6-4-84

WATER QUALITY CERTIFICATION AMENDMENT
(P.L. 92-500)

In the matter of: Mr. David F. Buckley
Williams River Electric Corporation
18 Bridge Street
Bellows Falls, VT 05101
Application for Amendment to Brockways Mills Hydroelectric Project Water Quality Certification

The Water Quality Division of the Vermont Department of Water Resources and Environmental Engineering (the Department) has reviewed the information submitted by James Hansen and Associates on behalf of the Williams River Electric Corporation (the applicant) by letter dated January 5, 1984 and filed in accordance with Conditions B and F of the Water Quality Certification issued December 1, 1982. The Department has made the following findings:

1. The applicant has made some significant changes to the project layout. The powerhouse, which was originally proposed to be located in the gorge and on the right side of the river, has been relocated 200 feet upstream to the site of the former tailrace of the old mill on the left side of the river. The proposed excavated tailrace would be 120 feet in length. The dam, would now be constructed 10 feet downstream of the State Aid Highway #82 bridge and would be reduced in height from 15 feet to 7 feet. The dam crest would remain at elevation 439.0' NGVD. The intake structure would be located on the left side of the dam. A 70 foot long waterway conduit would be buried and extend from the intake structure to the powerhouse. Relocation of the powerhouse and tailrace would reduce the bypassed section of stream from 400 feet to approximately 100 feet.

2. The applicant proposes to amend the minimum flow requirement in the bypass from 10.0 cfs year round to 5.0 cfs from November 1 through March 1 and 13.0 cfs during the remainder of the year.

3. The revised project would continue to operate in a run-of-the-river manner. The capacity of the generating units would be reduced, however. Two 355 KW units (710 KW total) would be installed rather than the two unequally sized units (totaling 1,115 KW) proposed originally. The hydraulic capacity of the facility would be 30 to 260 cfs as opposed to 60 to 340 cfs.

The Department has reviewed the proposed change in hydraulic capacity to determine how it would effect the number of days during the months of June, July and August when the project would be generating and releasing only the minimum flow requirement of 13 cfs in the bypass, i.e., when stream flows are between 43 and 273 cfs (hydraulic capacity plus 13 cfs). Under the original proposal of 60-340 cfs, stream flows would usually have been insufficient for project generation during these low flow months and would have been spilled at the dam. The Department had taken this into consideration when issuing the original Water Quality Certification for this project. These low flows months usually present the most critical period for maintenance of water quality standards in a stream, particularly dissolved oxygen concentrations.

Based on flow records from the USGS gage (#01153500) located on the Williams River immediately upstream of the proposed

project, the Department finds that the project would be generating and releasing the minimum flow requirement of 13 cfs for approximately 19 days in June, 10 days in July and 5 days in August. Under the original proposal the project would have been generating and releasing the minimum flow requirement for about 16 days in June, 6 days in July and 4 days in August. The Department finds that this does not present a significant change over the original proposal.

4. The applicant's primary reason for these proposed changes is project economics. Construction costs would be less. Estimated construction costs for the revised project would be about $1,600 per kw compared to $2,200 per kw for the original project.

The applicant has also proposed these changes since project works would now be located on lands owned by the applicant.

Finally, the applicant has proposed this relocation to reduce project impact on the aesthetic value of the gorge.

5. The Department concludes that the changes to the project as proposed by the applicant will not degrade water quality.

CONDITIONS

Based on its review of the proposed changes, the Department finds that the revised project will meet Vermont Water Quality Standards provided the original conditions of the Water Quality Certification and amended Condition A are met. Condition A shall be amended as follows:

A. The project shall be operated in a strict run-of-the-river manner, with instantaneous flows below the tailrace maintained equivalent to instantaneous inflows to the project. A minimum instantaneous stream flow of 5.0 cfs shall be passed at the dam at all times from November 1 through March 1. For the remainder of the year, this flow requirement shall be increased to 13.0 cfs. When the project is not operating, all flows shall be spilled at the dam. The facility shall not be operated from storage. The applicant shall provide the Department with a description and plans detailing how releases will be made at the dam for review and approval.

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

Dated at Montpelier, Vermont
this 14 day of June, 1984.