PROJECT PROFILE

PART 12D INSPECTION AND FACILITATION SERVICES FOR HYDRO FACILITIES

D'Appolonia was retained by STS Hydropower, Ltd. to provide FERC Part 12D Independent Consultant services related to inspection of the French Landing Dam on the Huron River in Van Buren Township of Wayne County, Michigan. The project consists of a power plant, two sector gates, a 204-foot-long overflow spillway section, and two lateral earth embankments.

Aerial view of the French Landing Project on the Huron River in Michigan.

The scope of work for the hydropower facility inspection included a field inspection of the project components and a review of all documentation associated with the plant including the Supporting Technical Information Document (STID) and the Potential Failure Mode Analysis (PFMA) report. A comprehensive inspection report was prepared for each facility documenting the observed conditions with respect to the criteria set forth in federal guidelines.

The inspection included a review of the Surveillance and Monitoring Plan including review of recorded data and analysis of the data for observable trends. The Operation and Maintenance Program was also evaluated. Plant staff were questioned relative to documentation and implementation of O&M procedures.

D'Appolonia also provided facilitation services for a PFMA session conducted as part of the Part 12D Inspection process for the Cascade Dam located on the Thornapple River in Cascade Township, Kent County, Michigan. This project consists of a two-unit powerhouse, 100-foot-long, reinforced-concrete ogee spillway with four tainter gates and lateral earth embankments.

Powerhouse and spillway at Cascade Dam on the Thornapple River in Michigan.

In addition to the facilitator, the PFMA core team included the Independent Consultant, FERC inspector, the owner, and Cascade Township Engineers. The PFMA session was conducted over a two-day period. Supporting Technical Information Document data was provided to the core team members for review prior to the session. The core team walked the entire project and examined all pertinent project structures and discussed operations with site personnel on the first day of the PFMA session. Seven potential failure modes were identified: six Category II (Considered but not Highlighted) and one Category III (More Information or Analyses Needed in Order to Classify). The results of the PFMA were documented in a report detailing the considerations and conclusions reached during the PFMA session.