance from residents, and that considered accurate wind data from the affected area. This too would have been a reasonable measure, especially given the

¹ The Court notes that the asphalt plant is also having an undue adverse impact on noise and visual aesthetics in the area. The increased noise, including Jake brakes and substantial increases from background sound levels, and increased diesel fumes associated with the increased truck traffic, is disturbing to some Neighbors. The Court can see for itself that the plume flowing from the stack, described by Mr. Bernier as a hazy, blueish-grayish color, is unsightly. However, the Court does not rely upon these factors in drawing its conclusion that the asphalt plant has an undue adverse impact on aesthetics.

large expanse of the ROA tract and the existence of areas within that tract that are removed from the residential village area. NEMG presented no evidence to the contrary.

Given that NEMG did not present any evidence that it considered either of these measures, or that either of these measures would have been unavailable or unreasonable, NEMG failed this prong of the *Quechee Lakes* test. See *In re Halnon*, 174 Vt. 514, 515-18, 811 A.2d 161 (2002) (affirming denial of Certificate of Public Good where Public Service Board found that Applicant had not “fully addressed the feasibility of other possible alternative locations” and that “the project in its presently proposed location will offend the sensibilities of the average person”); *In re McShinsky*, 153 Vt. at 593 (noting that “the evidence concerning the location of the campground” along with other evidence “was sufficient for the Board to determine that [Applicants’] attempts to mitigate the adverse impacts of the project were inadequate”).

II. AIR POLLUTION

A. Findings of Fact

1. The previous Findings regarding The Setting and The Plant and Its Impacts, including the multiple exposures of Graniteville residents to asphalt fumes and smells (*Aesthetics Findings 1-62, supra*), are hereby incorporated herein.
2. The asphalt plant emits hazardous pollutants into the air. These pollutants include benzene, formaldehyde, arsenic, cadmium, and nickel. *Exhibit 5 at 7-8 (NEMG Asphalt Plant Air Permit)*.
3. The crushing operation next to the asphalt plant also emits pollutants into the air. These pollutants are particulate matter, including silica dust, and emissions from fuel combustion of the diesel engine generators. *Testimony of Marc Bernier; Exhibit 7 at 6 (NEMG Crushing Plant Air Permit)*.

4. The Rock of Ages mineral processing facility in Graniteville also emits pollutants into the air. *Testimony of Marc Bernier*. According to a 1997 permit issued by Vermont's Agency of Natural Resources (ANR), the facility's aggregate allowable emissions are greater than ten (10) tons per year. Therefore, the facility is a Vermont "Subchapter X Major Source" for purposes of Vermont Air Pollution Control Operating Permits. *Exhibit 8 at 2 (ROA Mineral Processing Plant Air Permit)*.
5. NEMG obtained an air permit from ANR for the asphalt plant on June 15, 2012. *Exhibit 5 (NEMG Asphalt Plant Air Permit)*.
6. The asphalt plant air permit allows emission of the following air contaminants:
 - a. 3.2 tons per year of particulate matter (PM);
 - b. 2.1 tons per year of coarse particulate matter (PM-10);
 - c. 0.4 tons per year of sulfur dioxide (SO₂);
 - d. 1.9 tons per year of nitrogen dioxide (NO_x);
 - e. 9.8 tons per year of carbon monoxide (CO);
 - f. 1.0 tons per year of volatile organic compounds (VOCs);
 - g. 10 tons per year of criteria pollutants;
 - h. 10 tons per year on any single hazardous air pollutant; and
 - i. 25 tons per year of any combination of hazardous air pollutants.

Id. at 4.

7. Allowable emissions from the asphalt plant are estimated to be greater than ten (10) tons per year combined. Therefore, the asphalt plant is classified as a "Subchapter X Major Source" and must operate under a permit consistent with the requirements of Subchapter X of the

Vermont Air Pollution Control Regulations (hereinafter “*Regulations*”). *Exhibit 5 at 3 (NEMG Asphalt Plant Air Permit)*.

8. The air permit did not include an air quality impact evaluation pursuant to § 5-261(3) of the *Regulations*, nor was it based on such an air quality impact evaluation. Thus, the air permit proceedings did not consider whether the emissions from the asphalt plant, in conjunction with the emissions from all other sources, are causing or contributing to ambient air concentrations in excess of Hazardous Ambient Air Standards. *Exhibit 5 at 4-5 (NEMG Asphalt Plant Air Permit); Testimony of John Hinckley*.
9. Nothing in the air permit or any other evidence submitted by NEMG includes an assessment of cumulative emissions from the asphalt plant, the rock crushers, and the ROA processing facility, nor an evaluation of the existing air quality in the Graniteville community where the asphalt plant is located. Nothing in the air permit or any other evidence submitted by NEMG demonstrated that ANR considered the proximity of the source to residents or emission dispersion characteristics at or near the source.
10. The asphalt plant is expected to have emissions of the organics benzene and formaldehyde above their respective Action Levels. The asphalt plant is also expected to have emissions of the metals arsenic, cadmium, and nickel above their respective Action Levels. Some of the emissions from both organics and metals are assumed to be from the volatilization of the asphalt and processing of the earthen aggregates which are not exempt from the *Regulations*. Therefore, pursuant to § 5-261 of the *Regulations*, these emissions shall achieve the Hazardous Most Stringent Emission Rate (HMSER) for the respective hazardous air contaminant. *Exhibit 5 at 7-8 (NEMG Asphalt Plant Air Permit)*.

11. In lieu of establishing a HMSER limit for each hazardous air contaminant, ANR instead based HMSER limits on the surrogates of combustion efficiency and filterable particulate matter. *Id.*
12. Instead of establishing HMSER limits for benzene and formaldehyde, ANR established a carbon monoxide emission limit of 0.13 pounds per ton of hot mix asphalt produced from the rotary dryer. *Id.*
13. Instead of establishing HMSER limits for arsenic, cadmium, and nickel, ANR established an emission limit for filterable particulate matter of 0.020 grains per dry standard cubic foot of exhaust from the fabric filter. *Id.*
14. Formaldehyde is considered hazardous. Yet, the stack test for this plant does not test for formaldehyde. The formaldehyde emissions factor in this case is based on stack tests from other plants included in the AP 42 Compilation of Emission Factors. *Testimony of John Hinckley.*
15. The air permit does not consider noise, vehicle exhaust created by the project, or proximity of the project site to residences. *Exhibit 5 (NEMG Asphalt Plant Air Permit).*
16. Neighbors provided comments on the draft air permit on May 23, 2012, before it was finalized. In its response to the Neighbors' comments, ANR stated:

Making a determination of *whether or not a site is acceptable or not, is not within the jurisdiction of the Agency's review.* This type of determination may fall under the jurisdiction of local zoning or Act 250.

Exhibit 6 at page 4, No. 5 (ANR Summary of Comments and Responses to Comments)
(emphasis added).

17. ANR also made the following statement in its response to comments:

Recent staffing shortages make it difficult to guarantee annual inspection will continue, but asphalt plants have historically been an inspection priority.

Id. at page 6, No. 19 (emphasis added).

18. ANR stated that the air permit does not apply to emissions from vehicles (e.g., cars and trucks). *Id. at page 9, Nos. 34-35.*
19. ANR stated that “the Agency does not take population density into account when permitting an air contaminant source.” *Id. at page 11, No. 43.*
20. ANR stated that “. . . Regulations do not take into account such issues as synergistic effects of various pollutants when added together.” *Id. at page 12, No. 46.*
21. The air permit application prepared by Resource Systems Group did not include a diagram of the actual asphalt plant nor the actual emission sources. The sources and amount of emissions from the asphalt plant were estimated using a diagram entitled “AP 42 Compilation of Emission Factors.” This diagram is a guidance document prepared by EPA and represents estimates of emissions sources and amounts based on a compilation of empirical data from hot mix plants around the country. *Testimony of John Hinckley.*
22. The air permit does not provide a compliance plan containing the present compliance status of the asphalt plant, even though this facility is forty (40) years old and there is data regarding compliance with South Carolina laws and regulations. ANR rejected the Neighbors’ comment that Applicant should have based estimates of future emissions on past emissions in South Carolina. *Exhibit 6 at page 4, Nos. 1, 3, 4. (ANR Summary of Comments and Responses to Comments).*
23. Batch hot mix means that asphalt is not produced continuously throughout the day. NEMG starts the asphalt plant to mix a measured amount of liquid asphalt and aggregate and loads trucks each time asphalt is needed. The hot mix batch production process and the truck load-off process each produce emissions. *Testimony of John Hinckley.*

24. Each time the plant “starts up” or “warms up,” there are emissions. The first “cold start up” of the day produces the most emissions. The estimated emission amounts from the AP 42 Compilation of Emission Factors only include emission data from asphalt plants that were already “warmed up,” not from “start-up.” *Testimony of John Hinckley.*
25. Pollutant emissions from the asphalt plant fabric filter dust collector vent vertically through a stack which extends a minimum of thirty-three feet above the stack base grade elevation. *Exhibit 5 at page 9, par. 3 (NEMG Asphalt Plant Air Permit).* These emissions are approximately the same molecular weight as air and include some volatile organic compounds (VOCs). The plume of emissions from the asphalt stack is estimated to rise at an initial rate of approximately 50 miles per hour. *Testimony of John Hinckley.*
26. As shown in the residents’ testimony and exhibits, the prevailing winds at the project site are from the west. *See Aesthetics Findings 21 & 40, supra.* Thus, emissions from the site regularly disperse towards the west and towards the homes of Ms. Danilowicz, Ms. Bernier, Mr. Bernier, and Ms. Bennett.
27. There are times when there is no wind at the project site, creating an “inversion layer.” During this time, the plume from the stack will not move very far into the air or disperse quickly, but rather will rise laterally in and around the inversion. *Testimony of John Hinckley.*

B. Conclusions of Law

Act 250 Criterion 1 seeks to protect the public against undue air pollution. In order to grant a permit, this Court must find that the Project will not result in “undue air pollution.” 10 V.S.A. § 6086(a)(1). Air pollution may include, among other things, industrial emissions such as chemical contaminants, exhaust, dust, fumes, and odor. Re: Pike Industries, Inc., Land Use

Permit No. 5R1415-EB, Findings of Fact, Concl. of Law, & Order, at 31 (Vt. Env'tl. Bd. June 7, 2005).

While Criterion 1 provides no specific quality levels, it directs the Court to consider several factors, the most applicable to air quality being “the applicable health and environmental conservation department regulations.” 10 V.S.A. § 6086(a)(1). In its decision in In re: Rivers Dev. Act 250 Appeal, this Court noted that:

The historical interpretations of Act 250 Criterion 1 concerning air pollution do not establish a sole reliance upon governmental air quality standards, but rather vest the adjudicating tribunal with the responsibility of determining whether all applicable factors support a finding of undue air pollution.

68-3-07 Vtec, slip op. at 14 (Vt. Env'tl. Ct. Mar. 25, 2010) (Durkin, J.).

There is “no clear definition” of what constitutes undue pollution. Re: Pike Industries, Inc., at 31. Whether pollution is undue depends on factors such as (1) the nature and amount of the pollutant, (2) the character of the surrounding area, (3) whether the pollutant level meets applicable standards or recommended levels, and (4) whether effective mitigation measures are available and in place. In re Rivers, at 14 (citing Re: McLean Enterprises Corp., Permit No. 2S1147-1-EB, Findings of Fact, Concl. of Law, & Order, at 41 (Vt. Env'tl. Bd. Nov. 24, 2004)).

Generally, Environmental Board decisions are fact specific and more instructive about what is *not* undue, rather than what is undue. *See In re Pike Industries, Inc.*, at 31. The Board has, however, defined “undue” as “that which is more than necessary—exceeding what is appropriate or normal.” In re Rivers, Inc., at 14

The Applicant bears the burden of proof under Criterion 1 to demonstrate that the Project will not result in undue air pollution. 10 V.S.A. § 6088(a); In re R.E. Tucker, Inc., 149 Vt. 551, 558, 547 A.2d 1314 (1988); In re Pike Industries, Inc., at 31. The air permit issued to NEMG creates a rebuttable presumption that the asphalt plant will not result in undue air pollution. In re

Hawk Mountain Corp., 149 Vt. 179, 185-86, 542 A.2d 261 (1988). “This presumption is merely ‘locative,’ placing the burden of going forward with the evidence on the party against whom it operates as a rule of law, but operating without any independent probative value.” In re Hawk Mountain Corp., 149 Vt. at 186 (citation omitted). Upon introduction of sufficient evidence, the presumption disappears, and in accordance with 10 V.S.A. § 6088(a), the burden of proof of compliance with the regulations remains with the Applicant. Id. (citing In re Wildlife Wonderland, Inc., 133 Vt. 507, 511 (1975)).

This presumption may be rebutted by sufficient evidence that the air emissions, even at permitted levels, will cause adverse effects on public health and welfare and/or that the permit does not ensure compliance with the *Regulations*. See In re Hawk Mountain, 149 Vt. at 185-86; In re Wildlife Wonderland, Inc., 133 Vt. at 514-15

NEMG sought to satisfy its burden by relying on an Air Pollution Control Permit issued by ANR to create a presumption that the Project will not be detrimental to the public health and welfare. 10 V.S.A. § 6086(d); Act 250 Rule 19(F). Neighbors successfully rebutted this presumption in multiple ways. First, Neighbors demonstrated that the air permit fails to ensure compliance with § 5-241 of the *Regulations* by proving (1) that the asphalt plant is discharging such quantities of air contaminants or other materials (asphalt fumes and smells) that are causing detriment, nuisance, and annoyance to a considerable number of people and which are endangering the comfort and repose of these persons, and (2) that the asphalt plant regularly and repeatedly discharges objectionable odors of asphalt beyond the property line of the premises.

Second, Neighbors demonstrated that the air permit failed to ensure compliance with § 5-261(3) of the *Regulations* because the permit failed to consider emissions from other sources such as the rock crushers and the ROA processing facility, failed to consider the proximity of the

source to residences and population centers, and failed to consider emission dispersion characteristics at or near the source.

Third, Neighbors demonstrated that the air permit failed to ensure compliance with § 5-261(2) of the *Regulations* by demonstrating that those regulations do not permit the use of surrogates to determine the HMSER.

Fourth, Neighbors rebutted the presumption by producing sufficient evidence that the air emissions from the asphalt plant do in fact cause adverse effects on the health and welfare of Graniteville residents. The testimony of these residents established that the asphalt plant fumes and smells cause headaches, nausea, respiratory symptoms, and other health effects. Residents are exposed to adverse health effects even assuming NEMG is in compliance with the air permit.

Once the presumption disappears, the burden of proof under Criterion 1 shifts back to NEMG. NEMG failed to provide sufficient evidence beyond the permit itself to carry its burden of demonstrating that no undue air pollution results from the asphalt plant. Specifically, NEMG failed to provide evidence that pollutants from the asphalt plant do not and will not reach residents' homes and that the health and welfare of residents in the Graniteville community are not will not be adversely affected by air emissions from the asphalt plant.

Because there is an inadequate factual basis to support positive conclusions in favor of NEMG, NEMG has failed to meet its burden of proof under Criterion 1.

III. TRAFFIC

A. Findings of Fact

1. The previous Findings regarding The Setting and Trucks (*Aesthetics Findings 1-6, 63-74, supra*) are hereby incorporated herein.

2. 100% of the truck traffic generated by the asphalt plant travels through Graniteville on Graniteville Road. *Testimony of David Saladino.*
3. A .3-mile segment of Graniteville Road is designated as a High Crash Location (HCL) by the Vermont Agency of Transportation (VTRANS). *Testimony of David Saladino; Testimony of Michael Oman.*
4. This HCL on Graniteville Road begins approximately where the Graniteville General Store is located and continues to the west approximately to the entrance to the Quarry Hill Senior Apartments. *Id.*
5. This HCL designation means that (1) there were at least five crashes on this segment of highway during the 2008-2012 period, and (2) the rate of crashes per million vehicle miles traveled was unusually high. *Id.; Exhibit 31 (VTRANS High Crash Location Report: Sections & Intersections).*
6. In the VTRANS Traffic Impact Study Guidelines, HCLs are the first subject that must be addressed under “Safety Analyses.” *Exhibit 30 (VTRANS Traffic Impact Study Guidelines).*
7. In the VTRANS High Crash Location Report for 2008-2012, VTRANS states that the primary purpose for collecting highway crash data is “to identify highway safety issues and determine a way to address those issues.” *Exhibit 31 (VTRANS High Crash Location Report: Sections & Intersections).*
8. The most notable feature of the HCL on Graniteville Road is a sharp curve at the intersection of Graniteville Road with Baptist Road. Both traffic experts described this as a “sharp” curve. NEMG’s traffic expert characterized the curve as approximately a 90-degree curve. *Exhibit 1 (Graniteville Map from Google Earth); Testimony of David Saladino; Testimony of Michael Oman.*

9. In addition to the sharp curve, the HCL is characterized by narrow shoulders, or no shoulders at all, alongside the paved road. There is a telephone pole immediately adjacent to the paved road in the center of the sharp curve that eliminates any opportunity for westbound traffic on Graniteville Road to use any part of the unpaved shoulder in negotiating the sharp curve.

Exhibit 1 (Graniteville Map from Google Earth); Exhibit 25 (video of sharp curve, 9.25.14); Testimony of David Saladino; Testimony of Michael Oman.

10. The HCL includes the hub of all commercial and community activity in Lower Graniteville, including the general store, the post office, and a park and playground. These features lead to a high level of pedestrian and motor vehicle activity in the HCL. *Testimony of Michael Oman.*

11. The HCL also includes a crosswalk across Graniteville Road and a school bus stop. There are limited or no sidewalks throughout the HCL. *Testimony of Michael Oman.*

12. Due to the Quarry Hill Senior Apartments, the general store, the post office, the school bus stop, and the playground/park, the HCL is a focus of activity for the elderly and children, two particularly vulnerable groups in terms of highway safety. *Testimony of Michael Oman.*

13. The HCL also includes the entrance to the community bike path, leading to the presence of bicyclists, particularly in the summer, when the asphalt plant is operating. *Testimony of Michael Oman.*

14. Of the five crashes in the HCL in the 2008-2012 period, two occurred in the sharp curve, one occurred at the crosswalk, and two occurred in the parking lot of the General Store. These crashes reflect that the HCL is a location where any inattention quickly can get a driver into trouble. *Testimony of Michael Oman.*

15. For all of these reasons—the HCL designation, the sharp curve, the narrow or absent shoulders, the hub of community and commercial activity, the crosswalk, the limited or absent sidewalks, the heavy pedestrian and bicycle use, and the presence of elderly and children—the HCL indicates an existing unsafe condition in this segment of Graniteville Road.
16. NEMG’s traffic analysis predicted that the asphalt plant truck traffic could lead to a 5% increase in vehicle traffic through the HCL at peak times. *Exhibit A (Original Act 250 Application-RSG Traffic Study)*. If somewhat different assumptions are made as to truck size, the asphalt plant truck traffic could lead to an 11% increase in vehicle traffic through the HCL at peak times. *Testimony of Michael Oman*. Thus, operation of the asphalt plant as permitted can lead to an increase in vehicle traffic through the HCL of 5% - 11% at peak times.
17. A 5% - 11% increase in traffic volume through the HCL during peak traffic volume leads to a 5% - 11% increase in crash exposure or crash likelihood during peak traffic volumes. *Testimony of Michael Oman*.
18. Trucks of the size and mass that transport asphalt present several increased risk factors compared to passenger vehicles: (a) due to their mass, these trucks have longer stopping distances; (b) these trucks have significantly wider turning radii, and (c) again, due to their mass, a truck that is involved in a collision will transmit more energy and do more damage at a given speed than a passenger vehicle. *Testimony of Michael Oman*.
19. Neighbors presented videos of asphalt trucks negotiating the sharp curve in the HCL by encroaching 4-5 feet across the center line into the oncoming lane. None of these trucks appeared to be exceeding the speed limit. One does not need to be a traffic expert to

recognize that trucks of this size encroaching that far into the oncoming lane in a sharp curve create an unsafe condition, or exacerbate an existing unsafe condition. *Testimony of Michael Oman; Exhibit 25 (video of sharp curve, 9.25.14); Exhibit 26 (video of sharp curve, 9.24.14).*

20. Marc Bernier had an incident where he was traveling east on Graniteville Road and had to stop in his lane at the sharp curve because a westbound asphalt truck was encroaching into his lane. His vehicle and the truck avoided a head-on collision only by stopping essentially facing each other, bumper-to-bumper. Eventually, Mr. Bernier was able to back up and go around the truck to his right. *Testimony of Marc Bernier.*
21. One day, when Ms. Viens-Kirkpatrick was walking with her friend Suzanne Smith near the curve, she observed two asphalt trucks passing in opposite directions on the curve. These trucks narrowly avoided a biker, who was almost run off of the road, and Ms. Viens-Kirkpatrick and Suzanne moved to avoid the trucks. *Testimony of Denise Viens-Kirkpatrick.*
22. There are no reasonably available engineering actions that could remedy the sharp curve or the other conditions in the HCL. *Testimony of David Saladino.* Accordingly, the only option for remedying these unsafe conditions is for the asphalt plant truck traffic to avoid traveling through the HCL. *Testimony of Michael Oman.* This could be achieved either by relocating the asphalt plant to a site on the ROA tract where these trucks would not need to use Graniteville Road through the HCL, or by requiring the truck traffic for the asphalt plant to use existing roads on the interior of the ROA tract to avoid traveling through the HCL. *Id.*
23. In addition to the HCL, NEMG's expert David Saladino testified that there is existing traffic congestion at the intersection of Quarry Street and Route 14. According to Mr. Saladino, in 2012, traffic making a left turn onto Route 14 experienced a Level of Service (LOS) D during the evening peak hour. Due to increased traffic from the project and other traffic, this

intersection and turn are experiencing LOS E during the evening peak hour. *Testimony of David Saladino.*

24. VTRANS' policy is to maintain LOS D for such intersections. *Exhibit A (Original Act 250 Application-RSG Traffic Study); Testimony of David Saladino.*

25. Mr. Saladino's firm is working on a plan and a project to improve the unacceptable level of traffic congestion at this intersection, and funding is in place. However, even if this project moves forward, it will not be completed until 2017, the same year that NEMG's Act 250 permit expires. Thus, the improvement project cannot serve as a condition to address the traffic congestion being caused by the truck traffic from the asphalt plant under its current Act 250 permit.

B. Conclusions of Law

Neighbors have met their burden of showing that the asphalt plant will cause unsafe conditions with respect to the use of the highways under Criterion 5 because the asphalt plant truck traffic will cause or exacerbate unsafe traffic conditions in the Graniteville Road HCL by increasing the volume of traffic through that HCL and by the nature and particular risks of the large asphalt trucks. *See In re Pilgrim P'ship*, 153 Vt. 594, 596-97, 572 A.2d 909 (1990); Champlain Parkway Act 250 Permit, No. 68-5-12 Vtec, slip op. at 12-16 (Vt. Super. Ct. Env'tl. Div. July 30, 2014) (Walsh, J.).

Having found that the asphalt plant causes unsafe traffic conditions, the Court may impose permit conditions to remedy the safety problems. *Id.*, slip op. at 12.

A reasonable condition to remedy the identified truck traffic safety issues is to require that the asphalt plant truck traffic avoid traveling through the HCL on Graniteville Road. This can be achieved either through relocating the plant to an alternative site on the ROA tract, or by

requiring the asphalt plant truck traffic to use already-existing roads on the interior of the ROA tract to avoid the HCL.

If the asphalt plant were to continue operations, the Court would require that, within 30 days of this decision, NEMG and ROA must submit a plan for the asphalt plant truck traffic to avoid traveling through the HCL on Graniteville Road.

The testimony of David Saladino also established that the truck traffic from NEMG's asphalt plant is causing or exacerbating traffic congestion at the intersection of Quarry Street and Route 14 during the afternoon peak hour, in violation of Criterion 5. In re Pilgrim, 153 Vt. at 596-97.

Incorporating the planned improvements to the intersection of Quarry Street and Route 14 as a condition of the NEMG Act 250 permit is or would be pointless because the permit will expire before these improvements are completed; therefore, the improvements do not remedy the traffic congestion during the life of the permit.

The only condition that can remedy the unacceptable traffic congestion caused or exacerbated by the truck traffic from the asphalt plant's operation is to prohibit the plant from operating until the planned improvements to the intersection of Quarry Street and Route 14 are completed. Thus, if the asphalt plant were to continue operations, the Court would condition those operations on completion of the planned improvements to the intersection of Quarry Street and Route 14.

Additionally, NEMG has the burden of proof under Criterion 9(K) to show that its project will not unnecessarily endanger the public investment. 10 V.S.A. § 6088(b). Criterion 9(K) requires NEMG to prove that the proposed project will not "materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to," any

public facilities, services, or lands, including highways. Id. § 6086(a)(9)(K); Re: St. Albans Grp. & Wal-Mart Stores, Inc., No. 6F0471-EB, FCO, Findings of Fact, Concl. of Law, & Order, at 52-53 (Vt. Envtl. Bd. Dec. 23, 1994). For the foregoing reasons, the traffic impacts of the asphalt plant rise to the level of “material jeopardy or interference,” *see id.* at 56, and NEMG has failed to meet its burden of proof under Criterion 9(K).

PROPOSED JUDGMENT

Based on the foregoing, it is hereby ORDERED and ADJUDGED that the asphalt plant is causing and will cause an undue adverse impact on the aesthetics of Graniteville Village, is causing and will cause undue air pollution, and is causing and will cause material jeopardy or interference with the public’s use and enjoyment of public facilities. Therefore, Act 250 permit #5W0966-6(Altered) is hereby DENIED, and the decision of the District Commission granting Act 250 permit #5W0966-6(Altered) is REVERSED. It is also ADJUDGED that the asphalt plant will cause and contribute to unsafe conditions with respect to use of the area’s highways. Because the permit has been denied on other grounds, it is unnecessary for the Court to impose conditions to address these traffic safety concerns.

Respectfully submitted this 5th day of June, 2015.

Neighbors for Healthy Communities

By counsel:



Douglas A. Ruley

802-831-1136 (P) 802-831-1631 (F)

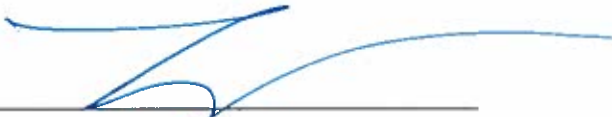
druley@vermontlaw.edu ERN 6321

Environmental and Natural Resources Law Clinic

Vermont Law School

PO Box 96, 164 Chelsea Street

South Royalton, Vermont 05068



Laura B. Murphy

802-831-1123 (P) 802-831-1631 (F)

lmurphy@vermontlaw.edu ERN 5042

Environmental and Natural Resources Law Clinic

Vermont Law School

PO Box 96, 164 Chelsea Street

South Royalton, Vermont 05068

Catlin A. Davis

James M. LaRock

Student Clinicians

APPENDIX

	Lori Bernier	Pamela Austin	Melyssa Danilowicz	NEMG
May 19, 2014	X			X
May 27, 2015	X			X
June 5, 2014	X			X
June 18, 2014	X			X
July 14, 2014	X			X
July 17, 2014			X	
July 22, 2014	X	X	X	X
July 23, 2014	X		X	X
July 29, 2014	X		X	X
August 1, 2014	X	X		X
August 5, 2014	X	X		X
August 6, 2014	X		X	
August 12, 2014	X	X		X
August 15, 2014		X		X
August 20, 2014	X	X		X
August 21, 2014	X	X		X
August 25, 2014	X			X
August 28, 2014	X		X	X
September 8, 2014	X	X	X	X
September 22, 2014	X			X
September 23, 2014		X		
September 24, 2014	X	X	X	X
September 25, 2014	X	X		X
September 26, 2014	X			X
September 28, 2014	X	X		
October 3, 2014	X	X		X
October 6, 2014	X	X		X
October 9, 2014	X	X		X
October 10, 2014			X	X
October 13, 2014		X		X

STATE OF VERMONT
SUPERIOR COURT - ENVIRONMENTAL DIVISION

**In Re: North East Materials Group,
Amended Act 250 Permit**

DOCKET NO. 35-3-13 Vtec

CERTIFICATE OF SERVICE

I hereby certify that I served a copy of the foregoing Neighbors for Health Communities' *Response to NEMG's Post-trial Memorandum Regarding Truck Noise Regulation in Act 250 Proceedings*, on this 5th day of June, 2015, via electronic mail, to the following:

James P.W. Goss, Esq.
Kenlan Schwiebert Facey & Goss, PC
PO Box 578
Rutland VT 05702
jgoss@kenlanlaw.com

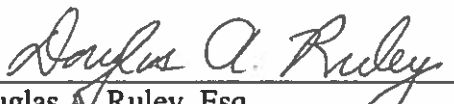
Alan P. Biederman, Esq.
PO Box 6001
Rutland VT 05702
apb@vtlawyer.com

Elizabeth Lord, Esq.
VT Agency of Natural Resources
Office of Planning & Legal Affairs
Davis Building 2nd FL
One National Life Drive
Montpelier, VT 05620-3901
Elizabeth.Lord@state.vt.us

Gregory J. Boulbol, Esq.
Vermont Natural Resources Board
National Life Dewy Building
National Life Drive
Montpelier VT 05620-3201
Greg.Boulbol@state.vt.us

Megan C. O'Toole, Esq.
VT Dept of Environmental Conservation
Air Quality and Climate Division
Davis Building 2nd FL
One National Life Drive
Montpelier, VT 05620-3901
megan.campbell.otoole@gmail.com

Dated: June 5, 2015 at South Royalton, Vermont.



Douglas A. Ruley, Esq.
802-831-1136 (P) 802-831-1631 (F)
druley@vermontlaw.edu ERN 6321
Environmental and Natural Resources Law Clinic
Vermont Law School
PO Box 96, 164 Chelsea Street
South Royalton, Vermont 05068