

STS Hydropower, LLC
c/o Eagle Creek Renewable Energy, LLC
2 Bethesda Metro Center, Suite 1330
Bethesda, Maryland 20814

July 17, 2020

Mr. Derek Haroldson
Michigan Department of Environment, Great Lakes and Energy
Kalamazoo District Office

RE: Morrow Dam (FERC No. 9000) Response to Violation Notice (010802) dated July 8, 2020 (Violation Notice)

Dear Mr. Haroldson:

STS Hydropower LLC (STS) transmits this letter in response to the Violation Notice referenced above, which relates to certain concerns with the temporary and partial emergency drawdown of Morrow Lake.

We recognize that the partial drawdown, while necessary and unavoidable, has resulted in a great deal of public and agency frustration. We do not take this lightly and are committed, through our direct efforts and our coordination with your team at the Michigan Department of Environment, Great Lakes, and Energy (EGLE), as well as the Michigan Department of Natural Resources (DNR), and the Federal Energy Regulatory Commission (FERC), to quickly take all steps reasonably necessary to mitigate those temporary impacts while we complete the dam safety work that necessitated the drawdown.

Safety – both of the public and of our employees – is STS’ number one priority. Once we determined that the condition of the Morrow Dam’s spillway gates constituted a threat to public and dam safety, we immediately began the partial drawdown of the reservoir in consultation with the aforementioned agencies. Although the drawdown has eliminated entirely the facility’s ability to produce electricity, that cost is not deterring us from taking the steps that are necessary to preserve public safety. We are eager and committed to completing all needed dam safety work so we can refill the reservoir as soon as possible, restore the public’s use of the waterways, and return to the business of generating carbon-free electricity. In support of that commitment, we set forth below our initial response to the Violation Notice.

Immediate Mitigation Measures and Long-Term Assessment of Resource Impacts and Mitigation Measures.

Your Violation Notice orders STS to pursue nine actions to mitigate the turbidity and passive downstream migration of sediments associated with the partial drawdown. Six of these actions are considered immediate mitigation measures that require an STS response and/or plan within 10

days of the date of the Violation Notice. These actions are listed below. STS's plan is provided immediately following each item.

1. Plan for immediately seeding and stabilizing the exposed bottomlands areas of the impoundment with a seed mix of Michigan species to prevent continued sedimentation from overland flow during storm events.

STS is in the process of developing a targeted seeding and stabilization plan for exposed bottomlands areas of the impoundment. The plan will utilize an aerial drone to identify target areas. An appropriate seed mix of Michigan species or other standard methodology will be utilized. STS expects to complete these activities prior to July 31, 2020.

Following stabilization activities, STS will conduct a site inspection of the targeted areas to confirm stabilization has occurred. If necessary, additional activities may be conducted.

2. Monitor and reduce offsite mobilization of sediment and turbidity during the drawdown period. Measures considered should include, but not be limited to erosion control blankets, bioengineering, turbidity curtains, bank stabilization measures, sediment traps, re-impoundment of Morrow Lake, and/or other measures to prevent offsite migration of impounded sediments.” Measures shall include the installation of electronic turbidity meters at locations both upstream and downstream of the dam. ECRE shall work with EGLE and MDNR to establish a turbidity monitoring plan that includes both seven-day average and momentary thresholds for action. The plan should include immediate notification to EGLE and MDNR upon exceedance of thresholds, and an action plan to reduce turbidity.

STS has engaged Stantec Consulting (Stantec) to develop a Turbidity Monitoring Plan. A draft of the monitoring plan will be submitted to your office for review and comment by July 24, 2020. STS expects to finalize the plan and commence turbidity monitoring no later than August 7, 2020.

STS is working with Stantec to develop an immediate mitigation action plan to minimize the passive migration of sediments from upstream of the dam. As detailed during the conference call with resource agencies on July 10, 2020, the initial phase of this plan will be the installation of a series of turbidity curtains located immediately upstream of the dam. STS has completed design plans and has identified an installation contractor and a supplier of the necessary materials. Phase 1 of curtain installation will be completed the week of July 20th. The Phase 2 curtain will be installed within one week following its fabrication and delivery to the Morrow plant. We expect Phase 2 installation to be complete by mid-August.

Following deployment of the turbidity curtains, STS will monitor them for effectiveness and evaluate additional measures as appropriate. STS proposes to

provide an update to the resource agencies on the effectiveness of the turbidity curtains and any additional proposed mitigation measures within two weeks following the installation of each phase.

3. Plan for assessing and stabilizing the developing river channel that is head cutting through the sediments of the impoundment, including assessments of any lateral migration, instability of the bed and banks.

STS plans to obtain aerial photography of the exposed bottomlands, developing river channel and any areas of instability acting as significant sources of sediment from runoff, channelization, or high flow events via aerial drone. Aerial photography will be evaluated by Stantec and mitigation measures will be developed as appropriate. STS proposes to provide an update on this evaluation and any proposed mitigation measures by August 7, 2020.

4. Plan for analyzing and comparing the pre-drawdown and post-drawdown impoundment bathymetry, and an analysis of the bed and bank scour that has occurred as a result of the drawdown. ECRE must analyze and quantify the amount of sediment mobilized as a result of the extended drawdown.

STS proposes to review pre-drawdown bathymetry data, to the extent available and relevant, and will discuss with EGLE how to determine the appropriate method for evaluating post-drawdown bathymetry and scour.

The Long-Term Assessment actions set forth in your Violation Notice (*i.e.*, Items 7, 8 & 9), as well as Item 4 above, exceed what STS considers reasonable and necessary to mitigate passive migration of sediments that may result from runoff and high-flow events during the drawdown period. STS requests the opportunity to discuss each of these items with EGLE prior to formulating a more detailed response. STS notes that STS did not generate, discharge, or dispose of any contaminants, including PCBs or hydrocarbon wastes that may be present upstream or downstream and should not be required to monitor, manage, or correct impacts from contamination caused by others who are the responsible parties.

5. Analysis of the feasibility of raising water levels in the impoundment to a higher elevation to re-impound currently exposed areas and prevent bank and bed erosion through the channel forming erosional process now occurring.

Please note that STS already made the determination to limit the drawdown. While a full drawdown would reduce the lake level by 14 feet, we determined that a 9-foot partial drawdown enables us to maintain a portion of the reservoir while still eliminating the dangerous loading on the gates. This decision significantly reduces the volume of potential sediment transport and lessens wildlife impacts.

As requested, we have continued to evaluate the appropriate level of the drawdown. At the partial, 9-foot level, additional minor modifications to the elevation will be evaluated from a benefit and a dam safety perspective. STS is working with Stantec to evaluate the benefit of different modifications to the nine-foot drawdown elevation. Following completion of the benefits analysis, STS will review the results with appropriate dam safety and operations personnel to confirm feasibility and safety. STS proposes updating the resource agencies on the results of this review and any recommended adjustments to target drawdown elevations by July 24, 2020.

6. As part of your response, please provide details on all alternatives that exist, including re-impoundment, to achieve reduced offsite mobilization of sediment. Furthermore, provide details on when re-impoundment is anticipated to commence.

As detailed in response to item number 5, STS is currently evaluating the benefit and safety of different modifications to the reservoir target drawdown elevation.

STS currently expects that Tainter gate replacement work will be completed by the end of the year, at which time reservoir refill operations can commence.

STS recognizes that there are important environmental considerations associated with the timing of reservoir refill operations. STS is managing the Tainter gate replacement project carefully to ensure maximum flexibility regarding the timing of reservoir refill. STS will continue to provide regular progress updates and will work closely with the resource agencies to coordinate the timing of the reservoir refill.

Background.

We think it is useful to all the parties to clarify the chronology of events that surrounded our decision to draw down the reservoir in order to repair the spillway gates and preserve public safety. We engaged an independent engineering contractor, Kleinschmidt Associates (Kleinschmidt), to inspect the spillway gates in Fall 2019. On an October 31, 2019, conference call with Kleinschmidt to discuss the findings of their inspection, STS determined that the deteriorated condition of the spillway gates warranted an immediate emergency drawdown to remove pressure from the gates and eliminate the risk of an uncontrolled flooding event downstream, which would have posed a considerable public health and safety risk to downstream communities. On the same day, STS notified EGLE, DNR and FERC of the need for the drawdown and began a dialogue that included measures to avoid, minimize, and mitigate potential environmental impacts. We began the drawdown the next morning. FERC acknowledged the drawdown on October 31, 2019, and reiterated the need for it on November 21 and 26. Based on EGLE and DNR requests and consultations, STS conducted the drawdown at an acceptable rate of release, performed turbidity monitoring downstream of the dam to monitor drawdown effects, conducted mussel surveys and relocations, and engaged an agency-recommended contractor to perform a field survey of aquatic organisms. As we noted to EGLE in our letter dated December 23, 2019, we understood drawing down at the rate recommended by EGLE, coupled with visual turbidity monitoring, was sufficient to address sediment migration concerns at the time.

Per our December 23rd letter referenced above, we noted that the drawdown “would be for a period of at least four months” and that an accurate projection of the full drawdown period could not be made until design work was completed and reviewed and approved by FERC. Once the partial drawdown was complete, a detailed inspection determined that the gates were in a much more deteriorated state than previously anticipated. Accordingly, this required significant modification of the repair project, including full replacement of the existing gates with stronger, custom-fabricated gates. The safety imperative of this modification to the project was clear, although it would come at much greater expense to STS, would require a longer drawdown period, and would prevent electricity generation for over a year. As mentioned above, our commitment to public safety is paramount and drove our decision to embark on the more extensive repair project. We commit to keeping the public and all other stakeholders regularly informed on a timely basis of our plans and and the replacement project’s progress.

Reservation of Rights.

As stated above and as noted in the ongoing regular collaboration discussions between agency staff and STS employees, STS will continue to fully cooperate and work with the resource agencies to monitor and mitigate any potential environmental impacts that may be encountered by natural channeling and runoff events while we continue our work to resolve the dam safety issues and replace the spillway gates.

Notwithstanding the foregoing, we respectfully maintain the position that the emergency drawdown was performed in accordance with all federal and state legal requirements applicable to a FERC-regulated dam and in coordination with EGLE and DNR. State permits were not required for the drawdown due to the superseding federal jurisdiction of FERC in this matter. Further, the safety emergency nature of the temporary drawdown and STS’s notification and consultation efforts would otherwise entitle STS to an exemption from state permits under state law, even if applicable. Additionally, the passive migration of sediments downstream are the result of natural channeling and runoff events. STS’s collaboration with the resource agencies and agreement to undertake mitigation measures is not an admission of liability under any federal or state law, and STS reserves its rights in that regard and to supplement its response.

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STS appreciates the opportunity to continue our collaboration with EGLE. In that vein, STS will continue to conduct regular bi-weekly conference call briefings to keep EGLE and other resource agencies updated on the status of the reservoir drawdown and the spillway gate replacement project.

If you have any questions or need additional information, please do not hesitate to contact David Fox, our Director of Licensing and Compliance, at (240) 724-8765 or via email at

david.fox@eaglecreekre.com. Alternatively, you may contact Melissa Rondou at (920) 293-4628 ext. 347 or by email at melissa.rondou@eaglecreekre.com.

Sincerely,
STS Hydropower, LLC



Neal Simmons
President and CEO

cc (via email):

- Senator Sean McCann
- Representative Brandt Iden
- Ms. Michelle Mohney, Comstock Township Clerk
- Mr. James Baker, City of Kalamazoo
- Mr. Tom Weaver, United States Geological Survey
- Ms. Kimberly Bose, FERC
- Ms. Angela Damron, FERC
- Mr. John Zygaj, FERC
- Ms. Jessica Pruden, U.S. Fish and Wildlife Service
- Mr. Scott Hicks, U.S. Fish and Wildlife Service
- Ms. Lisa Williams, U.S. Fish and Wildlife Service
- Ms. Cheryl Vosburg, Kalamazoo River Watershed Council
- Ms. Elizabeth Binoniemi-Smith, Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians
- Mr. John Rodwan, Nottawaseppi Huron Band of Potawatomi Indians
- Ms. Jodi Smet, ECRE
- Mr. Jay Wesley, MDNR
- Mr. Brian Gunderman, MDNR
- Mr., Matt Diana, MDNR
- Mr., Jessica Mistak, MDNR
- Ms. Kesiree Thiamkeelakul, MDNR
- Mr. Kyle Kruger, MDNR
- Ms. Amy Lounds, EGLE
- Mr. Luis Saldivia, EGLE
- Mr. Kyle Alexander, EGLE
- Mr. Luke Trumble, EGLE
- Mr. John Bayha, EGLE
- Mr. Chris Lantinga, EGLE
- Mr. Dan Peabody, EGLE