



Department of Energy

Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

December 20, 2017

Attn: Document Control Desk
Director, Division of Security Operations
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Evaluation of Hydrogen Gas Sampling at the Fort Saint Vrain Independent Spent Fuel Storage Installation, Docket 72-0009, Materials License No. SNM-2504 (EM-NRC-17-052)

Dear Sir or Madam:

On May 23 and 24, 2017, the Department of Energy (DOE) attempted to complete Fuel Storage Container (FSC) hydrogen gas sampling as required by the Fort St. Vrain Safety Analysis Report (SAR) Chapter 9, Conduct of Operations, Section 9.8, Aging Management Program. DOE attempted to sample six FSCs and was successful sampling four FSCs. No appreciable Hydrogen buildup was encountered in any of the four successful sampling activities. Gas sampling of the FSCs from the remaining two vault modules was not performed due to potential tooling or alignment issues when attempting to access the FSC seal plugs.

The FSC seal plug issue has been entered into the Corrective Action Management System. DOE has evaluated options as provided in enclosure 1 for NRC review.

Although not related to any commitments associated with Materials License No. SNM-2504, enclosure 2 provides NRC with a discussion as to why it is reasonable to find measurable amounts of radioactivity in the FSC's hydrogen gas samples.

Please direct any questions to myself at (208) 526-8888 or Mr. Steve Wahnschaffe at (208) 526-4993.

Sincerely,

Steve Ahrendts
Facility Director (Alt)

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Enclosure:

1. FSV Hydrogen Sampling, EDF-STI-17-01, Rev.1, December 13, 2017
2. Investigation of Measurable Radioactivity in Hydrogen Sampling Off-Gas, STI-NLF-RPT-038, December 2017

cc: Bernie White, NRC Project Manager
Eric Simpson, NRC Region IV
Lee Brookhart, NRC Region IV
David Bland, STI