



December 10, 2015

Director
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Failure of exposure device locking mechanism to operate as designed due to ice (event no. 51582). Materials License No. 50-27667-01 Docket: 030-35371

On December 1, 2015, 1:00 am at the Kuparuk Oilfield on the North Slope of Alaska, after a routine exposure, the lock slide on 880D exposure camera (SN D8300) did not automatically engage to lock the Ir-192 99.4 Ci source (SN 26212G) into the shielded position. With the use of a survey meter, the radiographer determined that the source was fully shielded after retraction and manually pushed the lock slide into the lock position. The radiographer notified the radiation safety supervisor and an investigation was made. The source was fully shielded. No overexposure to the RT crew or the public was made. Both radiographers involved received 5 mRem on their direct reading dosimeters for the whole day of the incident. The exposure camera was taken out of service, thoroughly heated, moisture dried, cleaned and tested. All radiographers and assistants are being notified of the incident and instructed to be diligent in preventing ice from forming in the locking mechanism.

Cause of incident: Crew did not take enough time to fully evaporate all the moisture inside the locking mechanism before re-exposing camera to freezing blizzard conditions.

Corrective action: Review incident and cold weather operating procedures with all radiographers and assistants. De-icing fluids are being investigated to determine suitability to prevent similar incidents. The use of improved de-icing fluids may be added to the cold weather guidelines if testing proves to be safe and effective. Kakivik will continue to review cold weather guidelines annually at the beginning of the cold weather season.

If there are further questions or information required, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Patton Pettijohn".

Patton Pettijohn
Kakivik Asset Management RSO
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