



SUBJECT - Low Impact Hydropower Institute (LIHI) Recertification Review for the Worumbo Hydroelectric Project (FERC-3428)

BACKGROUND

The Miller Hydro Group's (MHG) Worumbo Hydroelectric Project (Project), FERC-3428, is located on the Androscoggin River at river mile 8 (RM), in Lisbon Falls and Durham, Maine. The Worumbo Project is the third dam on the Androscoggin River, upstream from the Brunswick Hydroelectric Project (FERC-2284) and the Pejepscot Hydroelectric Project (FERC-4784). Other FERC regulated hydro projects above Worumbo are Rumford Falls (FERC-2333) in Rumford, Maine, the Riley-Jay-Livermore sites (FERC-2375) in Riley/Jay/Livermore, Maine, Otis (FERC-8277) in Chisholm, Maine, Gulf Island - Deer Rips (FERC-2283) in Lewiston, Maine, Lewiston Falls (FERC- 2302) in Lewiston, Maine and Upper Androscoggin (FERC-11006) in Lewiston, Maine.

The original 40-year license for the Project was issued on December 24, 1985. An order amending the license and revising annual charges was on issued October 3, 1990. On August 13, 1998, based on consultations with state and federal resource agencies, the license was once more amended by FERC. The project currently operates based on changes approved in this order.

The Project consists of gated and non-gated spillway sections. The non-gated spillway is comprised of two sections; a concrete ogee spillway with a crest elevation at 97.0 ft.¹, and a center rock ledge section containing a concrete dike with a crest elevation at 97.0 ft. Both sections have two-foot-high hinged flashboards installed. The gated section is a 520 foot long concrete spillway with three independently operable pneumatic flashboard sections; seventeen (17) 2.17 ft. panels, eight (8) 1.75 ft. panels, and twenty one (21) 2.25 ft. panels. This crest gate/flashboard system is designed to fail when overtopped by two (2) feet of water. The dam creates an impoundment with a surface area of 190 acres and a volume of 2,000 acre-feet at a normal full pond elevation of 98.5 ft.

The power facilities consist of an intake section; and an integral powerhouse equipped with two (2) turbine-generator units having a rated total capacity of 19.4 MW at a net operating head of 30.5 ft. The average annual generation from the Project is approximately 93.4 GWh.

The project is primarily operated as a run-of-river facility. However, during power system emergencies, current operation permits the impoundment to be drawn down a maximum of 1.5 feet (98.5 ft. to 97.0 ft.). Power system emergencies can be initiated to allow to provide short-term reserve capacity to the interstate power grid or to provide ancillary services (i.e., Automatic Generation Control) to the power grid under deregulated market conditions. Minimum flow releases from the project are maintained at the lesser of 1,700 cfs or inflow during impoundment refilling.

The project is also operated to provide seasonally-varied minimum flows into the 850 foot long bypassed river reach between the Durham-side dam and the end of the tailrace training wall.

¹ All elevations are referenced to mean sea level (MSL).



The Project's current five year LIHI certification ended on March 13, 2013. MHG submitted an application for recertification of the Project on May 1, 2013.

LIHI RE-CERTIFICATION PROCESS

Recertification review focuses solely on determining the answers to the following two questions:

- 1) Has there been a material change in circumstances since the original certification was issued?

For purposes of recertification review, a "material change in circumstances" will mean one or both of the following:

(a) Non-compliance: Since receiving its last certification from LIHI, the certificate holder/applicant has not implemented, or has delayed implementing, or has done an inadequate job of implementing obligations at or near the facility that are of relevance to LIHI's criteria. These obligations could be in the form of terms and conditions of license(s), settlement agreements, resource agency recommendations or agreements, LIHI conditions of certification including annual notifications, agreements with local municipalities or other third parties or similar relevant obligations; or

(b) New or renewed issues of concern that are relevant to LIHI's criteria: Since receiving its last certification from LIHI, either new issues of concern and relevance to LIHI's criteria have emerged that did not exist or were not made known to LIHI at the time of certification, or there continues to be ongoing problems with previously known issues that appeared to LIHI to be resolved or on the road to resolution at the time of certification but in fact are not resolved, and are ongoing at the time of the re-certification application.

If a new license, settlement agreement, prescription, biological opinion or other similar regulatory decision has been made since the original recertification, these documents will be evaluated to determine if new or renewed issues have been raised.

- 2) Have any of LIHI's criteria, or the Board's interpretation of one or more criterion, changed in meaningful ways since original certification that are applicable to the circumstances of the facility seeking re-certification?

MHG's Recertification Application was reviewed to assess adherence to the LIHI certification criteria with the above in mind. A FERC e-library search was conducted to verify claims in the Recertification Application. The docket search was confined to the period from the start of the previous LIHI certification, approximately March 1, 2008 through November 11, 2013, for FERC docket number P-3428. Appendix A contains a reversed chronological list of docket items pertaining to this recertification.

No major issues were found in the docket search.

This reviewer emailed each of the following individuals listed in the Project's Recertification application. In my email I stated, "I am a Low Impact Hydro Institute (LIHI) reviewer tasked with determining whether the Worumbo Project should be certificated for another 5 year term. I am



emailing you today because you have been identified by the owner as agency contacts familiar with the Worumbo Project. I would appreciate either a quick email response or a call to my cell (315-715-1556) to get your perspective regarding the project's operation over the last 5 years with regard to satisfying its environmental obligations as defined within its FERC articles. Thank you for your time in this matter."

Agency responses follow:

- Maine Department of Marine Resources (MDMR), 21 State House Station, Augusta, Maine 04333: Mark Lazzari - (207.624.6358) - Mark.lazzari@maine.gov. – No response to date².
- Maine Department of Marine Resources (MDMR), 6 Beech St. Central Building, Hallowell, ME 04347: Paul Christman - (207.624.6352) - Paul.Christman@maine.gov. No response to date.
- U. S. Fish & Wildlife Service (USFWS), 17 Godfrey Drive, Suite 2, Orono, Maine 04473: Steven Shepard - (207.866.3344) - Steven_Shepard@fws.gov. Steven responded by email, *"The project is now subject to an Interim Species Protection Plan (ISPP) designed to protect endangered Atlantic salmon. This is administered by NOAA and you should contact them regarding compliance matters."* Steven copied my email and his response to the NOAA representative, Jeff Murphy - jeff.murphy@noaa.gov. No response to date.
- Maine Dept. of Environmental Protection (MDEP), 17 State House Station, Augusta, ME 04333: Kathy Howatt - (207.446.2642) - Kathy.Howatt@maine.gov. No response to date.

During the last certification period, the Project's spillway has experienced substantive modifications. Given the public safety concerns of a potential failure of the deteriorated timber crib dam, the FERC initiated emergency consultation procedures under the Endangered Species Act (ESA) to find a construction alternative to remedy the situation. During the process, MHG consulted with National Marine Fisheries Services (NMFS) on various design aspects of the spillway.

NMFS issued a Biological Opinion addressing FERC's authorization of emergency actions taken at the Project to replace the Timber Crib Dam. NMFS concluded that the emergency project likely adversely affects the species and habitat of the endangered Atlantic salmon, but does not jeopardize the continued existence of the Atlantic salmon, or lead to destructive or adverse modifications of critical habitat.

On May 14, 2012, in response to NMFS's Biological Opinion, MHG submitted a draft Biological Assessment (BA) to FERC which was prepared under the emergency consultation procedures of the ESA. As an attachment to the BA, MHG submitted an Interim SPP addressing the measures needed to protect Atlantic salmon during the ongoing operation of the Project. On June 7, 2012, FERC adopted MHG's BA without modification, and requested the initiation of formal consultation under Section 7 of the ESA. The Interim SPP identified upstream and downstream passage monitoring studies necessary to develop a final SPP. The monitoring studies will be conducted for up to three years (2013, 2014, and 2015).

² An addendum to this report will be sent whenever a response is received.



RE-CERTIFICATION REVIEW

MHG meets annually with the resource agencies to discuss status of anadromous fish runs in the Androscoggin River, review fish passage operations at the Project, assess the need for further fish passage studies, and set operational parameters for the upcoming season. An annual status report is subsequently drafted, circulated, and filed with the FERC.

- 1. LIHI Criterion-Flows: Article 31 of the FERC license requires a minimum flow release, as measured immediately downstream from the dam, according to the following schedule.

| Date | Release |
|--------------------------|---------------------|
| September 1 - October 31 | 200 cfs |
| November 1 - November 30 | 50 ³ cfs |
| December 1 - April 15 | 50 cfs |
| April 16 - May 31 | 300 cfs |
| June 1 - June 30 | 200 cfs |
| July 1 through August 31 | 100 cfs |

These minimum flows may be temporarily modified by operating emergencies or by order of any jurisdictional government agency, or as authorized in advance by the Maine Department of Inland Fisheries and Wildlife (MDIFW). The licensee may release as low as 50 percent of the stated minimum flow for a period not to exceed one hour in a 24-hour period. Under releases for greater than one hour in a 24 hour period require authorization from the MDIFW.

Throughout the prior LIHI certification period, on an almost annual basis, minimum flows were not met occasionally. In each case, MHG reported the violation and gave a justifiable reason for the under release of flow. In all cases, the FERC, State and Federal Agencies have accepted MHG's explanation for under release of minimum flow.

- 2. LIHI Criterion-Water Quality: On July 13, 1998, the MDEP stated releases meet dissolved oxygen (DO) and drinking water standards and granted a water quality certification (WQC) for the project, subject to certain conditions. On January 18, 2002 MDEP issued a ruling that all compliance conditions within the WQC have been satisfied.

Throughout the prior LIHI certification period, no new areas of concern have occurred.

- 3. LIHI Criterion-Fish Passage and Protection: Article 35 of the FERC license pertains to fish passage and future study activities at the Project. The article specifies:

- a. No additional upstream or downstream fish passage studies are recommended at this time. Future studies, if any, may be determined in consultation with the resource agencies as alewife or other target populations become more abundant, as the evaluation of additional modifications may be indicated, or as additional methods and technologies appropriate to the site become available.

³ 50-cfs unless the downstream fishway is operational, in which case a release of 85-cfs is required.



- b. Upstream and downstream fish passage facilities are to be operated in a manner and on a schedule determined in consultation with the resource agencies.
- c. The licensee will meet with the resource agencies annually to discuss the status of anadromous fish runs in the Androscoggin River and the need for further passage studies. Annual status reports will be filed with the Commission following the annual meetings with the resource agencies.

Throughout the prior LIHI certification period, MHG met annually with the resource agencies to discuss status of anadromous fish runs in the Androscoggin River, reviewed fish passage operations at the Project, assessed the need for further fish passage studies, and set operational parameters for the upcoming season. Annual fish passage status reports have been subsequently drafted, circulated, and filed with the FERC.

4. *LIHI Criterion-Watershed Protection:* The existing shoreline is relatively steep and rocky with stable soils. As part of the amended license in 1998, a shoreline monitoring program (SMP) was conducted after consultation with the MDEP and the USFWS to investigate potential erosion of the reservoir shoreline due to the new proposed operating regime (i.e. allowing the reservoir to fluctuate between elevation 98.5 and 97 ft.).

No license article, settlement agreement or shoreline management plan requires that a buffer zone be dedicated for conservation purposes or that a watershed enhancement fund is required.

A review of the FERC docket indicates that during the prior LIHI certification period, no new areas of concern have occurred.

5. *LIHI Criterion-Threatened and Endangered Species:* During the last certification period, a public safety concern of a potential failure of the deteriorated timber crib dam occurred. The FERC initiated emergency consultation procedures under the ESA to find a construction alternative to remedy the situation. During the process, MHG consulted with NMFS on various design aspects of the spillway. Through consultation, in 2012, an Interim SPP addressing the measures needed to protect Atlantic salmon during the ongoing operation of the Project was developed.

The Interim SPP identifies upstream and downstream passage monitoring studies necessary to develop a final SPP. Monitoring studies will be conducted for up to three years (2013, 2014, and 2015).

All State and Federal Agencies are on board with all aspects of the emergency spillway construction plan. I recommend that MHG be required to update the status of the SPP in its annual LIHI compliance letter.

6. *LIHI Criterion-Cultural Resource Protection:* On April 17, 1998, the Maine Historic Preservation Commission (MHPO) stated after reviewing the proposed amendment to license, “Although there are or may be properties in the project area of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966, we find that the



proposed undertaking will have no effect upon such properties, in that the proposed pool operation between 98.5 and 97.0 feet, which is less than the historic operating maximum of 99.0 feet, will not exacerbate erosion of any archaeological sites located above the pool elevation.” No other cultural Resources issues were found.

Throughout the prior LIHI certification period, no new areas of concern were found.

7. *LIHI Criterion-Recreation:* MHG has constructed a boat launch facility and picnic area at the mouth of the Sabattus River to provide access for recreational boaters to the project reservoir. This facility has been deeded to the Town of Lisbon. The Town of Lisbon charges no fees for the use of the facility.

MHG constructed and maintains a canoe portage around the Project. Seasonal bank fishing from both the Durham and Lisbon shores is permitted and encouraged. MHG provides an easement across project land to the next downstream hydroelectric project to further promote bank fishing and access to the Pejepscot reservoir.

MHG sponsors an annual canoe race event in conjunction with the Town of Lisbon “Moxie Days”.

MHG charges no fees for the use of any of the above facilities.

Throughout the prior LIHI certification period, no new areas of concern were found.

8. *LIHI Criterion-Facilities Recommended for Removal:*

A review of the FERC docket indicates that during the prior LIHI certification period, MHG does not have any facility that has been recommended for removal by a natural resource agency.



RECOMMENDATION

A review of the Recertification application and a FERC docket search from the start of the previous LIHI certification, approximately March 1, 2008 through November 11, 2013, exemplifies MHG is a good steward of the environment.

MHG has been proactive regarding environmental issues associated with the Project. Most required filings were on time without the need of time extension requests. The docket search review resulted in no major non-compliance issues surfacing in the record. The project continues to satisfy the entire LIHI criteria.

During the next three years, the Interim Species Protection Plan is a major effort that must be adhered to for the Project to remain LIHI compliant. I recommend that MHG be required to update the status of the SPP in its annual LIHI compliance letter.

It is my recommendation that MHG be issued a LIHI recertification for an additional five years for the Worumbo Project, FERC Docket P-3428.

Gary M. Franc



FRANC LOGIC

*Licensing & Compliance
Hydropower Consulting & Modeling*



APPENDIX A

SUMMARY OF E-LIBRARY SEARCH (REVERSE CHRONOLOGICAL ORDER)

| DATE | ITEM |
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| 9/18/2013 | Letter informing Miller Hydro Group et al that the June 25 & August 9, 2013 incidents will not be considered run-of-river operation interruption and minimum flow deviation pursuant to Articles 30 & 31 re the Worumbo Hydroelectric Project under P-3428. |
| 9/12/2013 | Letter to Miller Hydro Group, Inc. acknowledging the 2012 Annual Fish Passage Status Report for the Worumbo Project under P-3428. |
| 8/28/2013 | Miller Hydro Group submits the updated Public Safety Plan for the Worumbo Project under P-3428. |
| 8/16/2013 | Miller Hydro Group submits the report of deviations from the required minimum flows for the Worumbo Project required by Article 30 under P-3428. |
| 7/29/2013 | Miller Hydro Group submits recommendations for the Annual Fish Passage Status Report re the Worumbo Project under P-3428. |
| 7/12/2013 | Miller Hydro Group submits report of deviations from the required minimum flows at the Worumbo Project under P-3428. |
| 6/10/2013 | Miller Hydro Group submits notification regarding the boat barrier system was installed for the season on 5/21/13 for the Worumbo Project under P-3428. |
| 6/5/2013 | Final Construction Report by NYRO for Miller Hydro Group for the Worumbo Project for the period Sept. 20, 2011 to Aug. 15, 2012 under P-3428. |
| 6/5/2013 | Final Construction Report by NYRO for Miller Hydro Group for the Worumbo Project for the period Sept. 20, 2011 to Aug. 15, 2012 under P-3428. |
| 5/31/2013 | Order approving Interim Species Protection Plan and Atlantic Salmon Passage Study Plans regarding the Miller Hydro Group's Worumbo Project under P-3428. |
| 5/30/2013 | Letter informing Miller Hydro Group, Inc. that the 4/16/13 Report of Run-of-River Deviations will not be considered a violation of Article 30 regarding the Worumbo Hydroelectric Project under P-3428. |
| 4/16/2013 | Miller Hydro Group submits Minimum Flow Deviation Report for the Worumbo Project under P-3428. |
| 3/21/2013 | Letter requesting Miller Hydro Group to submit by 9/1/13 the revised Public Safety Plan for the Worumbo Project under P-3428. |
| 3/19/2013 | Letter to Miller Hydro Group regarding the instantaneous run-of-river interruption pursuant to Article 30 of the license for the Worumbo Hydroelectric Project under P-3428. |
| 3/12/2013 | Letter informing Miller Hydro Group that the run-of-river operations deviations that occurred on 12/12/12 et al will not be considered a violation of License Article 30 regarding the Worumbo Hydroelectric Project under P-3428. |
| 12/28/2012 | Miller Hydro Group submits the report of deviations from required minimum flows for the Worumbo Project under P-3428. |
| 12/28/2012 | Miller Hydro Group submits the following report of deviations from the required minimum flows for the Worumbo Project under P-3428. |
| 12/12/2012 | Miller Hydro Group submits reports of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 12/26/2012 | MILLER HYDRO GROUP, INC. Confirmation that Miller Hydro Group's Upstream and Downstream Salmon Passage Study Plan was drafted in consultation with NMFS under P-3428. |
| 12/18/2012 | Report of MILLER HYDRO GROUP, INC. under P-3428, Miller Hydro Group's Upstream and Downstream Salmon Passage Study Plan. |
| 11/9/2012 | Miller Hydro Group submits the following report of deviations from required minimum flows for the Worumbo Project under P-3428. |
| 11/15/2012 | Letter to Miller Hydro Group regarding the minimum flow deviation for the Worumbo Hydroelectric |



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| | Project under P-3428. |
| 10/18/2012 | United States National Marine Fisheries Service submits the Biological Opinion regarding Worumbo Project under P-3428. |
| 10/19/2012 | Issuance of National Marine Fisheries Service Biological Opinion under P-3428. |
| 8/29/2012 | Miller Hydro Group submits the updated Public Safety Plan for the Worumbo Project under P-3428. |
| 8/29/2012 | Miller Hydro Group submits the Public Safety Plan for the Worumbo Project under P-3428. |
| 7/27/2012 | Miller Hydro Group submits Annual Fish Passage Status Report for the Worumbo Project under P-3428. |
| 7/29/2012 | Miller Hydro Group submits the report of deviation from required minimum flows for the Worumbo Project under P-3428. |
| 7/22/2012 | Miller Hydro Group submits status update regarding the public safety issues at the Worumbo Project under P-3428. |
| 7/10/2012 | United States Department of Commerce submits a request for formal section 7 consultation for the Worumbo Project under P-3428. |
| 7/9/2012 | Letter informing Miller Hydro Group that the run-of-river operation deviations that occurred on 6/11/12 will not be considered a violation of License Article 31 for the Worumbo Hydroelectric Project under P-3428. |
| 6/15/2012 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 6/20/2012 | Letter order accepting Miller Hydro Group Inc.'s 4/30/12 filing of the annual report on fisheries mitigation measures implemented during 2011 for the Worumbo Project under P-3428. |
| 6/7/2012 | Letter to National Marine Fisheries Service providing the Biological Assessment on effects to federally-listed Atlantic salmon during emergency dam safety repair etc. regarding Worumbo Project under P-3428 et al. |
| 4/11/2012 | Miller Hydro Group submits the report of deviations for the required minimum flows regarding Worumbo Project under P-3428. |
| 5/14/2012 | MILLER HYDRO GROUP, INC. Worumbo Spillway Rehabilitation Project Biological Assessment under P-3428. |
| 4/30/2012 | Miller Hydro Group submits Report of Deviations from minimum flows at Worumbo Project under P-3428. |
| 4/20/2012 | Miller Hydro Group submits the annual report for calendar year 2011 regarding Worumbo Hydro Station Project under P-3428. |
| 4/19/2012 | Miller Hydro Group submits status report and updated schedule for the Worumbo Project under P-3428. |
| 4/17/2012 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428, Miller Hydro Group Final Construction Report: Worumbo Spillway Rehabilitation Project. |
| 4/16/2012 | Report of MILLER HYDRO GROUP, INC. under P-3428, Miller Hydro Group: Updated BA Schedule |
| 2/27/2012 | Letter order accepting Miller Hydro Group's 1/31/12 Final Construction Report for the Worumbo Hydroelectric Project under P-3428. |
| 2/21/2012 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428, Worumbo Spillway Rehabilitation Project Completion Letters. |
| 2/3/2012 | Construction Report No.1 by NYRO for Miller Hydro Group for the Worumbo Project for the period July 12, 2011, to August 2, 2011 under P-3428. |
| 2/3/2012 | Construction Report No.1 by NYRO for Miller Hydro Group for the Worumbo Project for the period July 12, 2011, to August 2, 2011 under P-3428. |
| 2/3/2012 | Construction Report No.2 by NYRO for Miller Hydro Group for the Worumbo Project for the period August 2, 2011 to September 20, 2011 under P-3428. |
| 2/3/2012 | Construction Report No.2 by NYRO for Miller Hydro Group for the Worumbo Project for the period August 2, 2011 to September 20, 2011 under P-3428. |
| 2/1/2012 | MILLER HYDRO GROUP, INC. January FERC Construction Report and Attachments under P-3428. |
| 1/20/2012 | Report of MILLER HYDRO GROUP, INC. under P-3428, ESA Monthly Report |
| 1/20/2012 | Report of MILLER HYDRO GROUP, INC. under P-3428, January ESA Report |
| 1/11/2012 | Miller Hydro Group submits minimum flow requirements at the Worumbo Project under P-3428. |
| 12/29/2011 | MILLER HYDRO GROUP, INC. submits their December Construction Report under P-3428. |



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| 12/2/2011 | Letter to GKRSE regarding the Endangered Species Act consultation status report and schedule for the Worumbo Project et al under P-3428 et al. |
| 11/23/2011 | Status Report and Updated Schedule of Miller Hydro Group for Project No. 3428. |
| 11/22/2011 | Report of MILLER HYDRO GROUP, INC. under P-3428, November Construction Report and Attachments. |
| 11/9/2011 | MILLER HYDRO GROUP, INC. ESA October Report under P-3428. |
| 11/2/2011 | Miller Hydro Group submits letter regarding the public safety for the Worumbo Project under P-3428. |
| 10/24/2011 | Letter to Miller Hydro Group regarding the 9/30/11 letter from NMFS requesting that they modify proposed configuration for the Obermeyer crest gates for the Worumbo Project under P-3428. |
| 10/19/2011 | MILLER HYDRO GROUP, INC. October FERC Construction Report under P-3428. |
| 10/11/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. September ESA Report under P-3428. |
| 9/20/2011 | MILLER HYDRO GROUP, INC. FERC September Construction Report under P-3428. |
| 9/9/2011 | Letter order accepting Miller Hydro Group's filing of the Annual Fish Passage Status Report pursuant to License Article 35 under P-3428. |
| 9/6/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428, Monthly ESA Report: August |
| 9/1/2011 | Miller Hydro Group requests a waiver of their public safety of the boat barrier system at the Worumbo Project under P-3428. |
| 8/16/2011 | Report of MILLER HYDRO GROUP, INC. under P-3428, FERC Monthly Construction Report: August |
| 8/15/2011 | Letter informing Miller Hydro Group that the 6/22/11 deviation from flow requirements will not be considered a violation of license Articles 30 and 31 regarding the Worumbo Project under P-3428. |
| 8/9/2011 | Letter requesting Miller Hydro Group to address letter by 8/15/11 regarding the Dam Reconstruction: Downstream Public Access for the Worumbo Project under P-3428. |
| 8/8/2011 | MILLER HYDRO GROUP, INC's ESA: June Report. This filing to correct 7/8/11 filing which incorrectly attached May's report under P-3428. |
| 8/8/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428, Cofferdam Design Modification Memo |
| 8/5/2011 | Application (specify) of MILLER HYDRO GROUP, INC. under P-3428, The July ESA report is included with supporting construction photos. |
| 7/1/2011 | Miller Hydro Group submits report of deviation from required minimum flows of the Worumbo Project under P-3428. |
| 7/28/2011 | Letter informing Miller Hydro Group that the minimum flow deviations that occurred on April 13-18, 2011 will not be considered a violation License Article 31 regarding the Worumbo Hydroelectric Project under P-3428. |
| 7/26/2011 | Email dated 7/26/11 regarding the Low Perm Core under P-3428. |
| 7/20/2011 | Miller Hydro Group submits the annual fish passage status report under P-3428. |
| 7/21/2011 | Memo from Gerald Cross transmitting FERC's review of the preconstruction filing related to the spillway replacement for the Worumbo Project under P-3428. |
| 7/18/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. Public Access Memo (7/18/2011) under P-3428. |
| 7/12/2011 | MILLER HYDRO GROUP, INC. Revised SDR under P-3428. |
| 7/12/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. Worumbo Spillway Rehabilitation Project Permits under P-3428. |
| 7/12/2011 | Letter order accepting Miller Hydro Group's filing of May and June 2011 pre-construction filings regarding the Worumbo Project under P-3428. |
| 7/12/2011 | Letter order accepting Miller Hydro Group's May and June 2011 preconstruction documents & authorizing MHG to proceed with construction regarding the Worumbo Project under P-3428. |
| 7/8/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428, ESA Monthly Report: June |
| 7/8/2011 | Report of MILLER HYDRO GROUP, INC. under P-3428. ESA Monthly Report: June. |
| 7/7/2011 | Email dated 7/7/11 regarding the June 2011 Design Report Review Comments for the Worumbo Project |



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| | under P-3428. |
| 7/5/2011 | MILLER HYDRO GROUP, INC. Revisions and response to FERC's cofferdam design and QCIP requests under P-3428. |
| 7/5/2011 | Letter to Miller Hydro Group discussing the dam safety work at the Worumbo Project etc. under P-3428. |
| 6/30/2011 | Project Safety-Related Submission to NYRO of MILLER HYDRO GROUP, INC. under P-3428. Cianbro TCEAP is attached, with HDR's plan included for reference. |
| 6/30/2011 | Letter requesting Miller Hydro Group to revise its pre-construction filings of May and June 2011 regarding the Worumbo Project under P-3428. |
| 6/29/2011 | Report of Miller Hydro Group under P-3428, ESA Monthly Call Report: May |
| 6/26/2011 | Comments of Douglas H Watts regarding the 2011 Stabilization and Reconstruction Project at Worumbo Dam under P-3428. |
| 6/27/2011 | Protest of FRIENDS OF KENNEBEC SALMON under P-3428. |
| 6/17/2011 | Supplemental drawings for application (specify) of MILLER HYDRO GROUP, INC. under P-3428-000. For Construction plan set of the Worumbo Spillway Rehabilitation Project. |
| 6/13/2011 | Miller Hydro Group submits a Supporting Design Report for the Worumbo Spillway Rehabilitation Project under P-3428. Part 3. |
| 6/13/2011 | Miller Hydro Group submits Temporary Construction Emergency Action Plan in response to FERC 5/19/10 letter regarding the Worumbo Spillway Rehabilitation Project under P-3428. |
| 6/13/2011 | Miller Hydro Group submits Quality Control and Inspection Program in response to FERC 5/19/10 letter regarding the Worumbo Spillway Rehabilitation Project under P-3428. |
| 6/13/2011 | Miller Hydro Group submits Quality Control and Inspection Program in response to FERC 5/19/10 letter regarding the Worumbo Spillway Rehabilitation Project under P-3428. LARGE FORMATS ONLY. |
| 6/13/2011 | Miller Hydro Group submits letter regarding the boat barrier system at the Worumbo Project under P-3428. |
| 5/31/2011 | Miller Hydro Group submits status of the installation of the boat barriers for Worumbo Development under P-3428. |
| 5/16/2011 | Letter requesting Miller Hydro Group to provide a monthly report by 6/6/11 pertaining to the Emergency ESA consultation for dam safety work regarding the Worumbo Project under P-3428. |
| 5/13/2011 | Miller Hydro Group submits response to FERC 5/19/10 letter requesting additional information regarding the dam reconstruction for the Worumbo Spillway Rehabilitation Project under P-3428. |
| 5/13/2011 | Miller Hydro Group submits response to FERC 5/19/10 letter requesting additional information regarding the dam reconstruction for the Worumbo Spillway Rehabilitation Project under P-3428. LARGE FORMATS ONLY. |
| 5/13/2011 | Miller Hydro Group submits follow up letter providing a plan and schedule to submit the Worumbo Spillway Rehabilitation Plans et al for the Worumbo Crib Dam Replacement under P-3428. |
| 4/27/2011 | Miller Hydro Group submits the report of deviation from required minimum flow pursuant to Article 31 regarding the Worumbo Project under P-3428. |
| 5/4/2011 | Letter to National Marine Fisheries Service discussing the Emergency ESA Consultation for Dam Reconstruction regarding the Worumbo Project under P-3428. |
| 3/9/2011 | Letter order accepting Miller Hydro Group fish mitigation measures implemented during calendar year 2010 for the Worumbo Project under P-3428. |
| 2/18/2011 | Miller Hydro Group submits their annual report for 2010 calendar year for the Worumbo Hydroelectric Station Project under P-3428. |
| 1/28/2011 | Letter informing Miller Hydro Group that the incidents resulting in a deviation from the minimum flow requirements will not be considered a violation of Article 30 under P-3428. |
| 1/26/2011 | Submittal on behalf of Miller Hydro Group of letter dated January 25, 2011 to National Marine Fisheries Service summarizing the informal ESA consultation and outlines of documents to be used in the consultation for the Worumbo Project under P-3428. |
| 1/5/2011 | Miller Hydro Group submits a report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 1/7/2011 | Miller Hydro Group submits minimum flows which occurred during calendar year 2010 regarding Worumbo Project under P-3428. |



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| 12/10/2010 | Miller Hydro Group submits the report of deviation from required minimum flow of the Worumbo Project under P-3428. |
| 11/15/2010 | Letter informing Miller Hydro Group that the run of river operation deviation that occurred on 8/20/10 will not be considered a violation of license Article 30 regarding the Worumbo Project under P-3428. |
| 10/15/2010 | Miller Hydro Group submits Gross Generation at the Worumbo Hydroelectric Station for the period of 10/1/09 through 9/30/10 regarding the Worumbo Project under P-3428. |
| 10/18/2010 | Miller hydro Group submits notification of the installation of a boat barrier system on 5/13/10 at the Worumbo Project under P-3428. |
| 9/24/2010 | Miller Hydro Group requests EAP exemption continuation for the Worumbo Project under P-3428. |
| 9/7/2010 | Letter informing Miller Hydro Group that the 7/5/10 deviation from the minimum flow requirement will not be considered a violation of Article 31 regarding the Worumbo Project under P-3428. |
| 8/27/2010 | Letter to Miller Hydro Group regarding the 8/17/10 Dam Safety Inspection of the Worumbo Project under P-3428. |
| 8/20/2010 | Miller Hydro Group submits the report of deviation from required minimum flows regarding the Worumbo Project under P-3428. |
| 8/23/2010 | Letter order accepting Miller Hydro Group's 8/2/10 filing of the 2009 Annual Fish Passage Status Report for the Worumbo Project under P-3428. |
| 7/26/2010 | Miller Hydro Group submits their Annual Fish Passage Status Report for the Worumbo Project required by Article 35 under P-3428. |
| 7/23/2010 | Miller Hydro Group reports deviations to the minimum flow requirements for the Worumbo Project under P-3428. |
| 7/14/2010 | Letter to National Marine Fisheries Service regarding designation of non-federal representative for Section 7 Endangered Species Act of the Worumbo Project under P-3428. |
| 6/23/2010 | Miller Hydro Group Worumbo Project Request for Designation as Non-Federal Representative for Consultation Related to ESA Listing of Atlantic Salmon under P-3428. |
| 5/18/2010 | Comments of US National Oceanic and Atmospheric Administration National Marine Fisheries Services regarding the Worumbo Project et al under P-3428 et al. |
| 5/19/2010 | Miller Hydro Group submits letter regarding the Public Safety at the Worumbo Project under P-3428. |
| 5/19/2010 | Comment of National Marine Fisheries Service under P-3428, et al. |
| 4/5/2010 | Letter to Miller Hydro Group et al discussing the upstream and downstream fish passage issues regarding the Worumbo Project under P-3428. |
| 3/25/2010 | State of Maine submits letter regarding the Fishway Operations at Worumbo Dam and Pejepscot Dam under P-3428 & P-4784. |
| 3/25/2010 | Supplemental Information of FRIENDS OF KENNEBEC SALMON under P-3428, et. al. |
| 3/18/2010 | Letter to Miller Hydro Group responding to their 3/1/10 regarding the 1/28/10 deviation from the requirements for the Worumbo Project under P-3428. |
| 3/12/2010 | Letter order accepting Miller Hydro Group 2009 Report on Fisheries Mitigation- Article 31 for the Worumbo Hydroelectric Project under P-3428. |
| 2/22/2010 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 2/26/2010 | Response of Miller Hydro Group to Letters under P-3428. |
| 2/22/2010 | Letter informing Miller Hydro Group that the minimum flow deviation that occurred on 12/16/09 will not be considered a violation of Article 31 regarding the Worumbo Project under P-3428. |
| 1/31/2010 | Request of FRIENDS OF KENNEBEC SALMON for changes in upstream fish passage schedule at the Worumbo Dam under P-3428. |
| 1/31/2010 | Request of FRIENDS OF KENNEBEC SALMON for changes in downstream fish passage schedule at Worumbo Dam under P-3428 |
| 1/15/2010 | Miller Hydro Group submits the annual report of Fishery Management activities undertaken within the Lower Androscoggin River Watershed for the calendar year of 2009 regarding the Worumbo Hydroelectric Station under P-3428. |
| 1/10/2010 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |



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| 1/13/2010 | Miller Hydro Group submits statement concerning adherence to minimum flow requirements at the Worumbo Project under P-3428. |
| 1/12/2010 | Letter informing Miller Hydro Group that its 12/7/09 filing reporting a deviation from the flow requirements will not be considered a violation of its license regarding the Worumbo Project under P-3428. |
| 11/30/2009 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 11/17/2009 | Letter order accepting Miller Hydro Group's 7/30/09 filing of 2008 annual fish passage status report regarding the Worumbo Project under P-3428. |
| 11/3/2009 | Miller Hydro Group submits letter regarding the boat barrier system at the Worumbo Project under P-3428. |
| 7/31/2009 | Letter informing Miller Hydro Group that the Flow Modification Deviation that occurred on 5/31/09 will not be considered a violation of Article 30 for the Worumbo Project under P-3428. |
| 7/20/2009 | Miller Hydro Group submits annual fish passage status report regarding the Worumbo Project under P-3428. |
| 7/16/2009 | Incident Filing Follow-up of MILLER HYDRO GROUP, INC. under P-3428. |
| 7/16/2009 | Incident of MILLER HYDRO GROUP, INC. under P-3428. |
| 6/19/2009 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 6/3/2009 | Miller Hydro Group submits notification of boat barrier system installation at the Worumbo Project under P-3428. |
| 4/9/2009 | Letter order accepting Miller Hydro Group's report filed 3/2/09 of the 2008 Annual Report on Fisheries Mitigation- Article 31 for the Worumbo Hydroelectric Project under P-3428. |
| 3/2/2009 | Miller Hydro Group submits FERC Form 80 Licensed Hydropower Development Recreation Report for the year ending 1/8/09 for the Worumbo Project under P-3428. |
| 2/20/2009 | Miller Hydro Group submits Annual Report of Fishery Management Activities Undertaken within The Lower Androscoggin River Watershed in 2008 for the Worumbo Hydro Station Project under P-3428. |
| 2/12/2009 | Letter to Miller Hydro Group concluding that FERC will not consider the flow modifications that was reported on 12/13/08 et al violations of Article 30 regarding the Worumbo Project under P-3428. |
| 1/15/2009 | Letter to Miller Hydro Group discussing response to their 4/30/08 and 11/20/08 reports regarding deviations from the flow requirements at the Worumbo Project under P-3428 et al. |
| 12/19/2008 | Miller Hydro Group submits reports of deviations from required minimum flow at the Worumbo Project under P-3428. |
| 1/8/2009 | Miller Hydro Group submits their statement concerning adherence to minimum flow requirements at the Worumbo Project under P-3428. |
| 12/22/2008 | Miller Hydro Group submits report of deviations from required minimum flows at the Worumbo Project under P-3428. |
| 11/14/2008 | Miller Hydro Group submits Report of Deviations from required Minimum Flows regarding Worumbo Project under P-3428. |
| 10/6/2008 | Miller Hydro Group advises FERC that the gross generation at the Worumbo Hydro Station from 10/1/07 through 9/30/08 was 107,139,900kWh under P-3428. |
| 10/8/2008 | Miller Hydro Group advises FERC that the boat barrier system which was installed at the Worumbo Project on 5/28/08 was removed for the season on 10/7/08 under P-3428. |
| 9/10/2008 | Letter order accepting Miller Hydro Group's 2007 Annual Fish Passage Status Report filed on 7/28/08 for the Worumbo Project in compliance with Article 35 under P-3428. |
| 9/2/2008 | Letter to Miller Hydro Group, Inc. confirming the arrangements made about the environmental inspection for the Worumbo Project to be conducted on 9/17/08 under P-3428. |
| 7/21/2008 | Miller Hydro Group reports that on 9/24/08 that they filed its recommendations under Article 35 for future fish passage study activities at the Worumbo Project on the Androscoggin River in Maine under P-3428. |
| 5/29/2008 | Miller Hydro Group advises FERC of the boat barrier system at the Worumbo Project etc. under P-3428. |
| 5/8/2008 | Letter to Miller Hydro Group discussing the 3/12/08 filing regarding a deviation from flow requirements |



at the Worumbo Project under P-3428.

4/25/2008 Miller Hydro Group's reports of the 4/20/08 deviations from required minimum flows at the Worumbo Project pursuant to Article 31 under P-3428.

4/25/2008 Letter order accepting Miller Hydro Group's 3/8/06 et al filing of the reports on fish mitigation measures implemented for the years 2005, 2006, and 2007 at the Worumbo Hydroelectric Project under P-3428.

3/10/2008 Miller Hydro Group submits the Annual Report of Fishery Management Activities Undertaken within the Lower Androscoggin River Watershed in the 2007 pursuant to Article 31 regarding Worumbo Hydroelectric Station under P-3428.

3/7/2008 Miller Hydro Group submits their report of deviations from required minimum flows at the Worumbo Proj-3428.

1/10/2008 Miller Hydro Group reports compliance with the minimum flow requirement for the calendar year 2007 regarding Worumbo Project under P-3428.
