VERMONT ENVIRONMENTAL BOARD
10 V.S.A., Chapter 151

RE:	H. A. Manosh Corp. c/o Miller, Eggleston, Rosenberg, Ltd. P.O. Box 1489 Burlington, VT 05402	Findings of Fact and Conclusions of Law and Order Land Use Permit Application #5L0918-EB

This decision pertains to an appeal filed with the Environmental Board on September 1, 1987, by H. A. Manosh Corporation from the decision issued by the District #5 Environmental Commission on August 3, 1987. That decision denied the Applicant's proposal to extract sand and gravel from approximately 36 acres of a 360-acre tract of land off Duhamel Road in Morristown, Vermont.

Acting Chairman Lawrence H. Bruce, Jr. convened a prehearing conference in this matter on October 22 and a Prehearing Conference Report and Order was issued on October 27. The Board conducted a site visit on November 3 and convened a public hearing on December 8 and 9, 1987, and February 3, 1988. The following parties participated in the hearing:

Applicant H. A. Manosh Corporation (the Applicant) by Martin K. Miller, Esq.
State of Vermont by Frederic Emigh, Esq.
Lamoille County Development Council (LCDC) by Barbara Farr
Don Avery (Avery)
Vermont Natural Resources Council (VNRC), Lamoille Valley Property Owners Association (Ten Bends), Roman Wickert, Lawson and Ann Ainsworth, Leslie and Laurie-Sarah Lucchina, and David Cole by Frank Reed.

The hearing was recessed on February 2, 1988, pending the filing of proposed findings and conclusions by the parties, and a review of the record and deliberations by the Board. Proposed Findings were submitted by VNRC, Avery, Ten Bends et al. and the Applicant on February 22 and by the State on February 24. The Board deliberated on this matter on February 16, March 2, April 13, and July 14. On July 14 the Board determined the record to be complete and adjourned the hearing. This matter is now ready for decision. The following findings of fact and conclusions of law are based exclusively upon the record developed at the hearing. To the extent the Board agreed with and found necessary any findings proposed by the parties, they have been incorporated herein; otherwise, said requests to find are hereby denied.

I. ISSUES IN THE APPEAL

A. Substantive Issues

The Applicant was denied a permit to operate a sand and gravel pit on approximately 36 acres off Duhamel Road in Morristown. The District Commission denied the project for failure to comply with Criteria 8, 9(B), 9(E), 9(K), and 10. The District Commission also was not able to make positive findings under Criteria l(F), 4 and 5.

The following issues were raised on this appeal:

Criterion l(F) (shorelines): Whether the access road to the gravel pit has to be located along the shoreline of the Lamoille River and, if that is the only feasible route, what measures would be implemented to ensure that the shoreline and waters are maintained in their natural condition, that vegetation that provides screening is retained, and that the bank is stabilized from erosion.

Criterion 4 (soil erosion): Whether the project will cause unreasonable soil erosion and whether the Applicant has provided an adequate erosion control plan for the river banks, the so-called Meadow Road, the pit access road, and the walls of the gravel pit.

Criterion 5 (traffic): Whether the trucks from the project will create unsafe conditions along the pit access road, Duhamel Road, at the intersection of Duhamel Road and Cady's Falls Road, and on Cady's Falls Road.

Criterion 8 (aesthetics, historic sites, natural areas): Whether the operation of the pit will result in an undue adverse effect upon the area's scenic and natural beauty, the 14 historic sites located in and around Cady's Falls, and the Terrill Gorge natural area.

Criterion 9(B) (primary agricultural soils): Whether the project contains primary agricultural soils and, if so, whether the project will significantly interfere with or jeopardize the agricultural operation at the Cady's Falls Nursery.

Criterion 9(E) (extraction of earth resources): Whether the operation of the pit will have an unduly harmful impact upon the environment or surrounding land uses and whether the Applicant's reclamation plan is adequate.

Criterion 9(K) (public investment): Whether the project will unreasonably endanger the public's investment in, or materially impair the public's use of, the state lands along and in the Lamoille River, Kenfield Brook, and Terrill Gorge.

Criterion 10 (regional plan): Whether the project will conform to the policies in the regional plan that protect primary agricultural soils, public recreational opportunities, and of significant historical value, and the aesthetics of the area.

B. Party Status

In order to be granted party status as an adjoining property owner pursuant to 10 V.S.A. § 6085 and Rule 14(A), a person must demonstrate that the development will have a direct effect on his property with regard to any of the ten criteria listed in 10 V.S.A. § 6086(a). Any person may seek party status as a permitted party pursuant to Rule 14(B) if he can show either:

(1) That a proposed development or subdivision may affect his interest under any of the provisions of section 6086(a); or

(2) That his participation will materially 'assist the board or commission by providing testimony, cross-examining witnesses, and/or offering other evidence relevant to the provisions of section 6086(a).

Ten Bends is a group of individuals who own, individually and jointly, approximately 600 acres of land that adjoin the Applicant's property to the north. The shortest access from the Ten Bends property to Morrisville is by way of a right-of-way along the Lamoille River (the pit access road) and Duhamel Road to Cady's Falls Road.

Lawson and Ann Ainsworth, Leslie and Laurie-Sarah Lucchina, and David Cole are members of Ten Bends who own individual lots that adjoin Manosh's property. Noise from the pit can be heard at their properties as well as at the Ten Bends' common land.

Roman Wickert lives along Cady's Falls Road near the intersection of Bridge Street. He can see and hear the pit from his residence and he is concerned that heavy truck traffic will destabilize the banks of the Lamoille River by his property.

The VNRC is a private, non-profit organization dedicated to the wise use of Vermont's natural resources. Sixty-five members of the VNRC reside or do business in Morrisville.

Party status was granted pursuant to 10 V.S.A. § 6085 and Board Rule 14(A) to adjoining property owner Don Avery with respect to Criteria 4, 5, 8, 9(E), and 9(K); Ten Bends

with respect to Criteria l(F), 4, 5, 8, and 9(E); Lawson and Laurie-Sarah Lucchina with respect to Criteria 5, 8, and 9(E); and David Cole with respect to Criteria 4, 5, 8 and 9(E). Roman Wickert was granted permitted party status with respect to Criteria 5 and 8 pursuant to Rule 14(B) (1). As Rule 14(B)(2) permitted parties, Don Avery was granted party status with respect to Criteria 9(B) and 10 and the VNRC was granted party status with respect to Criteria l(F), 4, 5, 8, 9(B), 9(E), 9(K), and 10.

The State participated with respect to Criteria l(F), 4, 8, 9(B), 9(E), and 9(K).

LCDC provided testimony with respect to Criterion 10. LCDC believes the project conforms to the Lamoille County Regional Plan only if the traffic from the pit could be reduced by 50%.

After hearing the testimony and reviewing the record, the Board has revised its party status decision as follows:

Lawson and Ann Ainsworth and Ten Bends: Party Status is granted for Criterion 4 under 10 V.S.A. § 6085 and Rule 14(A) and for Criteria l(F), 5, 8 and 9(E) under Rule 14(B)(l).

Leslie and Laurie-Sarah Lucchina: Party Status is granted for Criteria 5, 8, and 9(E) under Rule 14(B) (1).

David Cole: Party Status is granted for Criterion 4, 5, 8, and 9(E) under Rule 14(B)(l).

The other party status decisions remain unchanged.

II. FINDINGS OF FACT

A. Description of the Project

1. The Applicant proposes to operate a sand and gravel extraction operation on 36 acres of a 360-acre tract in the Town of Morristown. Approximately 100,000 yards of gravel per year will be extracted over a 30-year period from the so-called "River Pit."

2. A stone crusher will be operated in the pit. Approximately 600 to 700 yards of material will be crushed each day, depending upon demand for the material.

3. In addition to the crusher, the equipment that will be used in the pit includes a screening circuit consisting of screens and conveyors of various lengths and sizes, up to two bucket loaders, and a diesel generator.

4. The pit will operate all year round except Memorial Day, July 4, Labor Day, Thanksgiving, Christmas, and New Year's Day, but will be most active from the middle of April through the middle of December. Trucks will be loaded from 7:00 a.m. to 5:00 p.m., Monday through Friday. Material will be processed and maintenance of machinery and equipment performed before 7:00 a.m. and after the pit closes at 5:00 p.m. Maintenance will be finished by 6:00 to 6:30 p.m.

5. The elevation at the floor of the gravel pit is approximately 625 feet and is approximately 755 feet at the top of the pit. The slopes of the pit will be 1 on 2 when excavation is completed.

6. A buffer area 200 feet wide between the pit and the Lamoille River will be retained.

7. The pit will be worked from the south to the north in three phases. In Phase I, excavation will take place behind the hillside, leaving a 400 to 500 foot buffer area of trees and embankment. The pit area will be dropped ten feet and a sedimentation basin and diversion ditch will be constructed to control runoff. Access to the hillside will be by way of a former farm road (the so-called "Meadow Road") running west from the access road and then north up a hill to a meadow and the top of the pit. During the second phase, excavation will continue to the north and will stay behind trees and embankments. In Phase III, nine acres at the easterly portion of the site toward the Lamoille River will be excavated.

8. A lo-foot high berm will be constructed along the entire easterly scope of the pit over the first three years of pit operation. It will consist of stumps and other material removed from the pit area and covered with four inches of topsoil. Grass and collected trees will be planted on the top and sides of the berm. The trees will be from six to eight feet high at the time of planting. The purpose of the berm is to contain runoff from excavation during Phase III, to reduce the width of the entrance of the pit to 35 feet, and to provide screening of the pit.

9. The gravel pit is located on a private road owned by the Applicant that runs from the pit to Duhamel Road, passing through the Avery property. It is paved for a distance of several hundred feet. Duhamel Road is a Class III gravel town road that runs along the Lamoille River beginning at Cady's Falls Road and ending at the Avery property, a distance of approximately one-half mile. Cady's Falls Road is a Class III town road that goes north through Cady's Falls Village to Hyde Park

and south past Lake Lamoille to Route 100 and Morrisville. The distance from the intersection of Duhamel Road and Cady's Falls Road to the pit is 1.4 miles.

10. Just north of the intersection of Duhamel Road and Cady's Falls Road is Cady's Falls Village, a densely populated village which contains a number of homes and other structures on the Vermont State Register of Historic Places.

11. The Cady's Falls valley is a typical picturesque rural Vermont valley, with three active farms in the valley floor, steep, heavily wooded slopes to the south and west, an historical residential settlement along the east side, and the Lamoille River and several tributaries running through the valley. The predominant land uses are agricultural, residential, and recreational.

12. Across the Lamoille River from the pit to the east is the Griggs farm. Access to the farm is by way of Griggs Road, a Class III town road leading from Cady's Falls Road just south of Cady's Falls Village and ending at the Griggs farm, a distance of approximately one-half mile. Several houses are located along Griggs Road.

13. The State of Vermont Department of Fish and Wildlife owns a number of parcels of land and "floating-rod" strips in the vicinity of the gravel pit along the Lamoille River and Kenfield Brook.

14. The total amount of land owned by the State in the area is approximately 22.8 acres, for which the State paid $5000 in 1968. The purchase was partially funded by the National Park Service. The state-owned land includes nearly 4000 feet along the west bank and 1200 feet along the east bank of Kenfield Brook and 3300 feet along the east bank of the Lamoille River. State land surrounds the area of the intersection of Duhamel Road and Kenfield Brook. The Applicant's property abuts State-owned land immediately downslope of the gravel pit and access road.

15. Terrill Gorge, an important recreational, geologic, and scenic resource, is located along Kenfield Brook approximately 100 yards past the end of the Averys' south field. The state-owned land extends up Kenfield Brook to encompass approximately 800 feet of Terrill Gorge.

16. Don and Lela Avery own 22 acres of land that abut Manosh's property on the east. Duhamel road ends at the Avery property. The pit access road runs from the end of Duhamel Road through the Avery property to the gravel pit and continues into the Ten Bends property. This road separates a five-acre field from the rest of the Avery property and runs within 80 feet of the Avery's house and within several feet of their vegetable garden. The house is approximately 1000 feet from the pit.

17. The Averys make their living operating the Cady's Falls Nursery on their property. They grow approximately 500 varieties of perennials and vegetable and flower greenhouse starts as well as herbs and flowering trees and shrubs for sale to the public. They also grow vegetables, berries, and hay for their own use and they sell the surplus. They keep a cow and various animals and their son grows pumpkins.

18. Another gravel pit, the so-called "Barn pit," is located immediately to the west of the Averys' house. The Applicant does not intend to conduct further extractions from that pit.

19. In 1985, the Applicant substantially increased extraction at the River Pit. In that year, 45,000 yards were extracted and in 1986 the Applicant extracted approximately 70,000 yards.

B. Criterion l(F) (Shorelines)

20. In the summer and fall of 1985, the Applicant constructed extensive improvements to approximately 3100 feet of Duhamel Road pursuant to an agreement with the Town of Morristown. Ledge was blasted, the roadbed was elevated and widened to 28 feet, and utility poles were relocated. Substantial fill was placed on the banks of the Lamoille River, and excess topsoil and blasted ledge were dumped over the river bank. The bases of trees growing along the river were buried with substantial excavation debris. No erosion control methods were implemented and soil from the river bank washed into the river.

21. The fill that the Applicant placed on the banks of the Lamoille River along Duhamel Road resulted in steep, highly erodible slopes that make access to the shoreline difficult in some places.

22. The trees along the River on Duhamel Road whose roots were covered with debris are showing signs of stress and may die.

23. Access to the pit could be gained by way of Town Highway #7 to Morristown Corners. The average grades along approximately 7000 feet of this road range from 13% for 1800 feet, 9% for 1000 feet, 0 to 5% grade for 1800 feet, and 5% grade for 2400 feet from the gravel pit to the bottom of the existing proposed right-of-way. At the intersection of the proposed access and Town Highway #7 above Morristown Corners, there is an average 15.5% grade and a blind curve. The westerly sight distance of 190 feet would be unsafe for trucks entering a town highway. Approximately 19 residences are located between this access road and Morristown Corners.

C. Criterion 4 (soil erosion)

24. The so-called "Meadow Road" runs from the pit access road up the hill through meadows to the back side of the gravel pit. The Applicant uses the Meadow Road to get vehicles and machinery to the top of the pit, to open up new land for extraction and to test dig for gravel. In 1985, the Applicant reconstructed the Meadow Road and its intersection with the pit access road by digging into the hillside and pushing large amounts of material into the low sections along the river. The freshly cut banks were not stabilized nor were culverts or other proper drainage installed. As a result, runoff and silt ran onto the Averys' land and were deposited on their field and part of the vegetable garden. No erosion control plan for the Meadow Road has been submitted.

25. During operation of the River Pit in 1985 and 1986, substantial amounts of silt, sand, and gravel were discharged from the gravel pit into the Lamoille River. Portions of the road bank toward the river were washed onto property owned by the Vermont Department of Fish and Wildlife and into the river.

26. In response to an enforcement action brought by the State, the Applicant has developed and has implemented an extensive erosion control plan for the gravel pit which includes storm water retention basins, sedimentation basins, hay bales, revegetation, and seeding. As the pit excavation moves in a northerly direction, the Applicant intends to construct new sedimentation and retention basins. Seeding, mulching, and fertilizing will be implemented to encourage sufficient vegetation to prevent off-site runoff of stormwater and silt. Top soil will be stockpiled on site to be used for revegetation.

27. The Applicant intends to implement minor reclamation, such as seeding and mulching and placing stone around headwalls, to stabilize the banks of the Lamoille River along Duhamel Road. No specific plan has been submitted.

28. The reseeding and planting of trees for erosion control would have to be continually maintained in order to ensure successful growth. The sedimentation and retention basins would also have to be continually inspected and cleaned out to prevent erosion.

D. Criterion 5

29. A 12-yard dump truck is eight feet wide, 24 to 26 feet long, and approximately ten feet high. Its maximum allowable road weight is 55,000 lbs. with normal registration and 60,000 lbs. with a permit from the Vermont Agency of Transportation, and it weighs about 22,000 lbs. unloaded. An 18-wheel tractor trailer is a maximum of 55 feet long and has a maximum load limit of 80,000 lbs. and weighs approximately 30,000 lbs. when empty. Bulldozers weigh about 70,000 lbs. A tractor trailer with a bulldozer weighs 90,000 lbs. with an overweight permit.

30. Trucks going to the pit travel from Cady's Falls Road to Duhamel Road to the access road. Trucks leaving the pit must turn south onto Cady's Falls Road from Duhamel Road because a fully loaded truck is too heavy legally to cross the bridge located just north of the intersection with Duhamel Road, which has a maximum allowable weight limit of 24,000 lbs.

31. The intersection of Cady's Falls Road and Duhamel Road has poor sight distances in both directions on Cady's Falls Road. When turning onto Cady's Falls Road from Duhamel Road, the view to the north is blocked by the steel bridge and a hill and curve block the view to the south. Because of the curve to the south, trucks turning right from Duhamel Road must pull out into Cady's Falls Road and cross the yellow line, causing a hazard to vehicles travelling north. There is a school bus stop at the intersection.

32. The Applicant proposes to remove a portion of the hill on Cady's Falls Road south of the intersection with Duhamel Road to give trucks turning right on Cady's Falls Road more room so they can stay in the right lane and to improve sight distances for vehicles turning left onto Cady's Falls Road from Duhamel Road.

33. Lake Lamoille is a man-made lake to the east of Cady's Falls Road just south of Cady's Falls Village. It is used extensively by the public for fishing, boating, duck hunting, and picnicking. Cady's Falls Road south of the Duhamel Road intersection along Lake Lamoille has very narrow shoulders and in some places there are no shoulders at all. Children ride their bicycles along this stretch of the road and residents of Cady's Falls use this route to walk to Morrisville. The road is approximately 22 to 24 feet wide and the pavement is cracked and rutted in many places.

34. Duhamel Road is approximately 18 to 20 feet wide. Sections of Duhamel Road have ledge on one side and a drop-off to the river on the other side.

35. An average of 49 trucks per day will use the pit, assuming each truck has a capacity of 12 cubic yards. This amounts to 98 truck trips per day, ten truck trips per hour, or one truck trip through the Avery property and on Duhamel Road every six minutes. On peak days, there would be approximately 98 to 100 trucks per day, approximately 20 truck trips per hour, or one truck approximately every three minutes driving on Duhamel Road.

36. The gravel trucks that use the pit are owned by various haulers and contractors. The Applicant cannot control the speed of the trucks on the town roads or the routes they take when leaving Duhamel Road.

37. Due to the angle of the intersection of the pit access road and Duhamel Road, trucks leaving the gravel pit cannot see traffic coming from the Avery nursery, and vehicles coming from Duhamel Road have difficulty seeing trucks coming out of the access road because of a hump in the road over the brook. Trucks frequently use the left lane when turning onto Duhamel Road. Within 30 feet of this intersection is the culvert of Kenfield Brook that is a popular public swimming hole, where the road narrows and drops off 12 feet into the brook on either side.

38. The Applicant proposes to move and realign the portion of the access road that runs from Duhamel Road past the Averys' house so that the road would be straight and farther away from the house. Since the road would be moved into the Averys' river field, permission from the Averys would have to be granted. A new bridge would have to be built over Kenfield Brook on lands owned by the State of Vermont, for which permission would have to be obtained from the State and the National Park Service. The Applicant has not secured permission for any of these changes.

39. Kenfield Brook floods annually and causes the entire river field to be under water. In 1984, the massive flooding of the Kenfield Brook area resulted in its being declared a federal disaster area. The Averys use this field to grow hay.

E. Criterion 9(K)

40. The Lamoille River is classified as a Class C waterway, which is not suitable for swimming. Just downstream of the culvert that carries Kenfield Brook under Duhamel Road is a popular swimming hole. Further upstream from the culvert, Kenfield Brook passes through Terrill Gorge which contains several pools that are also extensively used for swimming.

41. Terrill Gorge is listed in an Agency of Natural Resources publication, "The Waterfalls, Cascades and Gorges of Vermont," as an area of "high importance [because of its] fine recreational site, one of the few large chains of pools and cascades in the State." In that report, the gorge is described as "about one mile long and contains rapids, riffles, small potholes, water-smoothed ledges, tiny caves, cascades to 10 feet high, waterfalls to six feet high, and interrupted segments of rock walls up to 100 feet long and 15 feet high. The largest and most attractive feature is a cascade-falls combination about 20 feet high with a deep pool below it and high rocks for diving."

42. Members of the public enjoy swimming and fishing in Kenfield Brook and Terrill Gorge and have done so for many years. These areas are enjoyed by children and adults from the Morrisville area as well as by residents of the Cady's Falls area.

43. Members of the public who visit Terrill Gorge usually park along Duhamel Road and walk along the eastern edge of the Averys' field to get to the Gorge. People who fish and canoe in the river also leave their cars on Duhamel Road.

44. The Applicant proposes to construct a 12-car parking area at the end of Duhamel Road next to Kenfield Brook, and to construct a pedestrian and bicycle path approximately eight feet wide on the south side of Duhamel Road beginning approximately 900 feet from the intersection at Cady's Falls Road for a distance of approximately 1600 feet. A walkway would be constructed across the culvert for pedestrians and a guardrail installed between Kenfield Brook and Duhamel Road.

45. Area residents use Duhamel Road regularly for taking walks and riding bicycles. During the summer months, children swim and fish in the Kenfield Brook and Terrill Gorge, and ride bicycles and play along Duhamel Road.

46. Some families do not allow their children to go to the brook to swim or to ride their bicycles on Duhamel Road when the gravel pit is operating, due to their concern about unsafe traffic on the narrow roads from the trucks using the pit.

47. The public's use of the Duhamel Road, Kenfield Brook, Terrill Gorge, and the Lamoille River sharply decreased during the summer of 1985 and 1986 when the gravel pit was operated regularly. Recreational use of the culvert swimming hole in Kenfield Brook would be greatly diminished were the gravel pit to operate because it is unsafe to stand on the edge of the road when trucks are driving by.

48. The State stocks the Lamoille River,'including this area, with trout. Kenfield Brook is an important spawning and nursery stream for the Lamoille River. Excellent conditions in the Kenfield Brook encourage trout to leave the Lamoille River and migrate up Kenfield Brook to spawn.

49. Sediment pollutes the water causing reduction in the amount of oxygen available to aquatic insects and fish and impairing the function of fishes' gills, with death potentially resulting. Sedimentation can also smother and kill plants and fish eggs. Long-term sedimentation is likely to result in fewer and poorer quality fish.

50. The State acquired the lands in this area to provide a buffer for the water courses from development and activities that might harm the waters and the fish and aquatic habitat therein, to provide unlimited public access to the Lamoille River and Terrill Gorge for recreational purposes, and to provide an aesthetically pleasing recreational experience for the many people who enjoy the peaceful, bucolic nature of the area.

E. Criterion 8

51. The Cady's Falls Valley is an area of natural scenic beauty created by a wide river valley surrounded by heavily wooded, sharply defined hills to the west and south. Land uses are primarily rural residential,

agricultural, and recreational. Many of the residences are historical homesteads. No industry exists in the area.

52. The stretch of the Lamoille River from Cady's Falls to Cambridge Junction is identified in the Vermont Rivers Study as an "undeveloped corridor," and in the 'Nationwide Rivers Inventory" as being included in the final list of 'Potential Wild, Scenic and Recreation Rivers."

53. The gravel pit is visible from many locations in Cady's Falls, including Cady's Falls Bridge, some places on Cady's Falls Road, many of the residences in Cady's Falls Village, and Duhamel Road. It is also visible from Pinewood Estates, a residential development east of Cady's Falls Village, and from the yards of the houses on Griggs Road.

54. Survival of the existing trees along the edge of the pit at its base is questionable since they have experienced considerable stress from heavy machinery driving over their roots and long-term exposure to dust. If these trees do not survive, the entrance to the pit will be much more visible.

55. Even assuming that the existing trees along the edge of the pit survive, when Phase III is complete approximately one-third of the pit face will be visible from Cady's Falls Road north of the houses, and approximately 25% of the pit face will be visible from the intersection of Cady's Falls Road and Duhamel Road. Approximately 75% of the pit face will be visible from the Pinewood Estates, and approximately 40% will be visible from the residences along Cady's Falls Road.

56. If the trees on the proposed berm grow as intended by the Applicant, the berm would effectively screen views into the pit from some vantage points when the trees reach a 20-foot height, approximately ten years after planting.

57. The slopes of the berm will be approximately the same steepness as the finished pit face. The success of growing "collectibles" on the berm in 4 inches of topsoil is questionable. The Applicant has no maintenance plan for long-term establishment and health of trees on the slopes of the berm.

58. In order to provide continuing shielding of the pit from the valley after the excavation is completed, the existing tree cover along the eastern face of the pit

will have to remain. The Applicant has no plans to assure that that tree cover remains healthy over the life of the project.

59. Changing drainage patterns in the area of the pit could affect the health of the existing vegetation.

60. Before the Applicant reconstructed Duhamel Road, it was a small, meandering country lane. The vegetation was stripped, the uphill ledges were blasted, and the road was widened and straightened. Piles of topsoil and debris remain along the side of the road.

61. The engines of dump trucks are very loud. Many trucks have brakes that create noise when applied. Empty dump truck beds pound against the truck frame on bumpy roads, and the sound resonates great distances. Back-up beepers from trucks in the pit make a high pitched screech. A crusher makes a loud rumbling noise. These noises are audible on all of the Averys' land and the Fish and Wildlife land in the area when the pit is operating.

62. The sound of heavy equipment driving to and from the pit is audible throughout the entire valley which is open and has no hills to muffle the sounds. Loud noises from the crusher, back-up beepers, and trucks at the gravel pit can be heard in the yards of the residents of Cady's Falls Village as well as in other areas of the valley. The noise from the pit operation and the trucks is so intrusive and pervasive that it interferes with the public's enjoyment of the scenic beauty of the area.

63. Trucks going to the pit from Morrisville turn right from Bridge Street onto Cady's Falls Road. When the trucks stop at the intersection, the noise from hissing of the brakes and the grinding of the gears is so loud to residents living near that intersection that they must keep their windows closed during the hours of pit operation.

64. The noise of the gravel trucks at times has been so loud passing by the Averys' nursery that conversations with customers had to stop until the trucks passed. While paving and relocating the pit access road would cause a reduction in fugitive dust, it would not significantly reduce the truck noise experienced at the Avery homestead.

65. The Applicant has proposed to add plantings between the access road and the Averys' house and to weave a stockade fence to try to reduce the sound of trucks. No evidence was presented establishing that this would be successful in reducing the noise.

F. Criterion 9(B)

66. The 360-acre tract owned by the Applicant includes meadows which were farmed until the Applicant began excavating the pit in 1984. The 30 acres of meadow located on the gravel pit site are sandy and well drained and could be easily worked by standard farm equipment.

67. Soils at the gravel pit site are classified as Colton-Duxbury complex, Boothbay silt loam, Adams loamy fine sand and Salmon very fine sandy loam. Approximately one-third of the 36 acres that have less than a 15% slope are considered primary agricultural soils.

68. The agricultural potential of the primary agricultural soils would be significantly reduced by the gravel pit operation because the soils have to be stripped from the surface in order for excavation of gravel to take place.

69. The fair market value of the gravel pit site for use as a gravel pit is $2650 per acre. The fair market value for use as agricultural land is $265 per acre. Rental value for good crop land in the area is $10 to $25 per acre.

70. No evidence was submitted on the rate of return that the Applicant would obtain were the property devoted to uses that did not significantly reduce the agricultural potential of the primary agricultural soils. The Applicant has not investigated the economics of growing Christmas trees, perennials, or nursery stock. One could expect a profit of approximately $2300 per year per acre with blue spruce trees.

71. The Applicant owns or controls no land suitable for the extraction of gravel that it could extract instead of this gravel, since the other pit the Applicant owns cannot supplant the material from this pit.

72. When the Averys bought their property in 1979, it had not been farmed in many years. They have devoted the years since then to building up a viable commercial nursery operation.

73. The Averys cultivate approximately 15 acres, four of which are used for perennial fields and gardens. Most of the soils are classified as Podunk, an extremely fertile soil. The terrain is flat with a southerly exposure and is usually protected from early and late season frosts by fog from the Lamoille River. The Cady's Falls Nursery operates primarily on the weekends in the spring and six days a week during the summer.

74. The unique atmosphere at the Cady's Falls Nursery, of a rural, pastoral environment, enhances the experience of buying plants and is an integral part of the operation of the nursery. Many customers travel long distances to the nursery because they enjoy the pleasant atmosphere while touring the gardens and discussing horticulture with the Averys.

75. The access road passes within several feet of the Averys' vegetable garden and approximately 80 feet from the display gardens.

76. Dust from uncovered gravel trucks often is blown into the road. Trucks also stir up the dust along the sides of the road.

77. During the summers of 1985 and 1986 when the pit was operating, dust from the road covered the hay in the field and caused an inferior hay crop yield. During that time dust from the road also blew onto the Averys' fruit and vegetable gardens as well as into the nursery and greenhouse area and display gardens.

78. Dust on leaves interferes with photosynthesis and can cause plants to die. People are reluctant to purchase dusty plants because they perceive them to be unhealthy and therefore undesirable.

79. If the pit were in full operation, it would be difficult for the Averys to conduct their nursery business due to a number of factors. People must go out of their way to get to the Averys' nursery. The unpleasantness of the noise and dust from the gravel trucks would discourage customers from shopping there. The continued viability of the nursery as a commercial farm operation would be threatened by the disruption of the noisy trucks and the dust from the pit operation. Also, the potential safety problems on Duhamel Road may deter customers from travelling to the Averys' nursery.

G. Criterion 9(E)

80. The face of the pit will have eight-foot wide terraces at 40-foot intervals. The reclamation plan proposes maintaining existing vegetation at the 625-foot elevation and planting grass and trees on the slopes each year in the areas of the pit that will no longer be used.

81. The pit face will be regraded to a finish slope of 1 on 2 on the average when excavation is completed. The grasses established on the pit walls will be fragile

due to the steep slopes. Vegetation will have to be continually maintained and additional hand seeding will probably be required in future years.

82. The reclamation plan involves leveling the pit floor and covering it with four inches of topsoil before final grading and reseeding so that it can be used for agricultural purposes. However, any soil put on the pit floor would become very compacted after several years of heavy machinery use in the pit. It is questionable whether commercially viable agricultural crops could be grown on such a surface.

83. Manosh's consultants have no experience reclaiming a gravel pit as large as this one.

H. Criterion 10

84. The Town of Morristown does not have a duly adopted local plan.

85. The following goals and policies are included in the Regional Plan:

To encourage and protect land with fragile, historic, unique and/or endangered qualities in order to eliminate adverse development or damage to limited resources.

Any growth that should occur as a result of the growth in this region should not have unreasonable impact either all at once, or over time, such that any unnecessary burdens are placed on the community, municipal services, the region or on the physical capabilities and aesthetics of the land.

A large portion of Lamoille County's income is based on tourism which is directly related to the recreational assets that the land provides. Without careful planning and evaluation of development of this resource, we may not only lessen our quality of the natural environment but lose our economic base as well.

Future growth should not significantly reduce the production potential of primary agricultural soils or forestry soils, impair the public recreational opportunities of waters, open lands or woodlands or destroy or threaten areas of significant historical, educational, cultural, endangered, scientific, architectural or archeological value.

Preserve and retain open space and agricultural land to ... assure productivity of farmlands and the rural landscape.

The main concern of the LCDC as the Regional Planning Commission is to: protect the health, safety and general welfare of the residents; assist in providing a healthy business climate and diversified economic base; and both preserve and utilize the natural environment while practicing sound management techniques and conservation measures for our land and water resources. The quality of life must be retained while allowing for the increased growth.

The land is a non-renewable, limited resource and should be protected not only at the state level but also the regional and local level from development impacts which could cause irreversible damage in future generations.

Recreation was rated high on the list for importance in the Regional Plan Update Questionnaire in relation to the well being of each community. Keeping this in mind, it becomes a major planning factor when considering the development of the lands resources.

There are approximately 12 commercial operating gravel pits in Lamoille County outside of the village areas that provide gravel for roadwork and new developments. This is an important economic factor to the community as well as a necessity . . . . Future potential excavating sites should be identified and zoned appropriately, taking into consideration the impact on adjoining property owners.

III. CONCLUSIONS OF LAW

Criteria l(F) (Shoreline) and 4 (Soil erosion)

Criterion l(F) requires that if a development must be located on a shoreline, the development will:

(i) retain the shoreline and the waters in their natural condition,

(ii) allow continued access to the waters and the recreational opportunities provided by the waters,

(iii) retain or provide vegetation which will screen the development or subdivision from the waters, and

(iv) stabilize the bank from erosion, as necessary, with vegetation cover.

Criterion l(F) applies because the pit access road and Duhamel Road, both integral parts of the project, are located along the shoreline of the Lamoille River. Also, the pit itself is only 200 feet from the River.

The Board believes that these roads provide the only feasible access to the pit, and therefore the project must of necessity be located on the shoreline in order to fulfill its purpose. An alternate route to the pit was investigated by the Applicant. The Board agrees with the Applicant that that route would not be feasible, since the grades on Town Highway #7 are quite steep and sight distances are inadequate. Furthermore, the impact upon the 19 residences located along that route, which could be substantial, would have to be reviewed in the context of another application.

The Board is not persuaded that the Applicant has met its burden of proof on the subcriteria of Criterion l(F). Whether the shoreline and the waters will be retained in their natural condition depends upon the success of the erosion control plans. Substantial evidence was submitted regarding severe erosion and siltation caused by the operation of the pit and reconstruction of Duhamel Road in past years. A large gravel pit located so close to a river creates difficult problems in controlling erosion that are inherent to the site. Constant surveillance and cleaning of sedimentation basins is imperative to ensure that silt does not run off into the river. New seedings and plantings must be carefully maintained in order to ensure healthy growth. The roots and trunks of existing trees must be protected from the stress caused by heavy machinery.

The evidence indicates that the health of the existing trees both in the pit and along the river banks on Duhamel Road has been jeopardized by heavy machinery driving over their roots and by the deposition of debris during construction on Duhamel Road. Without contradicting evidence, the Board cannot find that vegetation will be retained to screen the gravel pit or that the bank will be stabilized from erosion with vegetation cover. Without an erosion'control plan for the banks of the river along Duhamel Road, the Board cannot find that the shoreline will be retained in its natural condition.

The Board is also unable to find that the project will allow continued access to the waters and the recreational opportunities provided by the waters. As will be more fully addressed under the conclusions with respect to Criteria 5 and 9(K) that follow, the Board believes that the traffic from the project will interfere with the public's use of the water because the unsafe and unpleasant conditions will discourage the public from using this area of the river for recreation.

Similarly, with respect to Criterion 4, the Board is not persuaded that the project will not cause unreasonable soil erosion, for the reasons stated above. Extensive erosion and siltation occurred during operation of the pit in the past. The Applicant has developed and been implementing an erosion control plan to correct the past problems. In light of the extensive erosion which occurred in the past, however, the Board is concerned that the Applicant's consultants have not provided evidence to ensure that the existing vegetation will remain healthy, that the new seeding and plantings will take root and be maintained, and that the sedimentation and retention basins will be adequate to prevent siltation of the Lamoille River. Siltation can have serious consequences with regard to the health of fish in the river. The Board is therefore unable to find that the project will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.

Criterion 5 and 9(K)

Criterion 5 requires the Applicant to demonstrate that a development will not cause unreasonable congestion or unsafe conditions with respect to the use of highways. With respect to Criterion 9(K), the Applicant must persuade the Board that a development located adjacent to governmental and public lands "will not unnecessarily or unreasonably endanger the public ... investment in the ... lands, or materially jeopardize or interfere with the function, efficiency or safety of, or the public's use or enjoyment of or access to the . .. lands."

A substantial amount of evidence was submitted regarding the unsafe conditions on Cady's Falls Road, Duhamel Road, and the gravel pit access road near the Averys' created by the truck traffic from the pit. Cady's Falls Road is narrow, windy, and hilly, with a rutted pavement and inadequate or non-existent shoulders. It is used regularly by the public for walking and biking, and the school bus stops at its intersection with Duhamel Road. Large numbers of gravel trucks on this road, with its narrowness and inadequate sight distances at its intersection with Duhamel Road, create unsafe conditions for both motorists and pedestrians.

Duhamel Road is used extensively by the public for walking, biking, and access to the Lamoille River for fishing and canoeing and to Kenfield Brook and Terrill Gorge for swimming. Children frequently walk or ride their bikes along Duhamel Road. Ledge on one side of the road and a drop-off to the river on the other limit the space available for pulling over when trucks pass. With the road approximately 18 to 20 feet wide, gravel trucks travelling at the average rate of one every three minutes create unsafe conditions along Duhamel Road. The pedestrian path proposed by the Applicant for Duhamel Road would not begin for 900 feet from Cady's Falls Road because the area is too narrow. The gravel trucks also create unsafe conditions for customers of the Cady's Falls Nursery with respect to the pit access road where it connects to Duhamel Road because of the inadequate sight distances. The Board cannot consider the Applicant's proposal to relocate and strengthen the access road because the Applicant has not secured the necessary permission from the landowners to do so and the necessary engineering work has not been performed.

The Board also concludes that the Applicant has failed to meet its burden with respect to Criterion 9(K). The State has made a substantial investment in the lands along and around the Lamoille River, Kenfield Brook, and Terrill Gorge. These areas are used extensively by the public for fishing, canoeing, swimming, and otherwise enjoying. Terrill Gorge is a pristine area of pools and waterfalls listed in a State publication as an area of high importance for recreation. While public access to the gorge will not be directly blocked by the project, the aesthetically pleasing experience of visiting the gorge will be substantially diminished by the noise, dust, fumes and general industrial atmosphere created by the gravel pit and the high volume of gravel trucks. The peacefulness of fishing along the Lamoille River will be similarly disturbed by the pit operation. The use of the Kenfield Brook culvert swimming hole, an extremely popular swimming area for children, will also be substantially diminished because gravel trucks passing by the culvert create the potential of serious accidents.

The State purchased these lands in order to protect the watercourses from adverse effects of development and to provide continued access to the public. The purpose of the State's investment would be completely defeated by the presence of an industrial operation with 98 daily truck trips. The public would lose the use of the varied recreational opportunities which they presently enjoy. Limitation by the Applicant of pit operation to weekdays would not be significant, because during the summer children bike, fish, and swim in the area throughout the week.

The Board therefore concludes that the project does not comply with Criterion 9(K).

Criterion 8 (aesthetics) and 9(E) (extraction of earth resources)

When Criterion 8 (aesthetics) is at issue, the Board follows the protocol it described in Re: Quechee Lakes Corporation, Land Use Permit #3W0411-EB and #3W0439-EB (November 4, 1985). In order to decide whether a project will have an "adverse" effect, the first step in the analysis is the identification of a proposed project's context and a determination of whether the project will "fit" within that context. This involves evaluating the nature of the project's surroundings, with special attention paid to sensitive natural features:

> [C]ertain types of land forms are especially sensitive to change, because these land forms tend to be visible from a wide area or they are seen by large numbers of people. These sensitive areas include ridgelines, steep slopes, shorelines and floodplains. Other features are sensitive because they are aesthetically unique; examples may include historic structures, wetlands and natural areas. In evaluating a project proposed in a sensitive area, the Board and District Commissions should give special attention in assessing whether the scenic qualities of these sites will be maintained.

The Board believes that the entire area within which the gravel pit is situated qualifies as a sensitive area. As the Board has found, the Cady's Falls valley is a peaceful and lovely valley with the Lamoille River meandering through it. Land uses are predominantly agricultural, recreational, and rural residential, with a number of historic homesteads located in and around Cady's Falls Village. Terrill Gorge, which is in the vicinity of the project, is a unique natural area by virtue of its being one of the few large chains of pools and cascades in the state and of high importance. Duhamel Road is a quiet country road that provides access to the Lamoille River, Kenfield Brook, and Terrill Gorge, all of which are extensively used by the public for recreation.

A major gravel extraction operation, with its resulting disfigurement of the hillside and the noise, dust and fumes generated by the high volume of truck traffic, clearly does not fit into the context of the area. The pit, which will be visible from a number of locations around the valley, is the only industrial enterprise visible in this bucolic area.

The Board concludes, therefore, that the project is not compatible with its surroundings and will cause an adverse impact on the aesthetics and natural and scenic beauty of the area.

Once a determination is made that a proposed project would have an adverse impact on the aesthetics of an area, the Board must evaluate whether the adverse effect is also "undue." In doing so, the Board addresses three questions set forth in the Quechee decision: 1) Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area? 2) Does the project offend the sensibilities of the average person? 3) Has the Applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings? If the answer to any of the questions is positive, the adverse impact is undue.

The Board reaches a positive conclusion to at least one of these questions: the Board's sensibilities are offended by the gravel pit operation. The project, when viewed within the context of the peaceful, rural Cady's Falls Valley, is offensive by virtue of the visual and aural assault which it would create upon both the residents of and the visitors to the area. The intrusion of an industrial operation into this area is so totally out of character with its surroundings and so significantly diminishes the scenic qualities of the area that it is offensive.

The Board concludes, therefore, that the gravel extraction operation will have an undue adverse effect upon the aesthetics and the scenic and natural beauty of the area. For all the above reasons, the Board also concludes that the project will have an unduly harmful impact upon the environment and the surrounding land uses pursuant to Criterion 9(E).

The Applicant has proposed mitigation of some of the adverse effects of the gravel operation. Unfortunately, they are not adequate to fully address all the problems created by the pit. The Board encourages the Applicant to continue to work with the Town and neighbors in the area to try to reach a satisfactory accommodation that would allow some extraction of a badly needed resource without causing the extreme intrusion that would result from the project as currently proposed.

Criterion 9(B)

The project site contains approximately 12 acres of primary agricultural soils whose agricultural potential would be significantly reduced by the excavation. The Board

is not persuaded that the pit will be able to be used for agricultural use after reclamation. The Applicant must therefore satisfy the four subcriteria of Criterion 9(B). The Board concludes that the Applicant has not met its burden of proof with respect to subcriteria (i) and (iv). While the Applicant claims that a reasonable return on fair market value could not be obtained were the property used for agriculture, the Applicant did not present any evidence of alternative uses of the site, such as growing Christmas trees, and the potential return that could be obtained from alternative uses. The Board therefore cannot conclude that the Applicant can realize a reasonable return on the fair market value of the land only by devoting it to uses that will significantly reduce the agricultural potential.

The Board believes the Applicant has satisfied subcriterion (ii) since operating other gravel pits would not substitute for operating this one. Subcriterion (iii) is not applicable to a gravel pit operation.

The Board concludes that the Applicant has not met its burden with respect to subcriterion (iv). Substantial evidence was presented that the gravel pit operation did interfere with the Averys' perennial nursery and vegetable gardens, and that it would continue to do so. The Averys' nursery provides a total aesthetic experience for the visitors who come from all over the northeast for the pleasure of viewing the display gardens and discussing horticulture with the Averys as well as to purchase plants. The high volume of trucks passing by the nursery, with the dust, noise, and fumes that they create, is totally incompatible with the pastoral environment necessary for the success of the commercial nursery. Dust from the trucks and the roadsides that blows onto the plants reduces the plants' desirability for sale and could harm them.

The Applicant has proposed to relocate the access road farther away from the Averys' residence and to create a planted berm to decrease noise at the Averys. As mentioned above, the Applicant does not have permission from the landowners to move the road. The field where the road would be relocated is in the flood plain and frequently experiences flooding. Also, no evidence was presented that demonstrated that the berm would have any significant effect on noise at the Averys'. The potential for soil erosion of the Meadow Road and resulting siltation onto the Averys' property remains. The Board must conclude, therefore, that the Applicant has not demonstrated that the gravel pit will not significantly interfere with or jeopardize the continuation of agriculture on adjoining lands or reduce their agricultural potential.

Criterion 10 (Regional Plan)

The Lamoille County Regional Plan contains a number of policies for ensuring that development is compatible with the environment, the capabilities and aesthetics of the land, and the use of primary agricultural soils. Gravel pits are mentioned only once in the Plan. While their importance is recognized in order to meet the needs of local development, the Plan emphasizes the importance of preserving the county's natural resources, including aesthetics, agriculture, and recreation. Because the Board has found that the project will have an undue adverse effect upon aesthetics, will jeopardize the continuation of agriculture, and will substantially diminish the recreational resources of the Cady's Falls area, the Board concludes that the project does not conform to the Regional Plan.

IV. ORDER

The Board concludes that the gravel extraction project described in Land Use Permit Application #5L0918-EB would be detrimental to the public health, safety, and general welfare under 10 V.S.A. § 6086(a) l(F) (shorelines), 4 (soil erosion), 5 (traffic), 8 (aesthetics, historic sites, natural areas), 9(B) (primary agricultural soils), 9(E) (extraction of earth resources), 9(K) (public investments), and 10 (regional plan). Land Use Permit #5L0918-EB is therefore denied.

Dated at Montpelier, Vermont this 8TH day of August, 1988.

ENVIRONMENTAL BOARD

Lawrence H. Bruce, Jr.,
Acting Chair
Elizabeth Courtney
Arthur Gibb
Samuel Lloyd
Donald B. Sargent

Member dissenting:
Roger N. Miller/l/

/1/ Dissenting Opinion of Member Miller. The Duhamel pit lies on the west margin of the Lamoille River bounded on the north by a large lot development operated in association with a fishing club and on the south by a seasonal retail nursery business. State-owned lands include fishing access to the river and a tract around a scenic gorge approximately 1/2 mile south of the entrance to the Duhamel pit. Access to the retail nursery, the state lands and the gravel deposit are via a 1/4 mile dead-end road from Duhamel Road. The Duhamel deposit, in common with all Vermont gravels, occurs proximate to the river system which formed it and which also formed the nearby relatively level agricultural lands and, typically, the steep minor water courses on which scenic falls and pools occur.

In accordance with Environmental Board Declaratory Ruling #163, the Applicant had a right to develop the deposit and to produce 10,000 cubic yards per year. The corporation has in the recent past abused this right and appears before us seeking an Act 250 permit and the right to

extract 100,000 yards per year from this 3,000,000 yard resource. The Applicant has proposed multiple steps and methods to mitigate the incontrovertible fact that the operation of the deposit will impose additional impacts and burdens on the immediate area and, to a lesser degree, on the general area.

The Applicant's proposals for mitigation would require in some instances the cooperation of the State of Vermont or the township or the abutting retail nursery in a search for minimum environmental impacts. To the Board's knowledge, these necessary cooperating offers have not been made.

A reasoned code of environmental law and rules requires that conflicting interests be balanced. We deal here with some adverse impacts on neighboring properties. This decision gives greater weight to these impacts than I feel is reasonable, given the needs of the broad public for a resource that is becoming increasingly difficult to provide. I believe that the countervailing general necessity for reasonable interpretation and application of the code must rule in this case.

The mineral resources of the State of Vermont have been recognized as a critical resource of the state by the legislature and by environmental law. Section 6086(a) (9) (D) of Act 250 provides that a proposed development or subdivision may not prevent or significantly interfere with access to a mineral resource of high potential. This provision has been in place since 1973 and in this matter is clearly a definitive element.

The Duhamel deposit is of extraordinary size and quality. It is located proximate to a state highway and will directly affect an absolute minimum of neighbors. It is not possible to precisely determine the average size of Vermont gravel operations, but it is not improbable that the Duhamel pit if rendered inaccessible will be replaced by ten smaller pits from which far greater total impacts will result. Act 250 is intended to protect the interests of the citizens of Lamoille County. Clearly a single gravel operation connected by a 1/4 mile access road to the state highway system that has a significant impact upon a single neighbor is to the environmental, economic and social advantage of the citizens of this state in contrast to the certain alternative of multiple pits springing up in diverse county-wide locations.

Viewed from an appropriately broad long-term perspective, there is no substantial benefit to the citizens under any of the appropriate criteria in the denial of this permit. The permit should be granted with appropriate mitigation.

FF 5L0918-EB (17)