

State of Vermont  
Water Resources Board

In re: Appeal of Vermont Marble Co. (OMYA)  
Docket No. 91-15

Authority:  
10 V.S.A. § 1269

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

This decision, dated January 17, 1994, pertains to an appeal filed by Vermont Marble Company ("VMC"), from a decision by the Secretary of the Agency of Natural Resources ("ANR"), issued by his designee, the Commissioner of the Department of Environmental Conservation, granting Discharge Permit No. 3-1346 with specified conditions. VMC operates a marble processing facility in Proctor, Vermont, and the subject permit concerns the discharge of the manufacturer's process wastewater from those facilities into the Otter Creek. As explained below, the Water Resources Board has determined that VMC's discharge enters the waters of the state at a seven gallon-per-minute stream located between the company's settling ponds and the Otter Creek and that the wastewater at the point of discharge complies with the Vermont Water Quality Standards.

I. BACKGROUND

On December 19, 1991, VMC filed an appeal with the Water Resources Board ("Board"), pursuant to 10 V.S.A. § 1269. VMC appealed the decision of ANR granting Discharge Permit No. 3-1346. That permit establishes effluent limitations and monitoring requirements for total suspended solids, pH, and turbidity at the outflow of VMC's settling ponds, on the assumption that this is the point where VMC's discharge of waste enters the "waters of the state."

In its notice of appeal, VMC sought elimination of the effluent limitations and monitoring requirements at the point of the settling pond outflow. VMC requested, among other things, that the Board establish the point of discharge to the waters of the state as Otter Creek and, if necessary, create a mixing zone within the Otter Creek. VMC asked the Board to issue a revised discharge permit containing the foregoing changes, consistent with VMC's obligations to comply with the Vermont Water Quality Standards ("VWQS"). VMC subsequently challenged the jurisdiction of the ANR (and therefore the Board) to require a discharge permit, raised a vested rights and a takings claim, and urged the Board to grant it a variance from the requirements of the VWQS.

Notice of the appeal and prehearing conference was published on January 9, 1992, in the Rutland Herald and sent to persons required to receive notice under the Board's Rules of Procedure.

A prehearing conference was held on January 29, 1992, in Montpelier, Vermont, with the Board's legal counsel presiding. On June 2, 1992, a Prehearing Conference Order was issued by Chair Rocheleau. The following were granted party status: Vermont Marble Company, represented by Edward V. Schwiebert, Esq., of the firm Abell, Kenlan, Schwiebert and Hall, P.C.; and the Agency of Natural Resources, by Charles A. Bristow, Esq. The parties were instructed to file prefiled testimony and exhibits.

The Board conducted a site visit and held a hearing in Proctor, Vermont, on November 18, 1992. Both VMC and the ANR participated. The hearing was recessed pending the filing of proposed findings of fact and conclusions of law by the parties, and deliberations and decision by the Board. On December 10 and 11, 1992, respectively, VMC and the ANR filed proposed findings of fact and conclusions of law. On December 23 and 31, respectively, the ANR and VMC filed memoranda of law. The Board convened oral argument on legal issues in Berlin, Vermont, on January 4, 1993. The Board reviewed the evidence and arguments presented in the case. The record is now closed and this matter is ready for decision. To the extent any proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they are denied.

## II. ISSUES

The key issues in this appeal are as follows:

(1) Is VMC's process wastewater a discharge of waste into the "waters of the state," and therefore subject to the permit requirement of 10 V.S.A. § 1263(a);

(2) If VMC's process wastewater is a discharge of waste, where does VMC's discharge enter the "waters of the state," applying the term "waters" as it is defined in 10 V.S.A. § 1251(13); and

(3) If VMC's process wastewater is a discharge of waste, does the discharge meet the applicable water quality criteria for pH and turbidity at the point of discharge into the "waters of the state"?

Because the Board concludes that VMC's discharge complies with the Vermont Water Quality Standards ("VWQS"), including all applicable water quality criteria at the point of discharge into the "waters of the state," it does not address VMC's various other claims, including its vested rights and takings claim and its arguments, in support of the grant of a variance or the creation of a mixing zone.

III. FINDINGS OF FACT

Historical Perspective

1. VMC began the business of processing marble at its facilities on the west bank of the Otter Creek in Proctor, Vermont, sometime in the late 1800's. VMC was incorporated in 1894, and since that time, it has conducted the business of the fabrication and processing of dimension marble and stone for use in the construction of buildings, marking of grave sites and other commercial purposes.
2. VMC was merged with its sister company and its name was changed to OMYA, Inc., effective September 30, 1992.
3. In the fabrication and processing of dimension stone at its Proctor processing facilities, VMC has historically utilized and still utilizes water withdrawn from the Otter Creek. Water is pumped through the processing facilities and runs continuously, even when the facilities are not in operation.
4. The water is used to cool equipment and as a medium to disperse and transport marble fines and other stone particles from the fabrication and processing operations.
5. At the conclusion of the fabrication and processing operations, the water containing marble fines and stone ("process wastewater"), is transported by gravity through a sluiceway from the processing facility, across the Otter Creek, to lands and premises owned by VMC on the east bank where it is treated.
6. VMC has transported its process wastewater by sluiceway to its property on the east side of the Otter Creek since the late 1800's. Historically, the process wastewater was allowed to flow upon the company's lands and from there it was carried via man-made structures, including small dug settling ponds and ditches, to Otter Creek. As these man-made structures filled up with marble and stone particles, the outlet from the sluiceway was relocated in order to flow into new settling ponds and ditches for the purpose of treating the process wastewater.
7. In 1960, VMC conveyed some of its land on the east bank of the Otter Creek to the Town of Proctor for the construction of the Town's original sewage treatment facility. In 1986, VMC conveyed additional land occupied by its settling ponds to the Town of Proctor for expansion of the municipal sewage treatment facility.

8. As a result of the 1986 property conveyance, VMC had to relocate and reconfigure its settling ponds.
9. In order to improve the quality of the treatment, a total of four new settling ponds were constructed on VMC's property adjacent to and east of the Town of Proctor's municipal sewage treatment facility. The process wastewater from these ponds eventually flows into the Otter Creek.

The Present Treatment System, the Permit, and Various Alternatives

10. Otter Creek is "waters of the state." Otter Creek is a Class B water, warm water fish habitat, subject to management by ANR in accordance with the VWQS.
11. On December 15, 1986, ANR requested VMC to submit an application for a discharge permit for the discharge of the company's process wastewater.
12. By application dated February 26, 1987, VMC applied to ANR for a permit to discharge its treated process wastewater.
13. During the four-year pendency of its application before ANR, VMC continued to treat its process wastewater through the company's process wastewater treatment system. This system consists of two parts: a system of setting ponds, followed by overland flow. Both are located entirely on VMC's property.
14. Process wastewater is transported by sluiceway from VMC's processing facility to a system of four settling ponds. The four ponds operate in parallel and in series, which permits each pond to be by-passed for cleaning while allowing the rest of the lagoon to continue to treat process wastewater. The settling pond portion of the treatment system removes most of the solids present in VMC's process wastewater.
15. The outflow from the four settling ponds is directed into a small man-made ditch. From there the process wastewater proceeds via overland flow in a largely northerly direction. During the course of travel through the overland flow portion of the treatment system, additional sediment in the process wastewater is trapped, settled and retained on company lands. The process wastewater next passes through a second man-made ditch and then enters a seven-gallon per minute ("7-gpm") stream, also located on VMC's property. The stream flows into Otter Creek. The distance between the out-flow from the settling ponds to the Otter Creek is approximately 2,500 feet.
16. On November 19, 1991, ANR issued an order, pursuant to 10 V.S.A. § 1272, requiring VMC to limit the discharge of pH

from its process wastewater treatment facility from 6.5 to 8.5 standard units.

17. On November 19, 1991, ANR also issued Discharge Permit #3-1346, purportedly permitting discharge of VMC's process wastewater to an unnamed tributary of the Otter Creek, and establishing at the outflow from the settling ponds certain effluent limits for turbidity and pH and requiring monitoring of total suspended solids ("TSS") at certain in-stream, water quality standards.
18. The permit contains the following requirements:

Flow:	1.2 million gallons per day
Turbidity	25 N.T.U. monthly average
pH	6.5 to 8.5 standard units
Total Suspended Solids	Monitor only
19. Discharge Permit #3-1346 was issued with an expiration date of June 30, 1993. Although ANR had authority to issue a permit for a duration of five years, the permit issued to VMC established a term of nineteen months in order to provide for data gathering. By special condition, VMC could continue its discharge beyond the permit expiration date if it reapplied by December 31, 1992. The present appeal was filed prior to the permit expiration date and the deadline for reapplication.
20. In order to attempt to comply with the requirements of the discharge permit and the Section 1272 Order issued by the ANR, VMC retained the firm of Wagner, Heindel & Noyes to provide technical assistance. The firm designed and oversaw the construction and the calibration of a flow monitoring device, a weir box, at the outflow of the settling ponds.
21. Flow data calculated from the flow measuring device indicates conformity with the volumes of wastes projected by VMC in its application as well as the limits contained in the discharge permit.
22. VMC also undertook steps to attempt to satisfy the pH effluent limitations in the discharge permit and Section 1272 Order. The company evaluated alternative approaches to treatment to achieve limits for pH and turbidity as specified in the permit. VMC evaluated five different systems to deal with various pollutant parameters. They included: the construction of a clarification plant to remove particulate matter from the process wastewater; a system to recycle water from which the solids had been allowed to settle; the use of flocculent chemicals to facilitate settling of the solids; the construction of a pipeline from the settling ponds to transport the

outflow directly to the Otter Creek; and the construction of an acid-dosing station by which hydrochloric acid would be introduced to the settling ponds to counteract the elevated pH of the process wastewater.

23. The construction of the clarification plant and the recycling system were rejected because the cost of each of these proposals was estimated to be in excess of several hundreds of thousands of dollars.
24. The construction of the pipeline to the Otter Creek was evaluated and an application for the same was submitted to ANR. At the time of the Board's hearing in this appeal, the ANR had determined that the application was complete and it was under review. This proposal calls for a direct discharge of wastewater into the Otter Creek resulting in a reduction in in-stream water quality, whereas the present treatment system does not result in a reduction of water quality in the Otter Creek. Additionally, VMC would have to obtain permission from the Town of Proctor to cross town lands with the pipeline and need to obtain various land use permits to implement this proposal.
25. The acid-dosing station was rejected by VMC as a possible means of altering the pH of the discharge from the settling ponds because of its potential environmental impact as well as liability concerns.
26. The use of flocculent, particularly in gel log configurations, was evaluated by laboratory analysis and by installation in the settling ponds with field trials following. While the results of those evaluations appear to be promising, both the VMC and the ANR are concerned that the logs may not operate well during cold weather conditions. VMC's use of flocculent logs indicates higher levels of solids removal than that achieved presently, but additional testing must be conducted to determine its effectiveness in treating process wastewater from different marbles and under cold weather conditions.

#### Environmental Impacts of the Present Treatment System

27. VMC's existing method of process wastewater treatment by settling ponds and additional sediment-trapping by overland flow on property owned by the company, has shown no demonstrable adverse effect on people or the environment. There is no evidence of adverse impact on the wetland area to the east and north of the settling ponds or on the water quality of the 7-gpm stream or the Otter Creek or other receiving waters.

28. ANR does not dispute that the settling ponds remove a high percentage of solids from VMC's process wastewater.
29. A comparison of the settling ponds' influent and effluent shows greater than 98% removal of suspended solids on over 60% of the sampling dates. That percentage reduction is better than that reported for this type of stone processing facility by the U.S. Environmental Protection Agency in its Development Document for Effluent Limitations, Guidelines and Standards, Mineral Mining and Processing Industry, U.S. EPA 1979 ("EPA Guidelines"), a document relied upon by the ANR in evaluating VMC's discharge of wastewater.
30. The process wastewater as it leaves the settling pond portion of the treatment system does not meet the applicable water quality criteria for turbidity and pH. However, those criteria are reliably met at the point of the confluence of the treated wastewater and the 7-gpm stream and in all downstream receiving waters.
31. VMC's existing process wastewater treatment system assures that the water quality of the receiving waters of the Otter Creek are not degraded and that existing values and uses associated with these waters are protected. The continued use of the existing treatment system results in water quality in Otter Creek better than would be the case with a direct discharge of process wastewater via pipeline.

#### Beavers, Wetlands and Run-off

32. During the late 1800's and early 1900's, the lands used for treating VMC's process wastewater were used for haying. Today, some of the lands are still used for agriculture, while other portions have become overgrown with brush and other vegetation, including vegetation characteristic of wetlands. The area between the outflow from the settling pond portion of the treatment system and the second man-made ditch (see finding 15) is now dominated by a series of beaver dams and braided channels.
33. Beaver have built dams in the area easterly and northerly of the present outflow from VMC's settling ponds which has had the effect of trapping, containing and rerouting the process wastewater through the area. Currently there are three beaver dams located easterly and northerly of the outflow from the settling ponds. These dams direct the flow of process wastewater in a variety of directions. However, the process wastewater coalesces into a single channel by the time it reaches a farm culvert in the second man-made ditch.

34. Based upon flow measurements at this farm culvert, 98% of the flow through the farm culvert is attributed to the process wastewater discharged by VMC.
35. Not until the 7-gpm stream is there a clear distinction between VMC's process wastewater and other surface waters.
36. Although the Otter Creek, at flood stage, may back up into the man-made ditch through which the process wastewater ultimately finds its way to the Otter Creek, it is not likely to inundate the wet area except in catastrophic flood events.
37. A portion of the area historically utilized by VMC for its treatment system immediately to the east of the Otter Creek, including the site now used for the Town of Proctor sewage treatment plant, is mapped as wetlands on the National Wetland Inventory ("NWI") map.
38. The area impounded by the beavers to the east and north of the outflow from the present settling ponds is not contiguous with the wetlands identified on the NWI map. The overland flow portion of VMC's treatment system is separated from the NWI-mapped wetland area adjacent to Otter Creek by a succession of fields utilized for agricultural purposes.
39. The overland flow portion of VMC's treatment system is not a wetland protected under the Vermont Wetland Rules.

#### Waters of the State

40. In order for there to be "waters of the state," there must be some defined body of surface water present.
41. While 2 percent of the water in the area to the east and north of the settling ponds may come from storm water flow, drains and seeps, such water does not constitute a defined body of surface water.
42. VMC's management of the process wastewater from the settling ponds is analogous to the management of stormwater runoff from ditches, overland flow and retention basins, some of which may be engineered and some of which may not be. Stormwater ditches and swales are not considered to be, nor are they managed by the ANR, as "waters of the state."
43. But for the continuous supply of process wastewater from VMC's facilities, the land between the outflow of the settling ponds and the farm culvert would not contain any body of surface waters.



44. The 7-gpm stream is a defined body of surface water which receives the discharge from VMC's process wastewater treatment system.

IV. CONCLUSIONS OF LAW

A. VMC's process wastewater is a discharge to the waters of the state

"Any person who intends to discharge waste into the waters of the state" is required to apply to the secretary of ANR or his authorized representative for a discharge permit. 10 V.S.A. § 1263(a); 10 V.S.A. § 1251(11). "Waste" is defined, among other things, as effluent, sewage or "any substance or material, liquid, gaseous, solid or radioactive, including heated liquids, whether or not harmful or deleterious to waters." 10 V.S.A. § 1251(12). "Discharge" means "the placing, depositing or emission of any wastes, directly or indirectly, ... into the waters of the state." 10 V.S.A. § 1251(3).

The fabrication and processing of marble and other stone produces process wastewater, a mixture of water, marble fines and other stone particles. Whether or not this material is harmful or deleterious, it is a "waste" as that term is defined by 10 V.S.A. § 1251(12). The Board further concludes that this "waste" is discharged into the "waters of the state," thereby requiring VMC to obtain a permit for its discharge pursuant to 10 V.S.A. § 1263(a). However, exactly where VMC's waste discharges into the waters of the state is the central issue in this appeal.

The parties do not dispute that the Otter Creek is "waters of the state" as that term is defined by 10 V.S.A. § 1251(13). VMC's process wastewater, albeit substantially treated, eventually reaches the Otter Creek and therefore the "waters of the state." The ANR, however, argues that VMC's process wastewater is discharged into the waters of the state where it leaves the company's settling ponds and flows into waters impounded by beaver dams, the "unnamed tributary" referred to in the discharge permit issued by ANR. VMC argues that its discharge occurs at the Otter Creek, or alternatively, where its channelized wastewater enters the 7-gpm stream.

B. VMC's waste enters the waters of the state at 7-gpm stream

The Board concludes that VMC discharges its waste into the "waters of the state" at the point that its process wastewater enters the 7-gpm stream. The Board agrees with VMC that but for VMC's process wastewater, there would be no body of surface waters

in the area downgradient of the company's settling ponds. Liquid waste, even when it contains a high percentage of water, does not constitute "waters of the state."

The definition of "waters" of the state includes "all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs and all bodies of surface waters, artificial or natural, which are contained within, flow through or border upon the state or any portion of it." 10 V.S.A. § 1251(13). There must be a defined body of surface water present before there can be a finding of "waters of the state." Furthermore, the definition of "discharge," and the text of 10 V.S.A. § 1263(a), make clear that the Legislature intended to regulate under 10 V.S.A. ch. 47 direct and indirect discharges of waste into the "waters of the state," not the deposition of liquid waste onto land per se. Compare with 10 V.S.A. ch. 159 (Waste Management).

The Board agrees with VMC that its historical treatment process has included settling ponds, ditching and sediment trapping and overland flows. The present treatment system incorporates these same methods, with improvements having been made in the settling process as a result of the construction of the four new settling ponds. Man-made treatment systems do not constitute "waters of the state." The fact that the treatment process includes the use of open ditches and overland flows does not mean that it is not a man-made system resulting in effective treatment of waste. Indeed, many treatment systems, including most stormwater management systems, consist of such ditches, overland flows and retention basins. The Board concludes that the treatment method now used by VMC effectively treats process wastewater from the company's stone processing plant and it is preferable to the alternative of direct discharge from the settling ponds into the Otter Creek, because it is more protective of the water quality of the Otter Creek.

The Board disagrees with the ANR that VMC's discharge occurs at the point its process wastewater leaves the settling ponds and enters the overland flow portion of the company's treatment process. The point at which the discharge occurs, and therefore the place to evaluate VMC's conformance with the VWQS, is where VMC's process wastewater enters a defined body of surface water. The Board has determined that this occurs at the confluence of the man-made ditch and the 7-gpm stream which flows through VMC's property before joining the Otter Creek.

The ANR argued at hearing that the process wastewater enters the "waters of the state" at a point shortly beyond the outflow from the settling ponds where the waste enters a so-called wetland. The Board concludes otherwise. First, the statutory definition of "waters of the state" does not include all wetlands. 10 V.S.A. §

1251(13). Compare with, In the matter of McGowan, 533 So.2d 999 (LA 1988) (definition of "surface water" included "wetlands, swamps, marshes" and other waters). Second, because the wetland is an integral part of VMC's man-made waste treatment system, it is exempt under 40 C.F.R 122.2(g) from the definition of "waters of the United States." The Vermont definition of "waters" should be read in connection with that federal law; otherwise, treatment lagoons would be "waters of the state." This conclusion is made under the specific facts of this case, including the fact that the land between the outflow of the settling ponds and the farm culvert would not contain any body of surface water but for the continuous supply of process wastewater from the VMC facility.

The ANR further asserts that the wet area in question is contiguous to a NWI mapped wetland and therefore, arguably, a protected Class Two wetland. See Vermont Wetland Rules, Sections 4.2(b). The Board concludes, based on the record before it, that the wet area created by VMC's process wastewater is not contiguous or otherwise connected to the mapped wetlands to the west along the Otter Creek.

C. VMC's waste meets the VWQS at the point of discharge into the "waters of the state"

The limitations for turbidity and pH contained in Discharge Permit #3-1346 issued to VMC are consistent with the applicable provisions of the VWQS for Class B waters, including the Otter Creek and the 7-gpm stream. Turbidity in Class B waters in a warm water fish habitat may not exceed 25 NTU. VWQS, Sections 3-03B.1.b and 3-04B.1.b. The pH in all waters, except mixing zones, regardless of their classification, must be maintained within the range of 6.5 and 8.5. VWQS, Section 3-01B.9. However, the point at which these provisions of the VWQS are applicable to VMC's discharge of waste is at the point the company's process wastewater enters the waters of the state, not at the outflow from its settling ponds. Therefore, the requirement for turbidity and pH must be met at the point where the process wastewater discharges into the 7-gpm stream.

The Board concludes that VMC's discharge meets these standards at the 7-gpm stream. By authorizing the continued use of VMC's existing treatment facilities, the values and uses associated with all downstream receiving waters, including the Otter Creek, will be protected.

D. Extension of Permit Expiration and Renewal Deadlines

The Board in performing its de novo authority under 10 V.S.A. § 1269 is required to issue an order "affirming, reversing or modifying the act or decision of the secretary." The Board reads this language to allow it to extend permit expiration and renewal deadlines as well as modify any substantive terms or conditions established in a permit. 10 V.S.A. § 1263(c)-(d).

In its Notice of Appeal, VMC asked the Board to revise and reissue Discharge Permit #3-1346 and to "afford such other relief as may be appropriate." VMC did not specify for what length of time a revised permit should be issued.

The Board notes that since the time it opened this proceeding, the expiration deadline for Discharge Permit #3-1345 has lapsed. The Board believes that VMC should not be disadvantaged by the passage of time inherent in the processing of its appeal. The Vermont Supreme Court and other administrative agencies have recognized the need to accommodate the passage of time in land use permit proceedings by directing the extension of permit deadlines. In re P.F. Partnership, No. 97-276 (Vt. March 21, 1991); Re: P.F. Partnership, Findings of Fact, Conclusions of Law and Order, #9A0169-EB at 1-2 (June 7, 1991); see also, New Haven Savings Bank, Findings of Fact, Conclusions of Law, and Order, #2W0769-1-EB (Nov. 23, 1992). The Board believes that an extension of the permit expiration deadline is appropriate and warranted in this case, consistent with 10 V.S.A. § 1263(d)(4), which requires that a permit be valid for a period of time specified therein not to exceed five years.

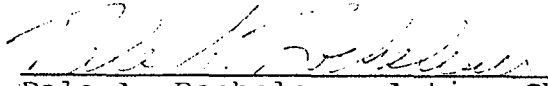
Therefore, the Board has decided to modify this discharge permit so as to establish a new expiration date of April 15, 1995.

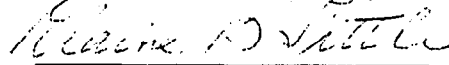
V. ORDER

Based upon the evidence of record, it is hereby ORDERED that the decision of the Department of Environmental Conservation, Agency of Natural Resources, granting Discharge Permit #3-1346, is affirmed, except as modified by this decision. Said permit shall expire on April 15, 1995.


Dated at Montpelier, Vermont, this 14<sup>th</sup> day of January, 1994.

WATER RESOURCES BOARD,

  
Dale A. Rocheleau, Acting Chair

  
Elaine B. Little

  
Stephen Reynes

  
W. Byrd LaPrade