WATER QUALITY CERTIFICATION

(P.L. 92-500, Section 401)

In the matter of: Robert F. Desrochers
North Danville Village
RFD 2
St. Johnsbury, Vermont
Application for Fairbanks Mill Hydroelectric Project on the Sleepers River

The Water Quality Division of the Vermont Department of Water Resources and Environmental Engineering (the Department) has examined the Water Quality Certificate application by Mr. Robert F. Desrochers (the applicant) by letter dated May 26, 1982, and has made the following findings:

1. The applicant proposes to construct a hydroelectric generation facility at an existing dam on the Sleepers River at North Danville. The site is known as the old Fairbanks Sawmill. A powerhouse containing a 12 foot diameter overshot waterwheel geared to an 18 kilowatt induction generator would be constructed on the upstream side of the existing mill building. A new 50 foot long, 2 foot diameter steel penstock would be installed. The available head is 13 feet.

2. The dam forms an impoundment with a storage volume of approximately 200,000 cubic feet. The application does not indicate that flashboards are to be used. The project will be operated in a strictly run-of-the-river manner. The Department interprets that to mean that instantaneous flows downstream of the tailrace will equal instantaneous inflows to the impoundment at all times. The design flow of the turbine is 30 cfs.

3. There is a salmonid fishery in the Sleepers River. The plunge pool at the dam provides good habitat conditions for adult salmonids and is a useful refuge area during periods of low flow. At the dam, a minimum stream flow sufficient to keep the pool fresh and allow upstream migration into the pool should be maintained.

4. The site has a watershed area of approximately 16 square miles. The mean annual flow may be estimated at about 30 cfs. The median flow may be estimated at about 13 cfs. The flow values are estimated based on U.S.G.S. gaging stations located in the Passumpsic River Basin.

5. The Sleepers River is a Class B stream. It is not anticipated that this project will degrade the water quality of the Sleepers River. The project is run-of-the-river with a very short bypassed section. The river in the area of the project has a relatively steep gradient with good reoxygenation characteristics.

6. Any future desilting of the impoundment would have to be done in accordance with the Agency desilting policy, a copy of which is included with the certificate. It is noted that the particularly critical time in terms of impact of high turbidity levels on aquatic life is the fall spawning and incubation period, which is approximately between October 15 and spring high water; however, significant adverse impacts can occur at any time during the year depending on how the desilting is carried out and the quantity of material involved.

CONDITIONS

The Vermont Department of Water Resources and Environmental Engineering certifies that this project will meet Vermont Water Quality Standards with the following conditions:

A. The project shall be operated in a strictly run-of-the-river manner with instantaneous flows directly downstream of the tailrace equaling instantaneous inflows to the impoundment at all times. Under no conditions shall flow be cut off to the Sleepers River by construction or operation of this project. A minimum flow of 3 cfs or instantaneous inflow, if less, shall be passed at the dam at all times.

B. Any desilting shall comply with the Agency of Environmental Conservation desilting policy.

C. Care shall be taken during construction to limit the disturbance of soils near the streambank. Disturbed soils shall be stabilized as soon as practicable following the removal of vegetation. Such areas shall be regraded and revegetated no later than September 15 of the year of construction. The applicant shall contact the Department if there are questions or any unusual anticipated problems with regard to erosion control. The Department reserves the right to order additional erosion control measures, if such measures appear to be warranted during or following construction of the project.

D. The applicant shall insure that every reasonable precaution is taken during construction to prevent the discharge of petro chemicals, wet concrete and debris to state waters.

E. Any debris removed from the impoundment during construction or later operation shall be disposed of properly.

F. Flashboards are not to be used unless approved in accordance with condition G.

G. Any significant changes to the project, including the operational scheme, must be submitted to the Department for review and approval prior to making the change.

H. The applicant shall provide the Department with a description of the method to be used to release the minimum flow required in condition A at the dam. Approval by the Department is necessary before operation may begin.

for John R. Ponsetto, Commissioner
Department of Water Resources
and Environmental Engineering

Dated at Montpelier, Vermont this 20th day of August, 1982.

JRC/rh
Encl.