

FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects
Division of Dam Safety and Inspections - Chicago Regional Office
230 South Dearborn Street, Suite 3130
Chicago, Illinois 60604
(312) 596-4430 Office - (312) 596-4460 Facsimile

In reply refer to: P-2056

August 17, 2022

VIA Electronic Mail
Mr. Scott Crotty
Senior Operations Manager
Xcel Energy
Scott.a.Crotty@xcelenergy.com

Re: July 22, 2022 - Drilling Program Plan (DPP) for Hennepin Island Earth Dam
St. Anthony Falls Hydroelectric Project FERC No. P-2056

Dear Mr. Crotty:

The FERC received the Drilling Program Plan (DPP) as part of the geotechnical investigation of seepage in the Hennepin Island Earth Dam of the St. Anthony Falls Hydroelectric Project (P-2056). The DPP was filed in response to your June 22, 2022, 12.10 incident report.

The DPP was prepared by Barr Engineering and included existing project information, previous and proposed subsurface exploration programs, drilling scope and methodology, risk evaluation, a soils sampling and testing program and borehole completion as well as resumes of engineering and drilling personnel.

The DPP proposes to perform seven borings (and an optional boring) along the axis of the Hennepin Island Earth Dam to supplement previous investigations and provide a profile of soil/fill conditions. Depths are expected to be 20 feet, or less to refusal, using a hollow stem auger. Standard Penetration Testing (SPT) sampling will be used to retrieve soil samples for laboratory testing. Shelby tubes would be used to obtain undisturbed samples of cohesive soils, but none are anticipated. Provisions for different soil types with drilling method and fluids are considered. The DPP outlines procedures for implementation if artesian conditions are unexpectedly encountered during drilling.

The FERC has the following comments:

1. The DPP was prepared in accordance with the FERC's June 2016 version of the "Guidelines for Drilling In and Near Embankment Dams and Their Foundations."

2. The resumes of drillers from American Engineering Testing, Inc. demonstrate that they meet the minimum 5 years of experience in drilling with the equipment, procedures, and sampling described in the DPP.
3. The resumes for the engineers from Barr and Hatch that form the DPP team were included and show that the engineering support and field supervisory personnel all have more than the FERC required minimum 5 years of experience in drilling with the equipment and procedures described in the DPP.
4. The Hennepin Earth Island Dam should be continuously inspected and monitored using appropriate procedures and instrumentation during drilling operations. As noted in the DPP, an experienced geotechnical engineer is expected to be onsite during drilling operations to log the encountered subsurface conditions, groundwater observations, provide oversight throughout the drilling process to identify signs of damage, and to notify emergency contacts if appropriate.
5. Any changes to the plans and specifications should be coordinated between the Consulting Engineer, Barr Engineering, and FERC. Any change in the operation of the project should be properly coordinated with FERC and understood by the drilling team.
6. We understand that the drilling is expected to take place in September 2022 and will likely require multiple days. A weekly email to Mr. Scott Airato should be provided with preliminary results. Any aberrant conditions encountered should be reported to FERC staff as soon as practical after the situation is discovered, without interfering with any necessary emergency response.

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|-----------------|--|--------------|
| Scott Airato | scott.airato@ferc.gov | 312-596-4431 |
| Kevin Griebenow | kevin.griebenow@ferc.gov | 312-596-4436 |
| Olaf Weeks | olaf.weeks@ferc.gov | 312-596-4451 |
| John Zygaj | john.zygaj@ferc.gov | 312-596-4437 |

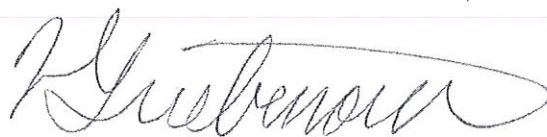
You may proceed as proposed.

The final report that includes the boring logs and sample testing results along with your plan and schedule to address any findings are due by **November 30, 2022**. File this report using the Commission's eFiling system at <https://www.ferc.gov/ferc-online/overview>. For all Dam Safety and Public Safety Documents, select Hydro: Regional Office and Chicago Regional Office from the eFiling menu. The cover page of the filing must indicate that the material was eFiled. For assistance with eFiling, contact

FERC Online Support at FERCOnlineSupport@ferc.gov, (866) 208-3676 (toll free), or (202) 502-8659 (TTY).

You may contact Mr. Scott Airato at 312.596.4431 (scott.airato@ferc.gov) or me at (312) 596-4430 if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "J. Zygaj".

for John A. Zygaj, P.E.
Regional Engineer