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Low Impact Hydro Institute  
Ms. Gabriela Goldfarb

Dear Ms. Goldfarb,

Please allow this letter to serve as a response to your Intake Review for the Martinsville Hydroelectric Project. In that review, you noted some missing information in the original LIHI application and added a list of Initial Issues.

I am attaching the following electronic files (each file contains correspondence between Martinsville Hydro, FERC and the Agencies) to supplement my original information:

- (1) FERC Project 7373-VT License Order of December 28, 1984
- (2) Order Amending License of April 27, 1995
- (3) License Application of February 8, 1984  
Exhibits A, E, F, G (Project Description and Plans and Environmental Report)  
Agency Responses
- (4) Recreational Report and Form 80 Status Letter – July 12, 1999
- (5) Environmental and Public Use and Safety Report Status
- (6) Minimum Flow Issues and Compliances
- (7) Water Quality Certificate (previously submitted)

You have clearly identified 4 major issues that need further discussion; (1) Recreational Resources (2) Cultural Resources (3) Fish Passage (4) Minimum Flow, Water Quality and Compliance.

### **Introduction**

For each of the four issues, there is a common feature that is the main determinant to assess the adequacy of the project's design and operation to meet LIHI standards – the physical setting of the bypass. As one read the agencies' comments on those issues, time and again, they refer to the bypass – the narrow, scoured rock streambed with occasional shallow pools, its steepness, and the difficult and limited access. To help those who have not visited the project, I have attached 6 photographs (See Attachment 8) of the bypass, from powerhouse to reservoir, shown as one would scramble 700 feet up the gorge. It is important to note that the flow velocity in the normal channel (averaging 2-5 feet wide) is 5-10 feet per second. During high flow periods, velocities exceed 20 feet per second, witnessed by the extensive scouring shown in the photographs. While these conditions lessen the value of fish habitat, they substantially increase water quality (D.O.) as the water “bishes and bashes” on its way to the bottom as it has done for thousands of years.

With regard to public access, approximately 75 percent of the project's footprint has an average slope greater than 45 degrees. There are 5 flights of stair to get to the power house and 3 flights to get to the intake platform on the dam, that is, after one walks 300 feet along the guard rail of the narrow state highway.

### **Specific Discussion**

In all cases, the License Order contains findings and proposed actions that are consistent with conclusions and recommendations from the agencies.

- (1) Recreational Resources: In a FERC letter dated Aug 12, 1999, "The Commission Staff (FERC) reviewed your project license and Environmental and Public Use Inspection Reports and has spoken with the Regional Office Environmental Staff. Available information indicated there is no potential for recreational use at the project." Similarly, but with a more expressive comment, the Vermont AEC, referencing public access, stated "access to the site is practically impossible and dangerous at best." See License Application, Environmental Report page E-11. The only mandate resulting from the FERC Environmental and Public Use Report was for a Public Safety Plan that requires the posting of danger and warning signs. (See Attachment 4 above).
- (2) Cultural Resources: The License Order states there are "no known historic, cultural or archeological resource that will be affected by the proposed project. The inclusion of Article 20 will protect any cultural resources that may be discovered." The Vermont SHPO letter of 12/5/1983 also states the same finding. (See Attachment 3)
- (3) Fish Passage: The physical setting of the project, one that makes access "practically impossible and dangerous at best", is also the reason no fish passage prescriptions were required. The WQC @ 7 states "The penstock- bypassed section is a steep gradient channel of chutes and shallow pools on largely scoured bedrock." Continuing "the proposed dam would not constitute an obstruction to the upstream migration of fish as the steep gradient of the chutes in the bypass present a natural barrier for fish passage".

Additionally, the USFWS letter of 12/4/1983 states "no fish passage facilities are necessary at this time, **or for the foreseeable future** (emphasis added). The USFWS notation "or for the foreseeable future" recognizes the fact that the natural barrier conditions (due to geography and geology) have and will be around for some time – certainly until 2034 when the license expires.

The "Order Amending License" states "there are no anadromous fish in Lulls Brook". The License Order has no requirements for any type of fish passage now or by some future, triggered condition.

- (4) Minimum Flow, Water Quality and Compliance: Prior to submitting its license application for a "run of river" project, Martinsville requested and was granted a 401 WQC from the Vermont Agency for Environmental Conservation. The WQC@ paragraph 7.0 states "The penstock- bypassed section is a steep gradient channel of chutes and shallow pools on largely scoured bedrock. Such habitat has little direct value

for fish production due to a lack of adequate spawning and nursery areas. The shallow pools may provide fish with temporary holding areas particularly in low flow periods of the year...The Fish and Game Department contends that a minimum release of 2 cfs should adequately maintain pools as temporary sanctuaries for displaced trout..."

Continuing, "The department (Water Quality) believes a minimum flow of 2.0 cfs should be adequate to maintain existing water quality conditions. The USFWS (letter of 12/4/1983) also concluded "A release of 2.0 cfs at the dam at all times, as available from inflow, is adequate for fisheries and water quality purposes." The License Order mandates the same flows.

In addition to the minimum flow release, the Vermont AEC (now VTANR) also stated (WQC @ A.) "...The applicant shall furnish a description, hydraulic design calculation and plans for the measure to be used to pass this minimum flow." The attached file (Minimum Flow and Compliance Issues) contains the hydraulic design, instrumentation standards, and method of flow release technique to maintain the 2.0 cfs minimum discharge. This is the standard used to determine minimum flow compliance. The New York FERC Regional Office is charged with monitoring project compliance. In scheduling its inspection visits, FERC always reminds Martinsville "that the project contains special requirements regarding minimum flow releases. The license requires that minimum flow be maintained." Copies of the inspection notice letter were (are) sent to pertinent agencies, including Vermont VTANR (Mr. Jeff Cueto, PE, and now Mr. Brian Fitzgerald) and the USFWS. A list of the notified agencies is shown on page six of the sample FERC Inspection letter of 4/18/2007.

At the request of Ms. Goldfarb, Martinsville check the status of the 303(d) Part A, Vermont List of Impaired Surface Water in Need of TMDL. As of the filing approved by EPA Region 1 on June 15, 2011, no part of the project or Lull Brook is listed.

On May 3, 2011, for purposes of the LIHI application, Martinsville spoke with Brian Fitzgerald, Streamflow Protection Coordinator for VTANR and asked if he would write that the Martinsville Water Quality Certification issued in 1983 is still in effect and that no changes to the original requirements are now being considered. Brian sent Martinsville an email stating "the Vermont Agency of Natural Resources considers the Martinsville Project to be in conformance with Vermont Water Quality Standards provided conditions in the Water Quality Certification issued on November 28, 1983 are followed. At this point, there are no plans to revisit operation of the project prior to expiration of the current license in 2034." In addition to being in compliance with VTWQC standards, as of an inquiry today with the NY FERC office, Martinsville is in compliance with the terms of its license.

Thank you for your time in considering my application. Please contact me if you have any questions.

Sincerely,

Jay Boeri