

RECLAMATION

Managing Water in the West

Final Report

FACILITY REVIEW ASSESSMENT

Safety and Occupational Health Program Action Plan
Team 16 Recommendations



U.S. Department of the Interior
Bureau of Reclamation

December 2015

U.S. DEPARTMENT OF THE INTERIOR

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Team 16 Recommendations

Prepared by the Safety and Occupational Health Program Action Plan Team 16:

Joe Austin, Upper Colorado Region
Martin Bauer, Policy and Administration
Tony Baquera, Lower Colorado Regional Office
Max Spiker, Power Resources Office
James Dean, Pacific Northwest Region
Tim Flanagan, Great Plains Region
Maria Ramirez, Lower Colorado Region
Rick Woodley, Mid Pacific Region
Gayle Kunkel-Shields, Policy and Administration
Brian Becker, Safety of Dams Office
Elizabeth Dinneen, Safety of Dams Office

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ACRONYMS

Department	U.S. Department of the Interior
JHA	Job Hazard Analysis
Reclamation	U.S. Bureau of Reclamation
SOH	Safety and Occupational Health
RO&M	Review of Operations and Maintenance
DSIS	Dam Safety Information System
PO&M	Power Review of O&M
SOD	Safety of Dams
D&S	Directives and Standards
FO&MT	Facilities Operations and Maintenance Team

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INTRODUCTION

Team 16 has assessed current practices and potential improvements to facility reviews to incorporate safety personnel, and believe the team has identified specific actions for improving and strengthening existing SOH oversight reviews, including appropriate follow-up actions and internal controls associated with those SOH oversight reviews.

BACKGROUND

The Department of the Interior's Office of Occupational Safety and Health reviewed Reclamation's SOH Program in July 2013 and issued a report. The report's conclusion 4-2 is: "Operations and Maintenance reviews are also conducted for dams and power plants, covering such subject matter as mechanical, electrical, operations, and maintenance. These reviews are comprehensive and include reviews of certain safety and health elements such as JHAs [Job Hazard Analysis], hazardous energy control, and scaffolding. SOH professionals participate on these review teams in some but not all regions." Conclusion 4-2 was based on the supporting observation which indicated, "Teams performing these reviews [comprehensive and periodic] did not generally include safety and occupational health professionals." In January 2014, Reclamation's SOH Action Plan Team identified Action Plan #16, to assess current practices and potential improvements to facility reviews to incorporate safety personnel.

In order to address Action Plan #16, a team of subject matter experts was assembled to form Team 16 comprising Reclamation's Facilities Operations and Maintenance Team (Facilities O&M Team), which includes representatives from each region, a civil engineer from Boulder City, and a Safety and Occupational Health Specialist from Montrose.

In the July 2013 report, Action Plan #16 recommended modifying the Review of Operations and Maintenance (RO&M) process. Oversight standards were needed to address SOH inspections. The existing RO&M programs were used as a means of providing oversight of the Area Office and Regional Maintenance programs.

RO&M maintenance oversight includes routine facility reviews in which subject matter experts not affiliated with the respective facility conduct facility inspections. Within the RO&M maintenance oversight, there are four specific programs that conduct facility reviews. They are Associated Facility Review, Power O&M Review, Review of High and Significant Hazard Dams, and Bridge Inspections. Each is defined in a Directives and Standards (D&S): Associated Facility Review (FAC 01-04), Power O&M Review (FAC 04-01), Review of High and Significant Hazard Dams (FAC 01-07), and Bridge Inspections (FAC-07-01).

With the exception of the annual review conducted by the operating office itself, oversight reviews are conducted in 3 and 6, or 4 and 8 year cycles depending on which program is being considered.

The Safety program includes inspections of facilities, which are safety reviews of workplaces pursuant to D&S Workplace Safety Inspection and Abatement (SAF 01-06). This D&S requires annual safety assessments of all workplaces.

This report documents Team 16's recommendations.

THE ISSUE

The information uncovered by the Team raised the following issues:

1. The high number of safety deficiency recommendations derived from facility reviews.
2. The high number of safety deficiency recommendations in facility review modules of DSIS
3. Lack of guidance for inspections performed under the SOH program.
4. SOH recommendations in databases other than DSIS, and workplaces and work practices not evaluated as part of the SOH required inspections.

ANALYSIS

Team 16 evaluated how to best incorporate safety personnel into existing D&S mandated facility reviews. Team 16 discussed existing safety programs and how these overlap with existing facility reviews. There was a concern that the proposed requirement appears to duplicate or complicate existing SOH annual inspections. Specifically, would participation of a SOH specialist in facility reviews replace annual workplace inspection SOH requirement for the facilities inspected?

The Dam Safety Information System (DSIS) contains modules for Safety, RO&M, Power Review of O&M (PO&M) and Safety of Dams (SOD) programs. The team noted that recommendations in various modules (Safety and facility review programs) described safety deficiencies. The team reviewed the type and number of safety recommendations generated by the existing RO&M inspections and compared them to the safety deficiencies in the safety module of DSIS. The team found an extensive number of recommendations (over 180 still incomplete) detailing safety hazards in RO&M and PO&M program products. In reviewing the recommendations, both in the Safety Deficiency Module and those associated with safety issues in the O&M and Power modules, it was noted the recommendations were similar in nature but not duplicative. The Team found that the quality of the numerous safety deficiencies

identified in facility reviews indicate the facility review staff had knowledge of SOH requirements.

The team also reviewed applicable D&Ss associated with facility reviews programs and the SOH program. The language in the facility review documents for Associated Facilities and Power O&M specifically mention evaluating safety requirements and procedures, and public safety. The Power O&M reviews also include a checklist for evaluation of program compliance prior to the actual review. The D&S for all reviews are explicit that including specialized staff was part of the review process and coordinating with pertinent staff from other programs. The Team noted that SAF 01-06 (called Workplace Safety Inspection and Abatement) included very little guidance on what to look for and appeared to focus on the qualifications of the individual performing the inspection.

Safety recommendations developed under the facility review programs are prioritized on a three tier system. Safety recommendations developed under the SOH program are prioritized on a six tier system. The Team also noted that not all Safety program recommendations are being documented in DSIS, as required by SAF 01-06. More than one region has developed its own database for managing SOH program recommendations. One region with a separate database has strong coordination between the SOH office and offices managing facility reviews.

The Team also noted that there were many safety recommendations in the facility review reports that were old and in some cases outdated. In discussing the recommendations with the Denver Safety Office, it appears that there is currently no official way to effectively share the information.

The Team expected fewer recommendations from the facility reviews that had a longer cycle than those under the existing SOH program with a shorter inspection cycle. In essence, under SAF 01-06, each workplace would be inspected three or four times before a facility review was conducted. Based on the number of deficiencies noted during facility reviews it appears that the annual workplace inspections were not as thorough as expected.

The Team interviewed various SOH managers who validated that not all workplaces were being inspected, and that the facility reviewers tend to witness employees in action, or access Reclamation structures and features where O&M work is generally not performed. When asked why the SOH staff do not inspect the same locations as facility reviewers, the response was that there not enough time and no specific guidance to perform that task.

CONCLUSIONS

After analyzing the proposed modification to facility review D&Ss, in order to consider adding a SOH individual to the facility review roster, the team concluded while the overlap of the two inspection programs appears to be duplicative; the formal participation of an SOH individual would be instrumental in the development of adequate guidance for the SOH program. Currently, the D&Ss for facility reviews provides for informal participation of a SOH specialist. The existing SOH program does not appear to include the following:

- Provide adequate guidance to identify SOH deficiencies;
- Define appropriate oversight of inspection results; or,
- Provide guidance on SOH inspection processes.

The current SOH program requires annual inspections of all workplaces. The number of deficiencies noted during facility reviews is an indication that the annual SOH inspections failed to detect those deficiencies. When evaluating guidance in the current SOH program, it focused on qualifications of personnel performing inspections, with little guidance on inspection scope. By contrast guidance for facility reviews tends to focus on scope and content. Finally, the Team noted that facility reviews tend to evaluate work processes employed by staff at specific locations. SOH personnel interviewed indicated that this practice was not articulated in the current guidance.

Since SOH deficiencies are uncovered during facility reviews following facility review guidance, the Team believes this is an indication that the facility review guidance has no corollary in the SOH program. Some facility review processes include a list of specific areas or actions that are to be evaluated. The Team concludes that the use of these documents helped ensure that complex work processes in Reclamation facilities are fully analyzed during reviews and this contributes to the number of safety deficiencies noted during facility reviews. The use of this method would help structure workplace inspections and oversight inspections in the SOH program.

Based on the number and age of recommendations imbedded in the various facility review modules, the Team concluded that the safety community may not be aware of those safety recommendations and that moving those recommendations to a single database would ensure the SOH program would be able to adequately monitor their status. The facility review programs that contain the bulk of the safety deficiency recommendations are under the oversight of the Facilities O&M Team and Power Managers Team. Currently SOH deficiency recommendations in the DSIS Safety Module are prioritized using a six tier system, and those developed during facility reviews are prioritized using a three tier system. The Team concludes that differing SOH deficiency recommendation prioritization and tracking leads may contribute to the age of some of the recommendations in the facility review modules.

The Team noted that in some regions there is a standing practice of administering SOH deficiency recommendations in separate databases. The existing SOH program requirements explicitly require use of a common database for all SOH program recommendations. Based on interviews, Team 16 is concerned that not all workplaces were being inspected, as required in the SOH program documents. The Team concluded the oversight of compliance with the SOH program requirements is not occurring.

RECOMMENDATIONS

The Facility Review Assessment Team 16 recommends:

Recommendation #1 – Existing D&S’ articulating facility review requirements are to be modified to require participation of a safety professional in all reviews and the specific duties of the safety professional are to be incorporated into a D&S produced by SSLE.

The existing team composition for facility reviews should be modified to require participation of a safety professional in all reviews. Safety-related recommendations identified during these reviews should be made through the safety component/chapter of the review and rated using the 6 tier ranking system used by the Safety Program. All of the facility reviews D&Ss should be modified to reflect the required safety professional participation. Specific duties of the safety professional related to their program and this specific activity (qualifications, frequency, content, and scope of the review, recommendations database usage, responsibility for follow-up on recommendations, etc.) should be incorporated into a D&S, new or revised, that is produced by SSLE.

Recommendation #2 – SSLE develop a checklist for comprehensive safety evaluations as a part of facility reviews.

SSLE should ensure that a safety-related review checklist be developed to ensure a comprehensive safety compliance evaluation is completed, similar to those used in facility reviews for power assets, prior to participating in these reviews.

Recommendation #3 – Safety related recommendations from facility reviews should be transferred to the DSIS safety module.

A process needs to be implemented to move the existing and new safety recommendations, developed during all of the facility reviews, into the safety module in DSIS. The Asset Management Manager and the Power Resources Office Manager should work with the Reclamation Safety and Occupational Health Manager to develop a process to transfer safety recommendations from DSIS facility review modules to the DSIS safety module. All of the facility reviews D&Ss should be modified to provide guidance for developing new safety recommendations during facility reviews.

Recommendation #4 – SSLE should revise the SOH D&Ss for an overall safety compliance review.

SSLE should review the entire range of current safety-related reviews and walkthroughs and to the extent possible, consolidate and revise the respective SOH D&Ss to ensure that an overall compliance review is performed in a manner that is both effective and efficient.