

UNITED STATES OF AMERICA 110 FERC ¶ 62, 146
FEDERAL ENERGY REGULATORY COMMISSION

Upper Peninsula Power Company

Project No. 1864-021

ORDER MODIFYING AND APPROVING WATER QUALITY MONITORING
PLAN UNDER ARTICLE 409

(Issued February 16, 2005)

On January 27, 2004, Upper Peninsula Power Company (licensee) filed its water quality monitoring plan under article 409 of the license for the Bond Falls Hydroelectric Project (FERC No. 1864).¹ The project is located on the Ontonagon River in Ontonagon and Gogebic Counties, Michigan, and Vilas County, Wisconsin.

WATER QUALITY REQUIREMENTS

Article 408

Article 408 requires the licensee to maintain water quality standards, for the protection and enhancement of aquatic resources in the Ontonagon River. The licensee must not discharge water from the Bond Falls Project developments into the riverine reaches of the Ontonagon River that exceed the following temperature limits (Fahrenheit):

	<u>Victoria, Bergland and Cisco Dams</u>	<u>Victoria Powerhouse and Bond Falls Dams</u>
January	38	38
February	38	38
March	41	43
April	56	54
May	70	65
June	80	68
July	83	68
August	81	68
September	74	63
October	64	56
November	49	48
December	39	40

In addition, the licensee must not cause the dissolved oxygen (DO) concentration

¹ August 20, 2003 Order Approving Settlement and Issuing New License (104 FERC ¶ 62,135).

in the Cisco and West Branches of the Ontonagon River immediately downstream of the Cisco, Bergland and Victoria dams to be less than 5 milligrams per liter (mg/l). The licensee must not cause the DO concentration measured in the Middle Branch of the Ontonagon River and in Roselawn Creek downstream of the Victoria Powerhouse and the Bond Falls Dams to be less than 7 mg/l.²

In the event that these water temperature and DO limits are not met, the licensee must notify the Surface Water Quality Division of the Michigan Department of Environmental Quality (MDEQ) within one working day, and take all reasonable steps necessary to ensure that compliance with the water quality limits are achieved, consistent with the water quality mitigation requirements of Article 409.

Article 409

Article 409 requires the licensee to file for Commission approval, a Water Quality Monitoring Plan, to document compliance with the water quality requirements of Article 408. The monitoring plan must include a three-year monitoring period for DO and temperature, provisions for subsequent monitoring based upon the results of the initial three-year monitoring period, and provisions for mitigation as described herein. All water quality monitoring must be funded by the Mitigation Enhancement Fund described in Settlement Condition 7. If the fund is exhausted, the licensee must fund the remaining activities as determined in the Water Quality Monitoring Plan.

The licensee must consult with the MDEQ, and other members of the Bond Falls Project Implementation Team (Implementation Team),³ prior to filing the Plan with the Commission. Monitoring locations downstream of each of the project discharges must be determined in consultation with the MDEQ and other Implementation Team members. These monitoring locations must be in areas of complete mixing. The licensee must include with the Plan an implementation schedule, documentation of consultation, copies of agency comments and recommendations on the draft Plan, and specific descriptions of how the comments are accommodated by the Plan. The licensee must allow a minimum of 30 days for agency comments and recommendations before filing the Plan with the Commission. If the licensee does not adopt a specific recommendation, the filing must include the licensee's reasons, based on project-specific information.

² As clarified in the Commission's February 14, 2005 Order on Rehearing (110 FERC ¶ 61,141).

³ The members of the Implementation Team include: the licensee, U.S. Forest Service (USFS), U.S. Fish and Wildlife Service, Wisconsin Department of Natural Resources, Michigan Hydro Relicensing Coalition, American Rivers, American Whitewater Affiliation, Keweenaw Indians, and Michigan Department of Natural Resources (MDNR).

In the event that monitoring studies demonstrate that the water quality limits of Article 408 are exceeded, the licensee must first implement operational measures to improve water quality, such as spilling a portion of required flow releases from applicable facilities. The licensee must bear the cost of any operational measures to improve water quality. Least cost structural solutions shall be the next preferred option. Required structural mitigation shall be funded by the Mitigation Enhancement Fund until the Fund is exhausted, upon which the licensee must fund the remaining amount. All water quality mitigative measures must be developed and implemented in consultation with the MDEQ and other members of the Implementation Team.

Plans for structural modifications to improve water quality must be filed with the Commission for approval, prior to construction of any such modifications. These plans must be developed in consultation with the MDEQ and other members of the Implementation Team, and must include design drawings and estimated construction and operations costs for any structural modifications, a schedule for constructing the modifications, documentation of consultation, copies of agency comments and recommendations on the structural modifications, and specific descriptions of how agency comments were addressed.

The Commission reserves the right to require changes to the Water Quality Monitoring Plan and any planned structural modifications. The Water Quality Monitoring Plan must not be implemented until the licensee is notified that the Plan is approved. Further, no ground-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the structural modification plan is approved. Upon Commission approval, the licensee shall implement the Water Quality Monitoring Plan and any necessary structural modifications according to the approved schedule, including any changes required by the Commission.

LICENSEE'S PLAN

Temperature and Dissolved Oxygen Monitoring Locations and Schedule

Water temperature and DO data will be collected on an hourly basis (24 measurements per day, per location) at five sites within the Bond Falls Project. The licensee will consult with the MDEQ and the Implementation Team to determine exact locations in 2004 to assure optimal monitoring capability in areas where complete mixing has occurred and adequately represents the mixing zones prior to installing equipment. The licensee will monitor DO concentrations and water temperature from June 1 through September 30 in 2005, 2006, and 2007. The licensee proposes the following locations for compliance with the requirements: (1) downstream of Cisco Dam, the licensee will monitor in the Cisco Branch of the Ontonagon River, approximately 1 mile downstream of the Cisco dam where a logging road crosses the Cisco Branch of the Ontonagon River; (2) downstream of Bond Falls flowage, in Roselawn Creek, the licensee will monitor

where Bond Falls road crosses Roselawn Creek; (3) downstream of the Bond Falls flowage, the licensee will monitor downstream of the Bond Falls dam in the Middle Branch of the Ontonagon River at the walkway below the falls; (4) downstream of Bergland dam, the licensee will monitor below the Bergland dam in the West Branch of the Ontonagon River; and (5) downstream of Victoria powerhouse, the licensee will monitor below the Victoria powerhouse in the West Branch of the Ontonagon River downstream of the confluence of the discharge channel and the main river channel.

Per the Bond Falls settlement agreement, the licensee will operate the Victoria powerhouse in run-of-river mode from April 15 through June 15. After June 15, discharge from the Victoria reservoir will occur from the Victoria powerhouse. Due to this limited discharge period into the bypassed reach of the Ontonagon River below the Victoria dam, the licensee proposes that the requirements to monitor below the Victoria dam be removed.

Monitoring Equipment and Quality Assurance

Water temperature and DO data will be collected using portable water quality monitoring equipment. All monitoring equipment will be calibrated for DO prior to deployment according to the manufacturer instructions. The instruments shall be cleaned and calibrated at least once every two weeks during the annual monitoring period. At the time the monitoring equipment is removed from monitoring, a post deployment calibration will be performed per the manufacturer instructions to determine loss of calibration, with a goal of less than 1.0 mg/L drift or error at least 70% of the time over the season. The licensee will consult with the resource agencies to determine the cause and downstream extent of the deviations from water quality standards and determine appropriate corrective action.

Dissolved Oxygen and Temperature Profile

At the Victoria and Bond Falls developments, vertical temperature and DO profiles will be performed monthly from June 1 through September 30. Secchi disk depth measurements will be made at the same time as the profile. The profile will be performed from a safe and easily accessible location on the top of the dam. When secchi disk readings are taken, weather conditions will be noted on the field sheets (time of day, cloud cover, wave conditions).

Profiles will be performed at 0.5 meter intervals using a hand held DO monitoring device. Water temperature and DO measurements will be replicated by using a second hand held device at both surface and bottom of the basin. In the event that replicate analyses differ by more than 1.0 mg/L DO or 1.8°F (1°C), the meters will be recalibrated and the profile will be repeated. Results of the profiles and secchi disk readings will be included in the annual report.

Annual Monitoring Results – Reports

All temperature and corrected DO data will be compiled and summarized in an annual report submitted to the Commission, MDEQ, and to members of the Implementation Team. A hard copy of the report will be filed with the Commission, and electronic copies of the data will be provided to the MDEQ and Implementation Team members in Excel format. A report will be submitted within 30 days of the completion of the annual monitoring period. For each continuous monitoring location, the following information will be provided:

- 1) A summary of all data collected with a determination of the monthly minimum, maximum, and average temperature and DO concentration at each monitoring location. All DO data corrected for calibration drift and raw temperature data will be presented in tabular and graphical form. All data gaps, if they occur, shall be explained.
- 2) A comparison of temperature and DO data with the state water quality standard will be presented in graphical form. Any deviations from the water quality standard shall be explained, including environmental factors and operational conditions that may have contributed or mitigated water quality conditions.
- 3) All quality assurance data.
- 4) A summary of the frequency and magnitude of any values that exceed the limits at each station.

Monitoring Schedule Amendments

In the event that monitoring studies demonstrate that the water quality limits of article 408 are exceeded, the licensee will consult with the MDEQ and the Implementation Team to determine any operational measures to be implemented to improve water quality. The licensee will bear the cost of any operational measures to improve water quality. If operational measures fail to improve water quality, least cost structural solutions will be the next option. All water quality mitigation measures shall be developed and implemented in consultation with the MDEQ and members of the Implementation Team. The Mitigation Enhancement Fund shall fund any required structural mitigation until the fund is exhausted, at which point the licensee will fund the remaining costs. Structural mitigation plans shall be developed in consultation with the MDEQ and Implementation Team. The licensee will file construction plans with the Commission for approval prior to any construction of modifications.

After the initial three year period of DO and water temperature monitoring, the licensee will consult with the MDEQ and the Implementation Team to determine any actions to be taken based upon the results of the initial three year monitoring period. Any additional monitoring or other actions may be implemented by the licensee through

agency consultation and upon written approval by the Commission. The Mitigation Enhancement Fund will fund any additional monitoring until the fund is exhausted, at which point the licensee will fund the remaining costs.

AGENCY COMMENTS

By letters dated December 3, 2003, the licensee requested comments from MDEQ and the Implementation Team members. The MDNR and USFS, by letters dated January 5, 2004; the MDEQ, by letter dated January 7, 2004; and the Michigan Hydro Relicensing Coalition, by letter dated December 30, 2003, provided comments on the licensee's plan and concurred with the licensee's proposal that water quality monitoring was not necessary downstream of the Victoria dam. The licensee incorporated these comments into the final plan.

DISCUSSION

The licensee's plan contains all the provisions required under article 409 of the project license. The licensee should also be required to file its annual report after each season (2005, 2006, and 2007) with the Commission. Since the licensee will file report with the agencies within 30 days of completion of the annual monitoring period, which ends September 30, the licensee should be required to file an annual report with the Commission by December 31 of each year of the monitoring season. The licensee should be required to file any agency comments it receives on the report. The report filed on December 31, 2007, should include any recommendations, for Commission approval, on actions to be taken based on the initial three year monitoring period.

So that the Commission can monitor the licensee's compliance with the requirements of article 408, the licensee should be required to file a report with the Commission of any deviations from article 408. The report should be filed within 30 days of the date that the data becomes available regarding the incident. The report should, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report should also include: (1) operational data necessary to determine compliance with article 408; (2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and (3) comments or correspondence, if any, received from the resource agencies regarding the incident. After reviewing the licensee's report, the Commission should reserve the right to require modifications to project operations or facilities to ensure future compliance.

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The licensee's water quality monitoring plan, with the above modification meets the requirements of article 409 and should, therefore, be approved.

The Director orders:

(A) The water quality monitoring plan under article 409 of the license for the Bond Falls Project (FERC No. 1864), filed on January 27, 2004, as modified by paragraphs (B) and (C), is approved.

(B) The licensee shall file an annual report with the Commission by December 31 of each year of the monitoring season (2005, 2006, and 2007). The licensee shall include any agency comments it receives on the report. For the report to be filed on December 31, 2007, the licensee shall, after consulting with the Bond Falls Implementation Team, include any recommendations, for Commission approval, on actions to be taken based on the initial three year monitoring period.

(C) If the project deviates from the requirements of article 408, the licensee shall file a report with the Commission within 30 days of the date that the data becomes available regarding the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: (1) operational data necessary to determine compliance with article 408; (2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and (3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(C) The licensee shall file an original and seven copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12.3
888 First Street, N.E.
Washington, D.C. 20426

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(D) 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 CFR § 385.713.

George H. Taylor
Chief, Biological Resources Branch
Division of Hydropower Administration
and Compliance