United States Department of the Interior

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March 21, 2008

Mr. Peter Laflamme
Vermont Department of Environmental Conservation
Water Quality Division
103 South Main Street, 10 North
Waterbury, VT 05671-0408

Dear Mr. Laflamme:

This is in response to the draft NPDES permit for Signal Wind Energy to discharge sediment and other construction-related pollutants to unnamed tributaries to Annis, Calendar, Clark, Nation, and Miller Brooks; and to an unnamed tributary to Willoughby Brook related to the construction of the Sheffield Wind Project in Sheffield, Vermont.

We understand that these streams and unnamed tributaries are classified as Class B cold water systems by the Vermont Water Quality Standards and that the new turbidity standard for these waters is none in such amounts or concentrations that would prevent the full support of uses, and not to exceed 10 NTU as an annual average under dry weather base-flow conditions. On pages 10 and 11 of the draft permit, the standard or action level for compliance monitoring is 25 NTU at points where visibly discolored stormwater runs off the construction site. Since the receiving waters are small headwater streams with some considerable variability in flow, and/or wetlands, it seems plausible that runoff from the construction site could constitute a substantial percentage of the flow in these waters particularly during the ascending phase of a precipitation event. Hence, our question is, given the nature of these receiving waters, how does the 25 NTU action level where runoff leaves the construction site ensure compliance with the full support or 10 NTU instream standard?

It seems difficult to reconcile the permit limits with the water quality standards criteria because 1) it is not clear what existing and designated uses are recognized and how full support of uses is measured in these waters, and 2) it is not clear who is responsible for measuring turbidity levels to establish the annual average under dry weather base-flow conditions. Specifically, do fish, macroinvertebrate or other reference conditions exist for these headwater systems? Are fish or macroinvertebrate biocriteria even applicable in the traditional sense? If these biocriteria exist, would they only be applied during late summer flow conditions like wadeable stream protocols or following episodic events of stormwater runoff from the construction site? Regarding the

phrase "annual average under dry weather base-flow conditions", does the Department have a definition and protocol established to assist permittees, agency staff and others to understand and measure these turbidity criteria in general and specifically in small headwater streams, and in wetlands?

As both of these criteria above seem to be difficult or impossible to apply contemporaneously with stormwater discharges from the construction site, is the 25 ppm action level in Part III.B. and the actions it may trigger, such as retesting and BMP adjustment, the de facto standard for the foreseeable future?

We understand that the Limited Duration Activity is not applicable and the draft permit does not specify a mixing zone, nor any treatment system from the point where the discharge leaves the construction site until it reaches the receiving waterbody. As there are no maps or drawings attached to the draft permit, we are unclear where waters of the U.S. and Vermont begin, or if in fact such a determination has been made by the Department in these headwater systems.

Another closely aligned question concerns compliance with temperature criteria. The standard for cold-water fish habitat is 1°F above ambient temperature. We assume section d. in the temperature criteria of the water quality standards does not apply as no mixing zone is specified in the draft permit. The visibly discolored water referenced above could be affected, e.g., warmed, by air temperature and by sunlight especially after convective-type storms during the growing season. It occurs to us that some of these receiving streams could be dry at the time of the discharge. At other times or places, the flow might be from surface runoff. Yet at other times and places, the receiving waters may be flowing due to ground water discharge. In each of these cases, the ambient temperature of the receiving waters could be different, as could the rate of stream flow and discharge volume from the construction site and temperature. Given that, the only monitoring specified in the draft permit is for turbidity as discussed above, how can the Department be certain that the temperature criteria will be complied with during project construction when it is not called out in the permit or addressed in monitoring protocols? The fact that temperature is not mentioned in the permit would seem to make it less likely that an inspector would take note and prompt the Department to utilize the provisions in Part II.D.2. of the permit to address the issue.

The Sheffield site has a number of small Class III wetlands that either occur adjacent to these headwater streams or scattered about the landscape as individual wetlands in depressions or ground water discharge sites. The applicant delineated and mapped these systems where they were adjacent to potential construction activities. However, there are areas on site where these wetlands, and we presume, headwater streams have not been delineated and mapped. The Class III wetlands are not regulated by the Vermont Wetlands Rules. However, we understand and wish to confirm that these wetlands and streams are regulated by Vermont Water Quality Standards, Section 1-01A.2. because they are waters of the U.S. Since these waters are both adjacent to and some distance from the construction sites and may or may not be delineated and mapped, is it reasonable to expect that the presumption in Part II.J. or the inspection and sampling in Part III.B. are adequate to insure compliance with the turbidity and/or temperature criteria above?

Part I.B. of the draft permit indicates that the limits of this permit are restricted to construction activities; a second permit would be required for stormwater runoff from impervious surfaces. We understand that storage or detention ponds are proposed to collect and regulate some of these discharges from project roads, and similar surfaces. While it is not abundantly clear where one permit ends and the next begins, it appears that the above issues are in some respects similar to both permits.

We have attempted to frame these comments as questions to the extent possible as we do not have the detailed application materials, most recent erosion prevention and sediment control plan and other background information that likely has been relied on to develop the draft permit. The landscape features of the site likely make this a somewhat unusual and/or challenging permit as well. In addition, we are uncertain whether the "new" or the "old" turbidity criteria are applicable given that EPA has not, to our knowledge, approved these "new" turbidity criteria.

Questions should be directed to me at 603-223-2541 or email vernon_lang@fws.gov.

Sincerely yours,

Vernon B. Lang
Assistant Supervisor
New England Field Office