130 FERC ¶ 62,171
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Woronoco Hydro, LLC Project No. 2631-039

ORDER APPROVING PLANS AND SCHEDULES FOR TRASHRACK INSTALLATION AND TESTING, AND A REVISED SCHEDULE FOR DOWNSTREAM ATLANTIC SALMON SMOLT PASSAGE EFFECTIVENESS STUDY, PURSUANT TO LICENSE ARTICLE 404

(Issued March 01, 2010)

1. On January 22, 2010, Woronoco Hydro, LLC (licensee) filed plans and schedules for the installation and use of seasonal trashrack overlays, trashrack velocity testing, and a revised schedule for downstream Atlantic salmon smolt passage effectiveness studies at the Woronoco Project, as required by the Commission's Order Approving Downstream Atlantic Salmon Smolt Passage Effectiveness Report and Requiring Further Action Pursuant to License Article 404, issued July 21, 2009.[1] The Woronoco Project is located on the Westfield River in Hampden County, Massachusetts.

BACKGROUND

2. The Woronoco Project includes adjacent north and south dams. An intake structure with 1.25-inch-clear bar spacing on its trashracks and an existing downstream fish passage facility are located at the south dam. The passage facility consists of an open-topped metal chute, a timber gate, and a plunge pool that has been modified to enhance safe fish passage. The chute is located adjacent to the project's intake, and operates using a flow of 20 cubic feet per second (cfs).

LICENSE REQUIREMENTS AND STATUS

3. Article 404 of the project license, issued April 30, 2002,[2] requires a comprehensive fish passage plan (comprehensive plan), with provisions to install, operate, maintain, and evaluate upstream and downstream fish passage for Atlantic salmon and American eel. A comprehensive plan filed by the licensee was addressed in the Commission's April 20, 2006 Order Modifying and Approving Comprehensive Fish Passage Plan Pursuant to License Article 404 and Requiring Further Actions.[3] Following

[1] 128 FERC ¶ 62,050 (2009).

[2] 99 FERC ¶ 62,075 (2002).

[3] 115 FERC ¶ 62,091 (2006).

issuance of the April 20, 2006 order, the Commission issued additional modification and approval orders addressing revisions to the comprehensive plan, including the July 21, 2009 order.

4. Paragraph (B) of the July 21, 2009 order requires the licensee to file, for Commission approval, a plan and schedule for the annual installation and removal of trashrack overlays, or for the installation of new trashracks. The licensee is to consult with the Massachusetts Division of Fisheries and Wildlife (MDFW) and the U.S. Fish and Wildlife Service (FWS) regarding the plan and schedule, and provide specified information regarding agency consultation.

5. Paragraph (D) of the July 21, 2009 order requires the licensee to perform a study determining intake velocities at the trashrack, develop detailed velocity profiles under varying levels of generation, identifying any areas where velocities exceed 2 feet per second (fps). The licensee is to plan the study, and determine measures to be taken if excessive velocities are found, in consultation with the MDFW and the FWS. The order required that the results of the study be filed with the Commission within 90 days, and if the study results could not be filed by then, the licensee is to instead file a schedule for completing the study and filing the report with the Commission before April 15, 2010.

6. Paragraph (E) of the July 21, 2009 order requires the licensee to file, for Commission approval, a plan and schedule for evaluation of effectiveness of downstream salmon smolt passage at the project, with the new trashrack configuration installed, during spring 2010. The plan as specified in the order is to address issues previously raised by the MDFW, FWS, and the Millers River Chapter of Trout Unlimited (TU), and provide specified information regarding agency consultation.

7. On December 21, 2009, the licensee filed revised plans pursuant to Article 404, addressing downstream smolt passage in response to the July 21, 2009 order, as well as other elements of the comprehensive plan. The plans indicated that a draft had been provided to the resource agencies on December 11, 2009, and agency comments had not yet been received. On January 11, 2010, the Commission rejected the December 21, 2009 filing. The licensee revised its plans after obtaining comments from the agencies, and re-filed them on January 22, 2010.

LICENSEE'S PLANS AND SCHEDULES

Installation and Use of Seasonal Trashrack Overlays

8. In its January 22, 2010 filing, the licensee proposes to use 13 full-depth, removable trashrack overlay panels to protect downstream-migrating salmon smolts, and also adult eel. The use of the panels would reduce the trashrack spacing from the current 1 ¼-inch clear spacing to ¾-inch clear spacing. The removable trashrack panels would be installed annually in time for the downstream smolt migration season of April 15

through June 15, and also for the downstream adult eel migration period, September 1 through November 15. The licensee included further information on the operation and maintenance of the downstream passage facility, indicating that the racks would be cleaned automatically with a mechanical rake, supplemented by manual cleaning during periods of heavy debris load. The licensee proposes to begin the initial installation of the removable trashrack panels by March 15, 2010, and complete installation by April 1, 2010, before the downstream smolt passage season.

Trashrack Intake Velocity Study

9. The licensee proposes to perform the trashrack intake velocity study within 7 days of trashrack overlay installation this spring, or as soon as possible thereafter when sufficient river flows occur. Velocity evaluations would be based on a combination of hydraulic calculations based on screen size and open area, and in-water velocity measurements. The measurements at the screens would be taken at water depths of approximately 2, 5, 8, 11, and 13 feet, at horizontal increments of about 4 feet. Horizontal increments would be decreased to 2 feet in area closest to the penstock inlet. Measurements would be taken at the face of the rack, and also 3 feet upstream of the rack face. The velocities would be obtained during 100-percent and 80 percent unit gate openings, with the all three project units in operation. Limited velocity measurements would also be taken during spill conditions.

10. The licensee indicates that, if areas with intake velocities greater than 2 feet per second are identified, additional data would be collected in an effort to better locate and define high-velocity areas. The licensee also indicates that, if such areas of high intake velocity are found, it would consult with the MDFW and FWS, and implement agency-approved modifications to reduce impacts on smolt passage.

11. A draft trashrack intake velocity study report would then be filed with the resource agencies and the Commission within one week of completion of the study, and would include results in graphical and tabular form for resource agency review. Areas of high velocity would be addressed, with measures that could include operational restrictions or intake reconfiguration. The licensee would then file a final report with the Commission by May 31, 2010.

Downstream Atlantic Salmon Smolt Passage Effectiveness Study

12. The licensee proposes to delay the study of downstream smolt passage effectiveness because a new downstream fish bypass system is currently being designed. The details of the design would incorporate the results of the trashrack intake velocity study. The licensee plans to file the proposal for the new downstream passage system with the Commission by May 3, 2010, with a goal of installation in the summer 2010 construction season, and operational testing by September 30, 2010.

13. Because of its plans to install a new downstream fish passage facility in 2010, the licensee now proposes to conduct the studies of downstream smolt passage effectiveness in spring 2011. The licensee would revise its existing effectiveness study plan in consultation with the resource agencies, and file the revised plan with the Commission by November 2010. The effectiveness study would then be conducted in late April or early May 2011. The study would be conducted, if possible, in conjunction with testing at the licensee's Indian River Project, FERC No. 12462, located immediately upstream. If there are potential problems with high river flows, water temperatures, or equipment, the licensee would consult the resource agencies to determine the most appropriate way to proceed. The licensee indicates that a report on the effectiveness study results would be provided to the resource agencies for review by July 15, 2011. The licensee anticipates that, following receipt of agency comments and recommendations, it would be able to file a final report with the Commission by September 15, 2011. Additional testing or modification of the downstream passage system, if necessary, would then be addressed as soon as possible in the following fish passage and construction seasons.

CONSULTATION

14. The MDFW and the FWS provided comments on the licensee's plans and schedules, dated December 29, 2009 and January 21, 2010, respectively. Comments were also received from TU, dated December 30, 2009. The MDFW indicated that, after consultation with the Massachusetts Department Environmental Protection, the FWS, and TU, it accepts the licensee's plans and schedules regarding trashrack installation, velocity testing, installation of new fish passage elements to be approved by the agencies, as well as conducting effectiveness testing in spring 2011.

15. The FWS commented that more velocity measurements should be made in the licensee's intake velocity study, recommending measurements at depths of 2, 5, 8, 11, and 14 feet, using horizontal intervals of 2 to 3 feet. The FWS commented that the licensee's schedule for intake velocity reporting was generally acceptable, but that because the downstream smolt passage season would be underway during part of the indentified period, remedial measures should be implemented as soon as agency concurrence is received, rather than possibly waiting for Commission approval of a final report. The FWS noted that the licensee needs to proceed with resource agency consultation regarding plans for downstream effectiveness testing of the new downstream passage system in spring 2011, and that testing would need to proceed at Woronoco in spring 2011 regardless of whether the Indian River Project is ready for testing.

16. TU indicated that the licensee's plans for a revised downstream fish passage system would need to address the passage of required minimum flows, and also commented that more intake velocity measurement points would be needed, and that the exact location of the measurement points should depend on the size and location of the penstock opening.

DISCUSSION

17. The plans and schedules in the licensee's January 22, 2010 filing adequately address the requirements of the July 21, 2009 order's paragraphs (B), (D), and (E) regarding seasonal trashrack overlays, study of trashrack intake velocities and measures to address excessive velocities, and evaluation of downstream salmon smolt passage effectiveness at the Woronoco Project.

18. Regarding the licensee's trashrack intake velocity study, we agree with the FWS and TU that the spacing between water velocity measurement points at the trashrack need to be reduced. The licensee should use the spacing identified by the FWS, or use alternative spacing identified in agreement with the MDFW and the FWS.

19. We also agree with FWS regarding the need to implement measures addressing areas of high velocity identified during the trashrack intake velocity study as soon as possible in order to best protect the 2010 downstream smolt migration. Therefore, the licensee should file a draft trashrack intake velocity study report with the resource agencies and the Commission within one week of completion the study, implement modifications to address areas of high velocity following approvals by the MDFW and the FWS, and then describe the results of the velocity testing and any measures taken in the final report filed with the Commission by May 31, 2010. However, we note that any significant changes to approved project features would require prior Commission approval. The licensee should consult with the Commission prior to proceeding with any modifications that may constitute significant changes.

20. The licensee should follow the operation and maintenance procedures included in its January 22, 2010 filing to help ensure successful operation of the downstream passage facility. However, the licensee should re-file this material as a separate operation and maintenance plan, for Commission approval, at the same time that the final downstream passage effectiveness study report is filed. The operation and maintenance plan should include any modifications identified in the passage effectiveness testing, and contain copies of resource agency approvals of the plan.

21. With the modifications we identify above, the licensee's plans and schedules regarding the use of seasonal trashrack overlays, identification and mitigation for any areas of high intake velocity, and evaluation of downstream passage effectiveness at the Woronoco Project adequately address the requirements of the Commission's July 21, 2009 order, and address protection of downstream-migrating Atlantic salmon smolts in spring 2010, and also downstream smolt passage effectiveness testing.

22. The licensee should keep the resource agencies and the Commission informed of any issues that may affect the schedules discussed in this order, so that effective downstream Atlantic salmon smolt passage can be provided at the Woronoco Project as quickly as possible.

23. Further, the Commission should reserve the right to require changes to project structures, fish passage facilities, or operation, based on information provided by the licensee, the FWS, or the MDFW, in order to ensure the effective passage of Atlantic salmon smolts downstream at the Woronoco Project.

The Director orders:

(A) Woronoco Hydro, LLC's (licensee) plans and schedule for the installation and use of seasonal trashrack overlays at the Woronoco Project, as described in the licensee's January 22, 2010 filing, fulfill the requirements of paragraph (B) of the Commission's July 21, 2009 order, and are approved.

(B) The licensee's January 22, 2010 plans and schedule regarding a trashrack intake velocity study, and mitigation for any areas of high intake velocity, fulfill the requirements of paragraph (D) of the Commission's July 21, 2009 order and are approved, with the following modifications: (1) the licensee shall use spacing between intake velocity measurement points as identified by the U.S. Fish and Wildlife Service (FWS), or use alternative spacing as determined in agreement with the FWS; and (2) any areas of high velocity be addressed through measures approved by the Massachusetts Division of Fisheries and Wildlife Resources and the FWS, and described in the final report to be filed with the Commission by May 31, 2010. If measures necessary to address areas of high velocity might constitute significant changes to approved project features, the licensee shall consult with the Commission prior to implementing the modifications that may constitute significant changes.

(C) The licensee's January 22, 2010 schedule to file a revised downstream Atlantic salmon smolt passage effectiveness study plan for Commission approval by November 30, 2010, addresses paragraph (E) of the Commission's July 21, 2009 order, and is approved. The study plan shall include copies of completed consultation with the Massachusetts Division of Fisheries and Wildlife Resources (MDFW) and the U.S. Fish and Wildlife Service (FWS), and indicate that the study shall be conducted by May 15, 2011. The study plan shall also indicate that study results shall be provided to the MDFW and the FWS for comment by July 15, 2011, and that the final report, including copies of comments from the MDFW and the FWS, made with the Commission by September 15, 2011.

(D) The licensee shall follow the downstream passage facility operation and maintenance procedures included in the January 22, 2010 filing. The licensee shall then file a separate operation and maintenance plan, for Commission approval, at the same time that the final downstream passage effectiveness report is filed. The filed operation and maintenance plan shall include any modifications identified in the passage effectiveness testing, and shall contain copies of approvals of the plan from the Massachusetts Division of Fisheries and Wildlife Resources and the U.S. Fish and Wildlife Service.

(E) The licensee shall keep the Massachusetts Division of Fisheries and Wildlife Resources, the U.S. Fish and Wildlife Service, and the Commission informed of any issues that may affect the schedules discussed in this order, so that effective downstream Atlantic salmon smolt passage can be provided at the Woronoco Project as quickly as possible.

(F) The Commission reserves the right to require changes to project structures, fish passage facilities, or operation, based on information provided by the licensee, the Massachusetts Division of Fisheries and Wildlife Resources, or the U.S. Fish and Wildlife Service, in order to ensure the effective downstream passage of Atlantic salmon smolts at the Woronoco Project.

(G) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

Heather Campbell
Acting Director
Division of Hydropower Administration
and Compliance

Document Content(s)