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December 15, 2011

VIA ELECTRONIC FILING

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission (FERC)
888 First Street NE
Washington, DC 20426

**Re: Jackson Hydroelectric Project, FERC No. P-2157
Article 407 Operation Compliance Monitoring Plan**

Dear Secretary Bose:

Enclosed for your review and approval is the Public Utility District No. 1 of Snohomish County's (District) Operation Compliance Monitoring Plan (OCMP) required by License Article 407 of the Jackson Hydroelectric Project (Project) per the Commission Order Issuing New License dated September 2, 2011.

The District provided a draft of the OCMP to the Aquatic Resource Committee on October 24, 2011 for review and comment; a copy of the transmittal is included in Appendix 2 of the OCMP. To-date, no comments have been received by any parties. As such, the District is providing the Commission with a copy of the OCMP for approval.

If you have any questions on the OCMP, please do not hesitate to contact me at (425) 783-8606 or Keith Binkley at (425) 783-1769.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kim D. Moore".

Kim D. Moore, P.E.
Assistant General Manager of Generation, Water and Corporate Services
KDMoore@snopud.com
(425) 783-8606

Enclosed: OCMP

Operation Compliance Monitoring Plan



Henry M. Jackson Hydroelectric Project
(FERC No. P-2157)



October 2011

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ACRONYMS & ABBREVIATIONS

A-LA	Aquatic License Article
ARC	Aquatic Resource Committee
District	Public Utility District No. 1 of Snohomish County
FERC	Federal Energy Regulatory Commission
MW	megawatt
OCMP	Operation Compliance Monitoring Plan
Project	Henry M. Jackson Hydroelectric Project, FERC No. 2157
SCADA	Supervisory Control and Data Acquisition
USGS	United States Geological Survey

1. INTRODUCTION

1.1. Background

Public Utility District No. 1 of Snohomish County (District) received from the Federal Energy Regulatory Commission (FERC) a new license for the existing 111.8-megawatt (MW) Henry M. Jackson Hydroelectric Project (FERC No. 2157) (Project) on September 2, 2011. The Project is located on the Sultan River in Snohomish County, Washington, near the City of Sultan. The Project was originally licensed in 1961 and amended in 1981. In 1964, construction of Culmback Dam was completed to create Spada Lake Reservoir – the source of 80% of the drinking water supplied to Snohomish County by the City of Everett. In 1984, construction of the hydroelectric portion of the Project as it exists today was completed. The Project includes a 262-foot high rock-fill dam (Culmback Dam); a 1,870-acre reservoir (Spada Lake Reservoir) operated for the City of Everett’s water supply, fisheries habitat enhancement, hydroelectric power generation, and incidental flood control; a Powerhouse and various other facilities; wildlife mitigation lands; and several developed and undeveloped recreation and river access sites.

1.2. Purpose

The purpose of the Operation Compliance Monitoring Plan (OCMP) is to describe how the District will monitor compliance with various aspects of license conditions as identified in Article 407 of the new license. Article 407 requires filing of the OCMP (see Appendix 1) within 90 days of license issuance.

1.3. Coordination and Integration

1.3.1. District’s Role

Upon approval of the OCMP from the FERC, the District will be responsible to implement the OCMP. This responsibility will include:

- providing the funding to carry out the measures as described herein;
- coordinating with surrounding landowners regarding land management in or near the Project boundary that may affect or be affected by the measures provided;
- consulting with the Aquatic Resource Committee (ARC);
- monitoring resource effects; and
- reporting to the FERC.

The District’s resource specialists and consultants will be involved as needed.

1.3.2. ARC Involvement

The District has provided a copy of the draft OCMP for a 30-day review and comment period to members of the ARC. ARC comments and the District’s responses to those comments are included in Appendix 2.

2. DOWNRAMPING RATE IN THE BYPASS REACH

The 0.5-foot-per-hour downramping rate applies to flow releases from Culmback Dam (including process flows, special purpose flows, and whitewater recreation flows) that cause the flow range at USGS Streamflow Gage No. 12137800 to be greater than 300 cfs but less than 1,000 cfs. Up to five of these types of releases can occur per year. Downramping from between 1,000 and 300 cfs will be conducted through the conservative, step-wise, incremental closing of the Howell Bunger valve following the manufacturer's rating curve. Compliance will be measured at the District's gage located upstream of the Sultan River Diversion Dam. This gage, to be installed in 2012, is outside of the impounding influence of the Diversion Dam and not influenced by flows from or to Portal 2 on the banks of Lake Chaplain. This gage is described below in Section 4 – District Gage Monitoring.

3. USGS GAGE MONITORING

By annual agreement with the USGS, the District provides Spada Lake Reservoir water surface elevation data at month end intervals to the USGS for Station 12137300. Data has always and will continue to provide hourly elevations of the reservoir. The District's expense for this service for the 2012 water year will be \$2,260.00.

Monitoring of streamflow at the Diversion Dam (USGS Station No. 12137800) and Powerhouse (USGS Station No. 12138160) is available by remote satellite telemetry and accessible by contacting the USGS on their website or by means of a link on the District's web site. By annual agreement with the USGS, the District pays for stream flow and water temperature data processing, gage calibration and maintenance, and satellite telemetry services. The data is available in 15-minute intervals. The District's expense for this service for the 2012 water year will be \$43,460.00.

4. DISTRICT GAGE MONITORING

The District will install two permanent stream gages on the Sultan River to facilitate monitoring and compliance with the requirements of the Process Flow Plan. These gaging stations will be installed and made functional by September 2012 and located upstream of the Diversion Dam and upstream of the Powerhouse. These gages will be calibrated in accordance with Chapter A10, Discharge Ratings at Gaging Stations, Techniques of Water-Resources Investigations of the United States Geological Survey. The stage discharge relationships will be verified on a quarterly basis. Data will be automatically displayed and logged in the District's SCADA system for compliance monitoring and reporting.

The equipment for the gage to be installed consists of the following:

- 1) A Druck PTX 1830 pressure transducer with 3-foot sensor range.
- 2) Wiring to retrieve the signal for the District's SCADA Remote Terminal Units located at each site.
- 3) A site staff gage anchored to rock in the vicinity of the pressure transducers.

5. INSTREAM FLOW MONITORING IN REACH 3

Minimum instream flow in the Sultan River between Culmback Dam and the Diversion Dam (Reach 3) shall be maintained either by continuous operation of the small hydro turbine and the 10-inch cone valve at the base of Culmback Dam or by use of the auxiliary water release line or combination thereof and any additional flow release facilities constructed during the term of the License. One system or the other shall be operating at all times to provide the required minimum flow. Before either one is closed or shut-off, the other shall be operating so as to maintain continuous water supply to the river. Stream gage instrumentation (including a WaterLOG H-3551 smart bubbler, GOES satellite transmitter, and staff gage) has been installed in the tailwater of Culmback Dam to monitor stage. A stage discharge rating curve will be established for this site for the purposes of verifying the valve manufacturers rating curves and documenting compliance with minimum instream flows. The valve openings and the downstream gage height shall be available for display and logging on the District's SCADA system along with the conversion of those values into flow units.

6. WHITEWATER BUDGET MONITORING

The District developed and filed with the FERC a Whitewater Recreation Plan which the FERC accepted with additional requirements by License Article 412. Flows targets for recreational event compliance will be monitored by the stream gage to be established above the Diversion Dam. Gage height data will be available for display and logging on the District's SCADA computer system. The magnitude and duration (including downramping) of the release from Culmback Dam, above that for minimum flow compliance, will be used to determine the volume to be subtracted from the three-year water budget.

7. FLOODING FROM WHITEWATER BOATING EVENTS NOTIFICATION

The District will notify the Commission within ten days of any Project-related flooding in the City of Sultan during a whitewater event as described in the Whitewater Recreation Plan modified by Article 412. The District will then file a report with the Commission within 30 days of the flooding event stating the reasons and any proposed corrective actions.

8. DEVIATIONS OF SALMON CEILING, INSTREAM FLOW, AND PROCESS RELEASES NOTIFICATION

The District will notify the Commission within ten days of any deviations from the:

- 550 cubic feet per second Chinook spawning flow ceiling required by Appendix A, condition 5.2 (A-LA 5);
- minimum instream flows required by Appendix A, condition 5.2 (A-LA 9) and Appendix B, condition 5.2 (A-LA 9);
- and process flow releases required by Appendix A, condition 5.2 (A-LA 8), and Appendix B, condition 2 (A-LA 8),

The District will file a report with the Commission within 30 days of the deviation, stating the reasons for the deviation, proposed corrective actions, and comments from the ARC as appropriate.

9. OPERATION COMPLIANCE MONITORING REPORT

The District will file an operation compliance monitoring report by November 1 of the first complete year following license issuance (November 1, 2012) and continuing annually by November 1 for each year thereafter, that documents the following for the previous water year (July through June):

- (a) the dates, duration, and quantities of the process flow released in accordance with the Process Flow Plan required by Article 416;
- (b) Spada Lake daily water surface elevations; and
- (c) if deviations from the targeted State 3 water surface elevations occurred, the reasons for the deviations and any proposals for corrective actions to avoid future occurrences, as appropriate.

The District will include with the annual operation compliance monitoring report, documentation of consultation with the National Marine Fisheries Service, the Forest Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Tulalip Tribes, Snohomish County, City of Everett, City of Sultan, and American Whitewater (Aquatic Resource Committee, as it may be revised in accordance with Appendix B, condition 2 (A-LA 1)), copies of comments and recommendations on the completed report after it has been prepared and provided to the ARC, and specific descriptions of how the ARC's comments are accommodated by the report. The District will allow a minimum of 30 days for the ARC to comment and to make recommendations before filing the report with the Commission. If recommendations are not adopted, the District will include reasons based on project-specific information.

Appendix 1

License Article 407

Article 407. *Operation Compliance Monitoring Plan*. Within 90 days of license issuance, the licensee shall file with the Commission, for approval, an Operational Compliance Monitoring Plan. The plan at a minimum shall include:

(1) the methods and schedule for ensuring compliance with the 0.5-foot-per-hour downramping rate in the bypassed reach downstream of Culmback dam (reach 3) required by Appendix A, condition 5.2 (A-LA 5);

(2) a provision to ensure that the powerhouse gage, Sultan River diversion dam streamflow gage, and Spada Lake water surface elevation gage (U.S. Geological Survey gage nos. 12138160, 12137800, and 12137300, respectively) are operated and maintained to provide streamflow and lake level monitoring at no less than 15-minute intervals for the term of the license;

(3) a detailed description of the proposed streamflow gages that would be installed immediately upstream of the powerhouse and Sultan River diversion dam to monitor compliance with the process flows required by Appendix A, condition 5.2 (ALA 8) and Appendix B, condition 2 (A-LA 8), including, at a minimum, the equipment that would be used, how the gages would be calibrated, whether the gages would be temporary or permanent, and the frequency at which stage discharge relationships would be verified;

(4) a detailed description of how the licensee will monitor minimum instreamflow releases in reach 3 during implementation of phase I and phase II of the Water Temperature Conditioning Plan, as referenced by Appendix A, condition 5.2 (A-LA 3), and Appendix B, condition 2 (A-LA 3);

(5) a description of how the licensee will monitor the amount to be deducted from the whitewater boating water budget for each whitewater event (discharge measured upstream of the Sultan River diversion dam, minus accretion between Culmback dam and the diversion dam), as set forth in the Whitewater Recreation Plan referenced by Appendix A, condition 5.2 (A-LA 4); Appendix B, condition 2 (A-LA 4); and Article 413.

(6) a provision to notify the Commission within ten days of any project-related flooding in the city of Sultan during a whitewater event as described in the Whitewater Recreation Plan modified by Article 412, and to file a report with the Commission within 30 days of the flooding event stating the reasons and any proposed corrective actions;

(7) a provision to notify the Commission within ten days of any deviations from the 550 cubic feet per second Chinook spawning flow ceiling required by Appendix A, condition 5.2 (A-LA 5); minimum instream flows required by Appendix A, condition

5.2 (A-LA 8) and Appendix B, condition 5.2 (A-LA 8); and process flow releases required by Appendix A, condition 5.2 (A-LA 9), and Appendix B, condition 2 (A-LA 9), and to file a report with the Commission within 30 days of the deviation, stating the reasons for the deviation and proposed corrective actions, as appropriate;

(8) a provision to file an operation compliance monitoring report by November 1 of the first complete year following license issuance and continuing annually by November 1 for each year thereafter, that documents the following for the previous water year (July through June): (a) the dates, duration, and quantities of the process flow released in accordance with the Process Flow Plan required by Article 416; (b) Spada Lake daily water surface elevations; and (c) if deviations from the targeted State 3 water surface elevations occurred, the reasons for the deviations and any proposals for corrective actions to avoid future occurrences, as appropriate.

(9) a provision to include with the annual operation compliance monitoring report required by item (8), documentation of consultation with the National Marine Fisheries Service, the Forest Service, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Ecology, Tulalip Tribes, Snohomish County, City of Everett, City of Sultan, and American Whitewater (Aquatic Resource Committee, as it may be revised in accordance with Appendix B, condition 2 (A-LA 1)), copies of comments and recommendations on the completed report after it has been prepared and provided to the Aquatic Resource Committee, and specific descriptions of how the Aquatic Resource Committee's comments are accommodated by the report. The licensee shall allow a minimum of 30 days for the Aquatic Resource Committee to comment and to make recommendations before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information. The Commission reserves the right to require changes to project operations or facilities based on information contained in the report and any other available information.

The licensee shall include with the Operation Compliance Monitoring Plan, documentation of consultation with the members of the Aquatic Resource Committee, copies of comments and recommendations on the completed plan after it has been prepared and provided to the Aquatic Resource Committee, and specific descriptions of how the Aquatic Resource Committee's comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the Aquatic Resource Committee to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. Implementation of the plan shall not begin until the plan is approved by the Commission. Upon Commission approval, the licensee shall implement the plan, including any changes

required by the Commission.

Appendix 2

Documentation of Consultation

Presler, Dawn

From: Presler, Dawn
Sent: Monday, October 24, 2011 12:14 PM
To: 'steven.m.fransen@noaa.gov'; 'Tim_Romanski@fws.gov'; 'Loren Everest'; 'Maynard, Chris (ECY)'; 'Applegate, Brock A (DFW)'; 'Leonetti, Frank'; 'Jim Miller'; 'Deborah Knight'; 'okeefe@amwhitewater.org'
Cc: Binkley, Keith; Moore, Kim; Meaker, Bruce
Subject: ARC - Article 407 - draft OCMP for your 30-day review - due November 23
Attachments: Operation Compliance Monitoring Plan.pdf

Dear ARC,

Per Article 407 of the new License for the Jackson Project, attached for your 30-day review and comment period is the DRAFT Operation Compliance Monitoring Plan. Please provide comments back no later than **November 23** (earlier the better though), so they can be reviewed and responded to as part of the FINAL plan. Requirements for this plan can be found in Article 407 of the license (also included as an appendix to the OCMP).

Thanks!

Dawn J. Presler
Sr. Environmental Coordinator
Generation Resources

Snohomish County PUD
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