Federal Energy Regulatory Commission
OWNERS DAM SAFETY PROGRAM
OWNERS SELF ASSESSMENT EVALUATION PARAMETERS
6/29/2007

Assuring the safety of licensed dams is a cooperative effort between owners, consultants and the FERC with the most important role being that of the owners. The owners are the ones who see the dam regularly and through surveillance and monitoring are monitoring and evaluating the health of the structure. Although a good owner's dam safety program may not prevent every conceivable failure mode, a poor program can likely lead to problems.

The scope of a particular owner's dam safety program should be commensurate with the size, type and complexity of the owner's dam(s). There is no "one size fits all" dam safety program. The two fundamental categories of principles and practices listed below provide some general guidance on what should be considered when evaluating an owner's dam safety program.

1 **Technical Requirements** which includes;
   A. Technical Competence of Responsible Personnel,
   B. Ongoing Visual Surveillance, Performance Monitoring and Periodic Inspection,
   C. Emergency Preparedness,
   D. Ongoing Maintenance,
   E. Remediation of Dam Safety Deficiencies or Vulnerabilities

2 **Organizational Practices** which includes;
   A. Recognition of Responsibility for Dam Safety
   B. Communication
   C. Allocation of Resources to Dam Safety
   D. Learning Organization
   E. Clear Designation of Responsibility

In response to the failure of the Taum Sauk dam, the owner developed and implemented a dam safety program that is considered appropriate, at this time, for owners that have similar structures. The Taum Sauk dam safety program can be found at:

(http://www.ferc.gov/press-room/press-releases/2006/2006-4/10-02-06-agreement.pdf)

To help you assess your dam safety program we have also developed a set of dam safety evaluation parameters that comprises questions regarding the essential elements of a good dam safety program. Again, it should be emphasized that the wide variation in types of dams makes a single owner's dam safety program for all dams not feasible. Judgment must be exercised when using this tool. The presence or lack of any particular item does not necessarily indicate whether a particular owner's dam safety program is appropriate.

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Owner: _____ **Date:** _____

Program Area	Comments
1) Management Policies and Expectations	
Do all levels in the organization recognize that, as the dam owner, they are ultimately responsible for dam safety?	
Does the organization operate and maintain their projects with good stewardship and responsible behavior?	
Does the organization allow production or other business objectives to compromise dam safety or regulatory compliance?	
2) Organization, Duties and, Responsibilities	
Is there a single individual with clear responsibility for the safety of the organization's dams? (This individual will be referred to as the Chief Dam Safety Engineer)	
Does the organization give the chief dam safety engineer adequate authority and resources to protect dam safety?	
Are dam safety concerns addressed in a timely manner?	
Does the chief dam safety engineer report to a senior level manager? If not, who do they report to?	
How is Senior Management apprised of dam safety matters?	
Does the chief dam safety engineer review and approve annual updates to each facility's EAP and assure that each EAP is tested annually?	
Does the chief dam safety engineer ensure that the Surveillance and Monitoring Program is implemented according to the filed Program?	
Do operating and maintenance staff, including engineering staff working on O&M issues, direct correspondence related to dam safety to the chief dam safety engineer?	
In the event that plant operations must be suspended or a reservoir drawn down due to safety or asset preservation concerns, who is authorized to take action?	
In the event that plant operations must be suspended or a reservoir drawn down due to safety or asset preservation concerns, do operations personnel make that decision in a prompt manner independent of any business objectives?	
3) Program Quality Elements	
Does the chief dam safety engineer provide independent, knowledgeable, review and approval of proposed modifications to project dams?	
Are there written procedures for performing dam inspections?	

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Program Area	Comments
Are there written qualification standards for personnel performing dam inspection or reading monitoring instrumentation?	
Is there a formal established training program for dam safety? Is it implemented?	
Is risk assessment utilized to prioritize issues identified during inspections?	

4) Internal Communications and Reports	
Do operations and engineering staff notify the chief dam safety engineer prior to implementing modifications to a project?	
Do operations and maintenance staff immediately report dam safety issues to their supervisors?	
Do supervisors and managers take immediate action to address dam safety issues?	
Do supervisors and managers promptly notify the chief dam safety engineer in the event of a dam safety issue?	
Are all employees and consultants free to document or orally convey dam safety concerns to the chief dam safety engineer without fear of reprisal?	
Does the chief dam safety engineer promptly report to senior management any dam safety concerns?	
Does the chief dam safety engineer meet periodically with senior management?	

5) External Communication and Reports	
Is there a single point of contact for non-emergency communications between the owner and FERC?	

6) Authority of Chief Dam Safety Engineer	
Does the chief dam safety engineer conduct unannounced facility inspections?	
Does the chief dam safety engineer review and approve proposed modification or changes to a dam structure, operating systems, control systems, or critical operations or maintenance procedures prior to implementation?	
Does the chief dam safety engineer have authority to order any employee, consultant or agent to take any action which in their judgment is necessary to ensure dam safety including action to stop operation of project facilities or initiate reservoir draw down?	

7) Training Plan for Dam Safety	
Is there a formal, established training program for dam safety? Is it implemented?	
Does the training plan for dam safety include the following elements?	
General and site-specific training focused on dam safety	

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awareness and regulatory compliance	
Presentation of Corporate policy regarding dam safety and regulatory compliance	
Recognition of potential dam safety deficiencies, including, but not limited to, design basis events for each facility	
Inspection and monitoring techniques	
Qualification standards for personnel conducting inspections, consistent with the nature and complexity of assigned duties	
Design control process requirements	
Personnel training records	
Modules for needed initial training and modules for continuing training as training needs are identified	
Review of the PFMA (if applicable)	
Review of the Surveillance and Monitoring Plan	
Review of Emergency Action Plans	

8) Dam Safety Surveillance and Monitoring Program (SMP)	
Does the Chief Dam Safety Engineer direct the creation and implementation of a formal Dam Safety Surveillance and Monitoring Plan for all FERC licensed facilities?	
Does the SMP include detailed descriptions of inspections to be performed by the following personnel including: Facility O&M personnel; Facility Management personnel; Hydro Engineering and Dam Safety personnel; and Outside Consultants performing Part 12 and other inspections as necessary.	
Does the SMP documentation outline the frequency and type of inspections to be performed by the personnel included above?	
Does the SMP documentation outline the instrumentation monitoring and assessments that will be part of the inspections?	

Other Comments:_____