



MISSOURI BASIN POWER PROJECT

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United States Nuclear Regulatory Commission
Region IV
612 East Lamar Boulevard Suite 400
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Subject: Unit 1 "G" Bunker Fire Incident Report
NRC Event Report #45441
NRC License #33-18224-01

Dear Sirs:

Background Information

The Laramie River Station (LRS), located in Wheatland, WY, operates 216 industrial gauges for the purpose of operational control measuring flow, level, or density, and use Cs137 as the source. The Radiation Safety Officer is David Cummings. Credentials have been submitted to James Thompson, NRC, under separate cover. Several Instrument Technicians and Laboratory staff are designated as radiation workers at LRS, and given training annually regarding the work they perform related to nuclear gauges. This training typically covers general radiation safety, and includes specific training for leak checks, shutter checks and shutter closures. All other employees are considered to be Members of the Public (MOP) under the LRS Radiation Safety Program.

On October 6, 2009, James Thompson of NRC Region IV was on-site for the investigation of an unrelated incident. During the course of the investigation, a question came up regarding damage to a gauge that was near a coal bunker fire in 2007. Mr. Thompson inquired as to whether the incident had been reported to the NRC. It was not immediately known if the incident had been reported. Mr. Thompson offered to check the NRC database, while a review of the records at the Laramie River Station would also be done.

On Friday October 16, 2009 following the records review and after receiving notification from Mr. Thompson that the NRC database did not have a record of the incident, the NRC hotline was contacted and a phone report filed.

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Incident Summary

Figure 1. Upper SeCoal Gauge 1G.



March 8, 2007: Terry Archbold, RSO at the time, was contacted by Greg Loveland, Instrument Leadman, to perform a gauge wipe test on the Upper SeCoal gauge. The test was requested in response to a fire at the top of the feeder chute 1G, which resulted in minimal damage to the chute, bunker and associated equipment. The gauge was a Texas Nuclear Model 5219, Serial Number B524, with a Cs-137 50 mCi source. The wipe test was performed by Lead Lab Technician Robert McEwen, with a negative result, indicating the source itself had not been damaged.

March 9, 2007: Instrument Technician Scott Olson notified Terry Archbold that a piece of lead was found on the floor beneath the chute. This indicated the fire had been hot enough to damage the shielding in the gauge. Mr. McEwen was assigned a dosimeter and conducted a survey around the gauge. A reading of 80 mrem was recorded at a distance of 2 feet from the gauge with a closed shutter, indicating the shielding was compromised and the source might have moved within the gauge. The area on the floor within eight feet of the gauge was red taped off with a radiation alert posted to prevent incidental contact. The gauge was left in place until its final disposition could be determined.

March 12, 2007: Mike Fontaneau, RSO of Thermo Electron Corporation was contacted regarding the replacement and disposal of the damaged gauge. It was decided to exchange the damaged gauge. A TN Technologies Model 5201 gauge was selected, with a 50 mCi Cs-137 source, Serial Number B4745. Arrangements were made for the purchase, transport, installation and commissioning of the gauge by an authorized service technician of Thermo Electron Corporation.

May 23, 2007: Gary Hunter, Service Technician for Thermo Electron Corporation, arrived on site to remove the damaged gauge, crate it and prepare it for shipment.

May 31, 2007: The damaged gauge was sent to ThermoFisher Scientific, 1410 Gillingham Lane, Sugarland, TX 77478 via Con-way Yellow Freight per BOL 439-863745.

June 19, 2007: An "Acknowledgement of Receipt of Radioactive Material" was received from Thermo Fisher Scientific, stating that a TN Technologies Model 5219, Serial Number B524, was received and ownership accepted as authorized by Texas Radioactive License L03524.

June 29, 2007: A copy of this letter was forwarded to the Division of Nuclear Materials Safety, US NRC Region IV office in Arlington, Texas by Robert L. Eriksen of Basin Electric.

Given the special mounting requirements for a SeCoal installation, the initial replacement gauge purchased was unable to be used. It was returned to the manufacturer and a search began to find an acceptable replacement. Thermo Electron eventually located a TN Technologies Model 5200 with the correct bracket. On January 10, 2008 a license amendment was requested for

United States Nuclear Regulatory Commission

November 3, 2009

Page 3

the Laramie River Station to approve the use of the Model 5200. The amendment was granted, the device was purchased and installed the summer of 2008.

To the best of my knowledge, no persons were significantly exposed who were not trained as radiation workers as a result of this incident. Mr. Robert McEwen, the technician who conducted the wipe test and survey, received an annual dose of 5 mrem in 2007. He was wearing his badge during the few minutes required to perform the wipe test and survey.

Root Cause

A fire at the top of the 1G feeder chute resulted in damage to the shielding of the gauge.

Incident Resolution

The incident was resolved through the proper replacement and disposal of the damaged gauge.

Actions Yet to Be Taken

At this time, there are no outstanding issues remaining to be completed for this incident.

Please do not hesitate to contact me if I can provide further information.

Sincerely,



David Cummings
Radiation Safety Officer
Laramie River Station

cc: M. Fluharty
B. Larson
B. Eriksen, HQ
lf