

FEDERAL ENERGY REGULATORY COMMISSION  
Office of Energy Projects  
Division of Dam Safety and Inspections  
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Subject: Oroville Dam Independent Forensic Findings

On January 5, 2018, the Independent Forensic Team (IFT) released their final report on the Oroville Dam Spillway Incident. The IFT Report highlights several issues that everyone involved in the dam safety industry should be aware of. The report is available on the FERC website at:

<https://www.ferc.gov/industries/hydropower/safety/projects/oroville.asp>

We request that you and your Chief Dam Safety Engineer/Coordinator read this report, share it with your senior executives as well as all your dam safety staff and discuss how the findings may apply to your own facilities and overall dam safety program. The report concludes that flaws in the Oroville Dam Spillway existed since construction that were missed by the owner, regulators, and consultants. It is very clear that just because a project has operated successfully for a long period of time does not guarantee that it will continue to do so.

One critical aspect of an Owner's Dam Safety Program (ODSP) is communication between dam safety staff and senior executives. This is an opportunity for you to highlight the importance of dam safety to every level of your organization and to ensure that you have the resources you need to ensure the safety of your facilities. As the IFT stated, "compliance with regulatory requirements is not sufficient to manage risk and meet dam owners' legal and ethical responsibilities." We are focusing on how to improve our program to identify and prevent incidents, regardless of magnitude, that could result from similar dam safety and organizational factors that contributed to the

Oroville incident. We expect our regulated dam owners to have similar internal discussions.

The Part 12D inspection program is meant to ensure that there is a “periodic comprehensive review of original design and construction and subsequent performance.” As a follow-up to the Part 12 training courses offered in 2013 and 2014 intended to improve the Part 12D program, we issued revised guidance in Chapter 14, Appendix H of our Engineering Guidelines in August of 2016 to clarify our expectations regarding Part 12D Inspection Reports. Consultants cannot rely on the reputation and expertise of previous consultants to justify their assessment of project safety without providing their own critical independent review. The Oroville IFT indicates that there was no clear evidence that the original design and construction documentation had ever been reviewed since original construction.

The IFT also identified shortcomings with the current Potential Failure Mode Analysis (PFMA) process, noting that it focuses too heavily on uncontrolled release of the reservoir, does not adequately consider interaction of project features, and too often does not reconsider PFMs that have been dismissed previously. As we review the PFMA process in light of the findings, we will communicate any changes that may be required. In the interim, you should keep these findings in mind while performing any new PFMA’s or reviews of existing ones. Broader implementation of our Risk-Informed Decision Making (RIDM) program may also help ameliorate some of these issues, as the PFMA is the foundation of the risk process.

Our expectation that a PFMA is based on all available information will not change, and it cannot be met if the Supporting Technical Information Document (STID) is not maintained as a comprehensive resource. The IFT noted that the Oroville Dam STID “did not contain much of the information which would have helped identify the risks at the two spillways.” As stewards of the STID, project owners must make every

effort to ensure that the documents are complete and all references have been reviewed and are included electronically.

The IFT report highlights the critical importance of your ODSP and a strong top-down dam safety culture within your entire organization. It is critical that you include a thorough review of your ODSP implementation; we have provided FAQs on this topic to assist you in your review, located at <https://www.ferc.gov/industries/hydropower/safety/initiatives/odsp/guidance-odsp.pdf> . If you have any questions, please contact me or the appropriate Regional Engineer for your projects.

Sincerely,

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