



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE

SUMMARY

Report:	Xcel Energy Hydroelectric Plant Penstock Fire
Recommendation Number:	2008-01-I-CO-R10
Date Issued:	August 23, 2010
Recipient:	Xcel Energy, Inc.
New Status:	Closed – Acceptable Action
Date of Status Change:	March 1, 2017

Recommendation Text:

Conduct periodic safety audits of contractor selection and oversight at your power generating facilities to ensure adherence to corporate contractor procurement and safety policies.

Board Status Change Decision:

A. Rationale for Recommendation

On October 2, 2007, five contract workers were killed and three others were injured when a flash fire erupted inside a drained penstock at the Xcel Energy, Inc. Cabin Creek hydroelectric power plant in Georgetown, Colorado. The fire, which trapped the fatally injured workers deep underground, resulted from the ignition of methyl ethyl ketone; a flammable solvent being used by the workers to clean spraying equipment. The spraying equipment was unsuccessfully employed by the workers to apply a protective epoxy coating to the interior walls of the penstock. Attempts made by local volunteer firefighters to rescue the trapped workers were unsuccessful. RPI Coating was the contractor selected by Xcel to perform the coating work inside the penstock. RPI was selected for the job based on its low bid. RPI had a poor safety record, which included injuries, fatalities, and numerous OSHA violations on past jobs performed by the company.

As a part of its investigation, the CSB examined Xcel Energy's contractor procurement and safety oversight policies, incident investigation policies, and confined space entry program. The CSB concluded that Xcel Energy's corporate policies for solicitation and procurement of construction service contractors allowed contractors with poor safety records to compete for contracts. Moreover, Xcel provided insufficient oversight to ensure that the contractor followed safe work practices while conducting the hazardous recoating work within the penstock at the Cabin Creek facility. The CSB issued recommendations to remedy these deficiencies. This evaluation only addresses the recommendation pertaining to Xcel's safety audits of its contractor selection and oversight at power generating facilities (2008-01-I-CO-R10).

B. Response to the Recommendation

Xcel Energy developed new guidelines for assessing its contractor selection and contractor performance periodically during safety audits. The guidelines are used to conduct risk based appraisals for contracted work crews at or within their immediate work environment. The guidelines use a standardized checklist to determine if the requirements are being met. Any

deficiencies noted are reported back to the project manager who is then responsible for ensuring that the contractor implements appropriate corrective actions.

The safety audit program consists of developing an annual audit plan, conducting the audits using standardized checklists to assess the program requirements, preparing and issuing a report with findings and recommendations, and requiring all findings to be corrected within 30 to 60-day time frames. There is also a provision to review a small pool of audit findings (10%) to verify that appropriate corrective actions were taken.

C. Board Analysis and Decision

As the information submitted by Xcel Energy meets the intent of Recommendation No. 2008-01-I-CO-R10, the Board voted to change its status to: “**Closed—Acceptable Action.**”