

FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects
Division of Dam Safety and Inspections - Headquarters Office
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February 21, 2017

In reply refer to:
P-2100

Mr. William Croyle
Acting Director
California Department of Water Resources
P.O. Box 942836
Sacramento, California, 94236-0001

Re: Emergency Repair and Board of Consultants for Oroville Dam Spillway

Dear Mr. Croyle:

By letter dated February 17, 2017, you proposed 5 members for the Board of Consultants for the Oroville Dam Spillway project. Those members are Kerry Cato, Ph.D., CEG, John J. Cassidy, Ph.D., Eric Kollgaard, P.E, Faiz Makdisi, Ph.D., P.E., D.GE, and Larry Nuss, P.E. After reviewing these resumes, we approve Dr. Cato, Dr. Cassidy, Mr. Kollgaard, Dr. Makdisi, and Mr. Nuss for their proposed respective roles for the Oroville Dam Spillway BOC.

As detailed in our February 13, 2017, letter, the BOC will assess, at a minimum, the below:

1. Current measures being implemented at the project to pass inflows.
2. Current condition of the service spillway and adjacent areas of the project.
3. Current condition and capability of the Emergency Spillway to safely pass flood flows.
4. Risk reduction measures currently implemented and any additional risk reduction measures proposed.
5. Measures to keep the Powerhouse operable during the short-term and long-term.
6. All proposed remedial options for the service spillway.
7. All proposed remedial options for the emergency spillway.
8. Long-term, permanent modifications and project operations.

9. Any additional information or analysis requested by the BOC.

In addition, you stated that you expect the forensic analysis to ensue within three months, based on teams identified by the US Society on Dams and the Association of State Dam Safety Officials. While we understand and concur that the priority must be on the emergency operations and the remedial design, this timeframe is too long. By March 15, please identify the team who will be leading the forensic analysis and provide a plan and schedule for this effort. They should begin the forensic analysis as soon as feasible in order to ensure that the remedial designs can account for any potential issues identified by the forensic analysis. The BOC shall also be tasked to review and comment on this analysis. Steps for the forensic analysis should include but not be limited to:

1. Development of a plan of action for the forensic analysis.
2. Performing field investigations
3. Reviewing project operations, before, during and after the event.
4. Reviewing project documents, including the emergency action plans, Potential Failure Mode Analyses, Part 12D Independent Consultant Inspection Reports and the Supporting Technical Information Documents, should be included in the analysis. This review should include an assessment of how extreme flood flows are passed at Oroville Dam.
5. Developing any additional information or analysis requested by the BOC and regulating agencies.
6. Preparing and submitting the forensic analysis report. The analysis should discuss the root cause of the spillway incident, as well as any other contributing causes.

As discussed, we will provide flexibility on the typical BOC requirements that have been identified. At the first BOC meeting, we will work to formalize an expedited process to ensure that reviews are conducted as quickly as possible, while still ensuring the integrity of the BOC process. The operation of the BOC will generally be as follows:

1. There will be formal meetings of the BOC scheduled to discuss the areas of the project the BOC is required to assess. The meetings should be scheduled at important milestone markers for the design and construction of the project.
2. At the end of each BOC meeting, the BOC is to present their meeting report and provide you a copy of this report. An electronic copy of the report should also be included.

As soon as possible after each BOC meeting, DWR must submit to FERC three copies of the BOC's report (one copy to the Acting Director, D2SI and two copies to D2SI-San Francisco Regional Engineer) accompanied with a statement of intent to comply with the BOC's recommendations and a plan to resolve any issues. In the event any of the BOC's recommendations are not going to be implemented, detailed reasons for not doing so should be provided. We may require additional action after we review the above information.

A summary table of all the BOC's recommendations is to be maintained by DWR in a status table. This table must indicate the BOC report in which each recommendation was made and include the current status and outcome of each recommendation. This summary table is to be available at each BOC meeting for discussion.

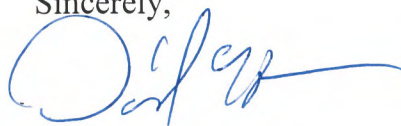
Upon completion of project construction, the BOC is to prepare a report that states the BOC's opinion with respect to the investigation, design, construction, safety, and adequacy of the project structures. Two copies of the BOC's report are to be sent to the D2SI-San Francisco Regional Engineer and one copy to the Acting Director, D2SI, within 45 days of completion of project construction.

Then, one year after completion of re-construction of the Oroville spillway project, the BOC shall prepare an operation assessment report of the project. This report shall assess if the project has performed as intended by the design. DWR shall submit two copies of the BOC project operation assessment report to the D2SI-San Francisco Regional Engineer and one copy to the Acting Director, D2SI. Your submittal letter for these reports is to address how you intend to comply with any BOC recommendations and how you intend to resolve any outstanding issues. The FERC will review the BOC report and any additional information provided by DWR. FERC will then provide a final letter of our review.

Also, in response to your request, we will have dedicated FERC staff made available to provide reviews and attend meetings as required. Commission staff will, as always, make every effort to help coordinate any necessary permitting reviews. Of course, responsibility for compliance with applicable laws and regulations will rest with DWR.

Please contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Capka", with a long horizontal flourish extending to the right.

David E. Capka, PE
Acting Director, Division of Dam Safety
and Inspections

cc:

Mr. David Panec
Chief, Dam Safety Branch
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