11. Criterion 3 (Harm to other water supplies)

I. Requirements for Issuance of Permit

Under Criterion 3, a project must not cause unreasonable burdens on an existing water supply.

II. Burden of Proof

The burden of proof is on the applicant. 10 V.S.A. §6088(a).

III. Analysis

The Environmental Board has held that compliance with Criterion 3 requires a demonstration that the project will not cause an "unacceptable interference" with existing water supplies, as defined in the Vermont Water Supply Rules at Appendix A, Section 11.6.3.1.

"Unacceptable interference"

In *Re: Pike Industries, Inc. and Inez M. Lemieux,* #5R1415-EB, Findings of Fact, Conclusions of Law, and Order at 35 (Jun. 7, 2005). The Board defined "unacceptable interference":

> The Board defines "unacceptable level of source interference" on an existing water supply to be the same as the definition of "unacceptable interference" in Section 11.6.3.1 of the State of Vermont Environmental Protection Rules, Chapter 21: Vermont Water Supply Rule. The Rule states as follows:
>
> > Public and private water supplies affected by the pumping of other proposed or existing groundwater sources shall be able to meet their average day demand while the proposed water supply is operated at the proposed pumping rates. If, as a result of predicted source interference, existing water supplies cannot meet their design demands, then unacceptable interference exists. Unacceptable interference may also include water quality problems resulting from source testing.

Citing, *Re: Barre Granite Quarries, LLC and William and Margaret Dyott*, #7C1079(Revised)-EB, Findings of Fact, Conclusions of Law, and Order at 73 - 74 (Dec. 8, 2000).

Evidence to consider

Where possible, a hydrologic evaluation should be conducted, simulating actual effects of the proposed water supply withdrawal with reference to background conditions (the water supply levels before the project's water use commences) to determine the level of interference, if any.

If such interference is predicted, the applicant may be permitted to use water from the source, but such use is allowed only upon certain conditions. Given the challenge of accurately evaluating groundwater hydrology, safeguards are usually incorporated into the permit to ensure that the applicant is responsible for any unreasonable harm to other water supplies. Safeguards and conditions implemented to protect against unreasonable interference have included:

1. Deepening other water users existing well(s);

2. Drilling replacement wells;

3. Installing additional potable water sources to offset strains of water supply;

4. Providing bottled water to meet potable water needs.

Dealing with inherent uncertainties as regards groundwater

The Board has recognized that, with groundwater predictions, nothing can be certain. Thus, in *Re: Pike Industries, Inc. and Inez M. Lemieux,* #5R1415-EB, Findings of Fact, Conclusions of Law, and Order at 30 – 31 (Jun. 7, 2005), the Board wrote:

> As regards many of the criteria at issue in this case, where the Board has set measurable compliance standards, or such standards exist in other regulations, there are often instances where the evidence presented to the Board cannot, with absolute confidence, support a conclusion that a project will, or will not, comply with Act 250's requirements. In its analysis of many of the criteria, the Board often cannot be certain that a project will satisfy or fail specified standards when completed at some point in the future.
>
> Certainly, there are some cases in which the Board may be able to conclude, based on projections, that a project will not be able to meet such established standards; in those cases, the Board has not hesitated to deny the application. *See, e.g., Re: McLean Enterprises, Inc.,* #2S1147-

1-EB, Findings of Fact, Conclusions of Law, and Order at 62 and 68 (Nov. 24, 2004).

In other cases, however, credible evidence may be presented to the Board, based upon modeling or other experience, that predicts that a project will be able to meet such requirements. In those circumstances, the Board may reasonably conclude on the evidence before it that the project will comply with a criterion if certain standards are met. The Board may then impose the required standards as conditions of its permit, and the applicant must meet them. The applicant therefore takes the risk that, if its modeling or projections turn out to have been incorrect, its operations may subsequently be shut down or substantially curtailed as being in violation of the standards-based permit conditions.

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