

**ENVIRONMENTAL INSPECTION REPORT
(ELECTRONICALLY SUBMITTED)
FEDERAL ENERGY REGULATORY COMMISSION
New York Region**

Date of Inspection September 21, 2006

Name Barton Village Hydroelectric Project **Project No.** 7725-VT

Licensee Barton Village, Inc. **License Type** Minor

License Issued June 9, 2004 **License Expires** October 2, 2043

Location Clyde River N/A
(Waterway) (Reservation)

Orleans Vermont
(County) (State)

Inspector John Mark

Licensee Representative Don Bowen, Line Foreman, Barton Village Electric Department

Other Participants None

Summary of Findings

The Barton Village Project was issued a new license on June 9, 2004. The licensee is in compliance with its environmental license article requirements with regard to the filing of plans for Commission approval.

However, the licensee not implemented its approved Flow Management and Impoundment/Flow Monitoring Plan and its approved Recreation Plan. By environmental inspection follow-up letter dated November 20, 2006, the licensee was directed to file within 15 days, for Commission approval, a schedule for the installation of the flow and impoundment management/monitoring system and for the maintenance of the recreational access along the bypass reach and to Charleston Pond. In addition, the licensee was directed to re-install a dam warning sign on the Route 105 bridge as a public safety measure.

Submitted December 4, 2006

John Mark
Environmental Protection Specialist

A. Inspection Findings

| REQUIREMENTS | DATE OF REQUIREMENT | FOLLOW-UP NEEDED | PHOTO NO(s). |
|--|--|-------------------------|---------------------|
| CULTURAL RESOURCES | | | |
| Article 408 requires the licensee to implement the Programmatic Agreement executed on March 22, 2004, and to file: 1) a final Phase 1A Archaeological Study; and 2) an Historic Properties Management Plan C-201/C-184 | O: June 9, 2004 AO: May 12, 2006 AO: May 16, 2006 | No | 1 |
| FISH AND WILDLIFE RESOURCES | | | |
| Standard Article 11 requires the licensee to construct, maintain, and operate or arrange for facilities for the conservation and development of fish and wildlife resources | O: June 9, 2004 | No | |
| Standard Article 12 requires the licensee to permit the United States to construct or improve fish and wildlife facilities | O: June 9, 2004 | No | |
| Article 401 requires the licensee to operate in a run-of-river mode and to release a minimum flow of 45 cfs into the bypass at all times C-204/C-089 | O: June 9, 2004 | No | |
| Article 402 requires the licensee to release at least 90 percent of the instantaneous inflow below the project and maintain the minimum flow requirement when restoring the elevation of Pensioner Pond C-091 | O: June 9, 2004 | No | |
| Article 403 requires the licensee to file a flow management plan to comply with the conservation flow and water level elevation requirements C-204/C-091 | O: June 9, 2004 AO: Nov. 7, 2005 | No | |
| Article 404 requires the licensee to file a plan for continuous monitoring and reporting of flow releases, impoundment levels, and inflows C-204/C-091 | O: June 9, 2004 AO: Nov. 7, 2005 | No | 2 – 3 |
| Article 405 reserves authority to the Commission to require the licensee to construct, operate, and maintain, or provide for, fishways C-072 | O: June 9, 2004 | No | |
| PUBLIC SAFETY | | | |
| Public Safety Device Installation – Public Safety Plan 18CFR | January 4, 1993 | No | 4 – 8 |

| RECREATION RESOURCES | | | |
|---|---|----|--------|
| Standard Article 13 requires the licensee to allow free public access to project land and waters | O: June 9, 2004 | No | |
| Article 407 requires the licensee to file a plan for recreational facilities to include: (1) two parking areas near the powerhouse; (2) a footpath to provide access to the bypass reach; and (3) an access path to Charleston Pond c-109 | O: June 9, 2004 AO: Nov 28, 2005 | No | 9 - 10 |
| OTHER ENVIRONMENTAL RESOURCES | | | |
| Standard Article 6 requires the licensee to install and maintain gages and stream-gaging stations to determine the stage and flow | O: June 9, 2004 | No | |
| Standard Article 14 requires the licensee to prevent soil erosion, sedimentation, and any form of water or air pollution in the construction, maintenance, or operation of the project | O: June 9, 2004 | No | |
| Standard Article 15 requires the licensee to clear and dispose of unused timber, brush, refuse, or other materials in accordance with Federal, State, and local statutes and regulations | O: June 9, 2004 | No | |
| Article 406 requires the licensee to file a plan for proper disposal of debris associated with project operations, including trashrack debris c-174 | O: June 9, 2004 filed October 18, 2004 | No | 3 |

O=Order **AO**=Approval Order **C**=OEP-IT Code **18CFR**=Title 18 Code of Federal Regulations

Comments and Follow-up Action

Cultural Resources: Article 408 requires the licensee to file a Phase IA Archaeological Study (Study) and a Historic Properties Management Plan (HPMP) for the project. The approved Study¹ concluded that there are no known or potential archaeological sites located upstream or downstream of the dam that would be affected by operation of the project. The project has been registered with the National Park Service for listing in the National Register of Historic Places as a property that embodies distinctive characteristics of hydroelectric facility engineering and construction in Vermont (Photo No. 1). The approved HPMP,² which incorporated the Study, provides guidelines for the management of any known or previously undiscovered historic or archaeological properties within the project's area of

¹ Order Approving Phase IA Archaeological Site Sensitivity Study Pursuant To Article 408 issued May 12, 2006 (115 FERC ¶ 62,168)

² Order Approving Historic Properties Management Plan issued May 16, 2006 (115 FERC ¶ 62,177)

potential effect. The licensee is required to file annual reports on activities associated with historic properties and cultural resources beginning July 9, 2007. The licensee appears to be in compliance with its requirements with regards to cultural resources.

Fish and Wildlife Resources: The licensee is required to operate the project in a run-of-river mode and release a minimum flow of 45 cfs into the bypass at all times. The project impoundment (Pensioner Pond) should be maintained at or above elevation 1,140.94 feet msl (top of flashboards) at all times. The licensee filed its approved Flow Management and Impoundment/ Flow Monitoring Plan³ on August 10, 2005. The plan proposed upgrades to the existing plant automation system to monitor and record headpond elevations, flows, and generation data. The plan proposed installation of water level sensors in Pensioner Pond, before and after the trashracks, mounting of a staff gage to calibrate the headpond sensor and to visually verify the water elevation in the intake area, and improvements to the Programmable Logic Controller (PLC) and computer system. The minimum flow would be released through a low-level slide gate at the left abutment of the dam (approximately 25 cfs) and through the downstream fish passage opening in flashboards, when constructed (approximately 25 cfs). The downstream fish passage facility is scheduled to commence operation by April 1, 2008. Currently, the 45 cfs minimum flow is being released from the slide gate (Photo No. 2). The licensee files annual reports certifying compliance with its minimum flow requirements. On the day of the inspection, the project was not generating due to low flows, and had generated for the past two weeks. The licensee has not installed the proposed water level sensors and staff gage and has not upgraded the PLC and computer system. A previously-installed headpond level sensor is located at the trashracks and intake (Photo No. 3) but the elevation data cannot be displayed by the current system. An operator visits the site everyday at 8:00 AM and determines if there is enough flow over the flashboards to manually start the turbine-generators. The licensee's representative stated that a contractor visited the project this past summer regarding installation of the flow/impoundment monitoring system. By inspection follow-up letter dated November 20, 2006, the licensee was requested to submit a plan and schedule for installation of the monitoring equipment.

Public Safety: The licensee maintains fencing, locked gates, guardrails, a horn, and signs to warn and protect the public of the hazards of project operations and to restrict the public from project structures (Photo Nos. 4 through 6). The licensee maintains a boater restraining barrier upstream of the project year-round (Photo No. 7). A "Danger Hydro Electric Dam Ahead" sign was removed during renovations of the Route 105 bridge was in the storage building awaiting re-installation (Photo No. 8). By inspection follow-up letter dated November 20, 2006, the licensee was requested to provide a plan and schedule for re-installation of the "dam ahead" warning sign. The licensee's Public Safety Plan was filed on January 4, 1993 and depicts the public safety devices installed at the project and their location. The Public Safety Plan appears to be adequate for the present level of public and recreational access. However, the licensee was requested to evaluate the need for additional

³ Order Modifying and Approving Flow Management And Impoundment/Flow Monitoring Plan Pursuant To Articles 403 and 404 issued November 7, 2005 (113 FERC ¶ 62,109)

signage in light of the proposed recreational enhancements at the project. The licensee appears to be in compliance with its requirements with regard to public safety.

Recreation Resources: Article 407 requires the licensee to file a recreation plan for the project. The approved Recreation Plan⁴ proposed measures for two parking areas near the powerhouse, a footpath to the bypass reach, and an access path to Charleston Pond. The licensee provides areas for visitor parking to the left and right of the powerhouse (Photo No. 9). However, the licensee has not cleared the access paths to the bypass area for fishermen and to Charleston Pond for fishermen and boaters (Photo No. 10). By inspection letter dated November 20, 2006, the licensee was requested to submit a plan and schedule for improvements to the access pathways and to provide signs in compliance with Part 8 of the Commission's regulations to inform the public of the availability of recreational facilities.

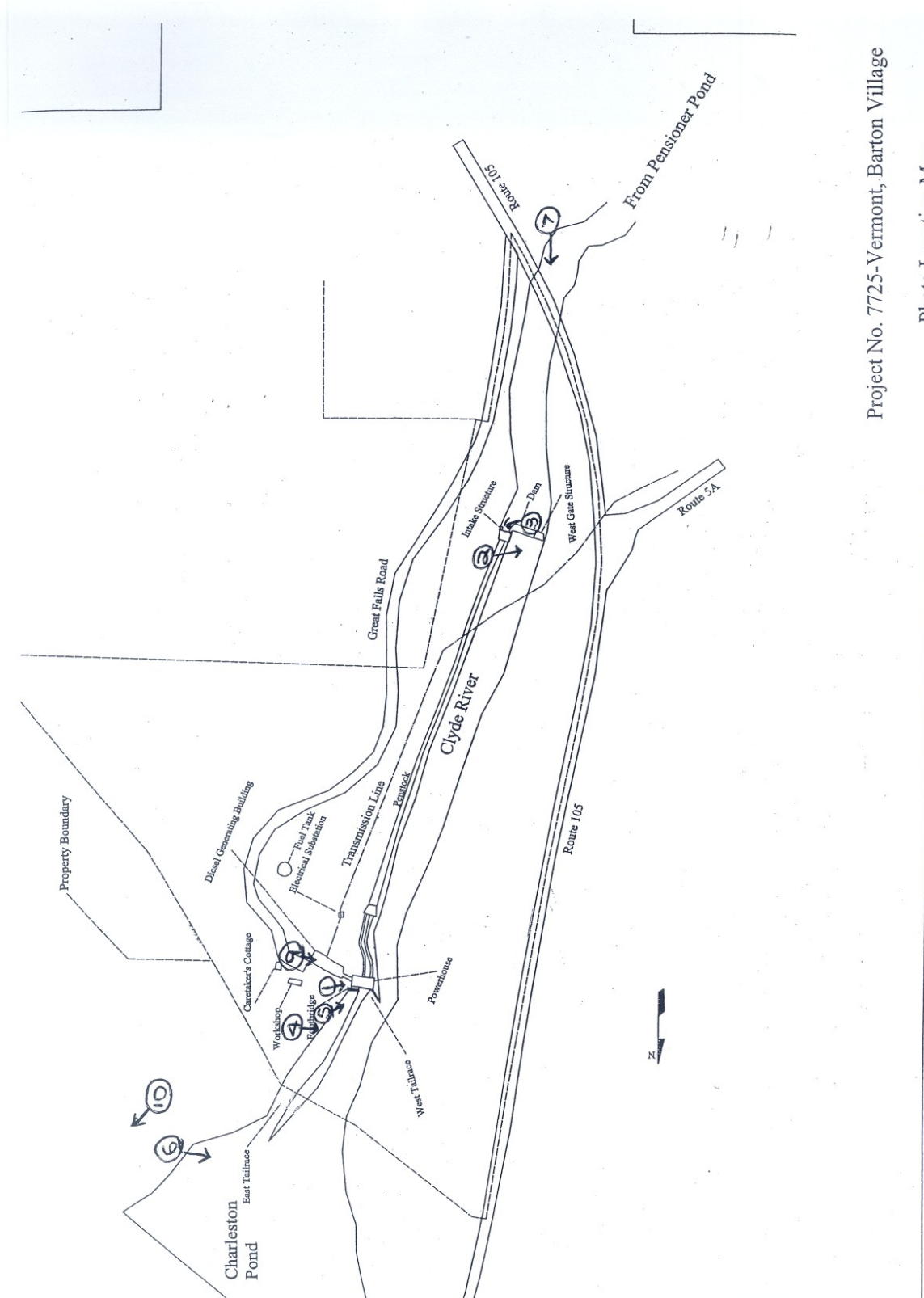
Other Environmental Resources: The licensee filed a Debris Disposal Plan on October 18, 2004 pursuant to article 406. A draft of the plan was submitted to the U.S. Fish and Wildlife Service and the Vermont Department of Environmental Conservation and any comments have been incorporated into the plan. Floating debris such as leaves and woody tree debris are normally transported downstream by high flow events. Debris accumulated at the project trashrack area is removed by a mechanical trashrake and sorted as to organic, non-biodegradable debris, and recyclable materials. The debris is then transported off-site to an appropriate State-approved facility in accordance with Federal, State, and local regulations. The licensee appears to be in compliance with its requirements with regard to other environmental resources.

B. Exhibits and Photographs

The following are provided to show the location of the project and to illustrate project features: One Photo Location Map and 10 Photographs.

OEP/DHAC Mark, J:jm December 4, 2006
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⁴ Order Approving Recreation Plan Pursuant To Article 407 issued November 28, 2005 (113 FERC ¶ 62,155)



Project No. 7725-Vermont, Barton Village

Photo Location Map



Photo No. 1 – View of the entrance to the powerhouse. This powerhouse was built in 1930 to replace the original hydroelectric powerhouse (circa 1895).



Photo No. 2 – View of the low-level slide gate at the left abutment of the dam. The 45 cfs minimum flow is currently being released through this gate.



Photo No. 3 – View of the headpond level sensor in front of the trashracks and intake. Note mechanical trashrake in front of the trashracks.



Photo No. 4 – View of a sign along the tailrace warning of project operations.



Photo No. 5 – View of the horn to warn fishermen and boaters mounted on the window sill on the tailrace wall of the powerhouse.



Photo No. 6 – View of two warning signs (arrows) posted downstream of the tailrace at Charleston Pond. The sign on the right was replaced and the sign on the left was installed as recommended during the last Environmental Inspection in 2003.



Photo No. 7 – View of the boater restraining barrier upstream of the Route 105 bridge. Note a “Danger Hydro Electric Dam Ahead” sign removed during renovations on the bridge will be re-installed on the bridge guardrails.



Photo No. 8 – View of the “Danger Hydro Electric Dam Ahead” sign in the storage building. (Not shown on Photo Location Map)



Photo No. 9 – View of the directional sign pointing to the parking area to the right of the powerhouse. There is additional parking available to the left of the powerhouse.



Photo No. 10 – View of the access path to Charleston Pond. The licensee needs to remove grassy and woody growth to provide better access and post directional signage.