

January 25, 2007  
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Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001  
ATTN: Document Control Desk, Director

The following correspondence is in accordance with 10 CFR 30.50 b 2, Notifications, for the requirements of a written notice within 30 days of the occurrence of an incident involving radiographic equipment.

Kakivik Asset Management LLC  
111 West 16<sup>th</sup> Ave.  
Suite 100  
Anchorage, Alaska 99501  
License # 50-27667-01  
Event Number 43117

**Description of equipment problem:**

Source would not retract to shielded position

**Cause of Incident:**

Shrinkage of the outer casing of the control cable assembly as a result reducing clearance of the drive cable within the control cable, assembly, Due to working in cold weather conditions.

**Name of manufacturer and model number of equipment involved in the incident:**

Exposure Device- Industrial Nuclear Co. INC-IR-100, S/N -6631  
Radioactive Source- Industrial Nuclear Co. INC-IR192,- 92 Ci.- S/N- J744  
Control cable assembly-Industrial Nuclear Co. INC-25FT. S/N-RC01

**Place, Date, Time of incident.**

CPF1 Facility, Kuparuk, Alaska. Jan. 13, 2007 12:30 am.

EVENT NUMBER- 43117

**Action taken to establish normal operations:**

Unscrewed control cable assembly connection on handle of crank assembly.  
Manually retracted source assembly by pulling drive cable back till  
Source was in shielded and locked position.

**Corrective action planned to prevent reoccurrence:**

Called Manufacturer (INC) to discuss problem.  
The solution we came up with is to shorten cable.  
Kakivik is in the process of making the cables 6" shorter .

**Qualification of personnel involved in incident:**

Isaac Abbott- Level II Radiographer  
Rob Lorentz- Level II Radiographer  
Rick Rodamaker- Level II Radiographer  
Ruel Carlson- Assistant

**Additional Information:**

Survey meters used- INC model 2:

S/N- 901088 cal. due 6-5-07

S/N- 900708 cal. due 5-11-07

Rate Alarms used NDS products model RA-500

S/N- 52539 cal. due 6-16-07

S/N- 40156 cal. due 4-5-07

S/N- 36900 cal. due 3-12-07

S/N- 36064 cal. due 7-27-07

Dosimeters used Arrow- Tech Model W138 0-200 MR.

S/N- 042150 cal. due 6-11-07

S/N-634453 cal. due 11-9-07

S/N- 634769 cal. due 11-9-07

S/N- 8786 cal. due 9-22-07

Total radiation exposure received by personnel involved for their entire shift:

Isaac Abbott – 4 mr.

Robert Lorentz- 17 mr.

Rick Rodamaker- 1 mr.

Ryan Calkins - 4 mr.

Conclusion:

From the time the source could not be retrieved till it was in its shielded and locked position was 1.5 hours. While disconnecting the crank assembly from the exposure device to retract source to the shielded position the radiation level was 15 mr/hr and took appx. 5 minutes. This is the second time this type of incident has occurred in the past 3 weeks at the Kapuruk, Alaska site. I have contacted all locations where Kakivik performs radiography and all of our crank assemblies will have the internal drive cable shortened before they are used again. This will insure that we do not have another incident of this nature in the future.

If you have any questions my cell # is 907-632-7305 and work is 907-834-7572

Sincerely;



Paul Casey

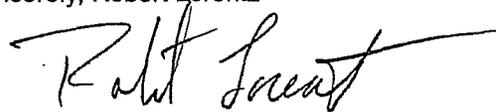
RSO

Kakivik Asset Management

To Whom It May Concern:

On January 13, 2007 around 1:00 a.m. Isaac Abbott called me and told me that he couldn't get his IR100 source to go back into the shielded position. I thought that he might have needed some deicer, but deicer didn't work so I called Joey Labbs and got his answering machine. Then I called Rick Rodemaker around 1:15a.m. Rick came out to CPF-1 and was able to get the source back into the shielded position.

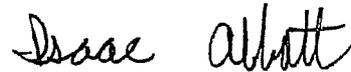
Sincerely, Robert Lorentz

A handwritten signature in black ink that reads "Robert Lorentz". The signature is written in a cursive style with a long horizontal stroke extending to the right.

To Whom It May Concern:

On January 13, 2007 at around 12:30 a.m. Inspection crew (Isaac Abbott RT Level II and Ryan Calkins level I) was performing radiographic inspections on piping at CPF-1. When Ryan cranked our first shot in, he noticed that the source had not completely gone back into the shielded position. He then let me know that the exposure device ( 6631, source s/n J744) lock had not locked when he cranked back in. I tried to crank the source back in myself and got the same results, the source was able to crank out and in but could not lock back to the fully shielded position. We had been using the same equipment for 2 weeks working facilities in 80 degree conditions. January 14 was the first night we had work outside, and the temp was 15 degrees below zero. I think the weather was a factor in this incident so I'm bringing this to your attention. After trying every thing in my power to lock the source back into the exposure device I called Rob Lorentz, the RT level II Lead tech., and asked him if he could bring some deicer out to our work site. Rob was unable to get the source back into the device and then called Rick Rodamaker. Rick arrived to the site and was able to get the source back to the shielded position, and we all had a happy ending.

Sincerely, Isaac Abbott

A handwritten signature in black ink that reads "Isaac Abbott". The signature is written in a cursive style with a large initial "I" and a long, sweeping underline.

## **Events of the morning of 1/14/07 at CPF1, Kuparuk**

At approximately 1:15 a.m. on the 14<sup>th</sup> of January I received a call from Robert Lorentz (the Q.C. Lead Tech), he informed me that he was trying to assist Isaac Abbott in returning his source to the shielded position. I asked him if he had contacted our Supervisor (Joey Labs), and he told me that he had not been able to get a hold of Joey. I wrote down Rob's cell phone number and told him that I would contact Joey for him. I went to Joey's room and informed him of the situation and told him that I would meet him down in the Corrosion office.

At approximately 1:25 a.m. we arrived at the office and at that time Joey called Larry Russell (our RSO), after explaining the situation, and the similarity of it to an incident that we had around two weeks earlier (that report is available upon request), we then came up with a plan of action. Having talked to Rob Lorentz, it was determined that the source was not disconnected from the drive cable, the source was able to be moved down the source tube to the collimator and retracted to just in front of the camera repeatedly without it locking in the shielded position. De-icer had been attempted several times, so icing of the lock and /or cable was improbable. So at this time we guessed that the drive cable housing had shrunken in the cold weather, and the drive cables were hitting the plug on the dead end side of the cable housings. To remedy this it was decided to try to disconnect the housings at the crank assembly and try to retract the source manually. At approximately 1:45 a.m. I arrived at CPF1 and implemented our aforementioned plan. After disassembling the cable housings I was able to get about 2-3 inches of slack in the cable and the source was retracted to the shielded position at approximately 2:00 a.m., the device was then secured in the truck vault, and the crew was told not use the equipment for the remainder of the shift. Joey was informed that the task was completed upon arrival back at the Corrosion office at 2:15 a.m., and that there was no overexposure to personnel.

This report of events was completed by Richard Rodamaker at approx 10:00 a.m, at the time of this report the equipment has not been inspected, but a thorough inspection will be conducted prior to any of it returning to the field.

The crank assembly noted is an INC 25' (s/n RC01).

The exposure device is an INC, IR-100 (s/n 6631).

The source is an INC, IR-192 (s/n J744), and its activity is 92.2 curies.

Richard G. Rodamaker / Q.C. Lead / Level II



1-14-07



**DAILY RADIATION JOB SHEET**  
**RADIOACTIVE MATERIAL SHIPPING DOCUMENT**  
 For Iridium 192 Sealed Sources  
 (UTILIZATION LOG)

Kakvik Asset Management  
 111 W. 18th Ave Suite 100  
 Anchorage, AK 99501  
 (907) 770-8400.

CUSTOMER/COMPANY Conoco Phillips DATE 13-JAN-07  
 LOCATION Kuparuk, AK PROJECT No AK000137  
 JOB DESCRIPTION RT ITEM(S) PIPE

EXPOSURE DEVICE: Make/Brand INC Model IR-100 Serial No 4810  
 SOURCE: Type/Sealed Source Ir-192 Serial No J635 Curies 65.1  
 SURVEY METER: Make/Brand INC Model 2 Serial No 900682 Cal. Exp Date 4-22-07  
 Make/Brand INC Model 2 Serial No 901092 Cal. Exp Date 6-29-07

EXPOSURE DEVICE: Check Out 70 mR/hr@Surface 7:00 AM (M) Check In 70 mR/hr@Surface 9:30 AM (M)  
 NOTE: Do not remove device if surface reading exceeds 200 mR/hr.  
 TRANSPORTING VEHICLE: Survey of all four outside surfaces  Does  Does not exceed 2 mR/hr on transport vehicle  
 Driver seat survey  Does  Does not exceed 1 mR/hr Passenger seat survey  Does  Does not exceed 1 mR/hr  
 Survey of exposure device prior to returning it (each time) to the vehicle storage container:  
70 mR/hr 70 mR/hr 70 mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr

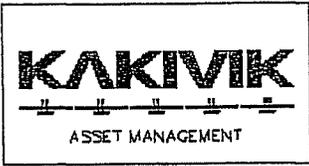
Radiographer Asst. Radiographer	Film Badge Number	Rate Alarm SN	Dosimeter SN	Dosimeter Reading		Total mR Reading
		Cal Due	Cal Due	Start	End of Day	
<u>Robert LORENZ</u>	<u>084</u>	<u>36039</u>	<u>193009</u>	<u>0</u>	<u>17</u>	<u>17</u>
<u>Ruel CARLSON</u>	<u>138</u>	<u>52542</u>	<u>570766</u>	<u>0</u>	<u>17</u>	<u>17</u>

**PHYSICAL SURVEY:**  
2 mR/hr@ 93 Feet # of exposures 80 total exposure time 68 (in minutes)  
 BARRICADE EQUIPMENT:  Sign  Rope  Cone  Tape  
 Light  Other(s) \_\_\_\_\_  
 SHIELDING USED:  Tungsten  Steel  Lead  Concrete  
 Other(s) DISTANCE  
 Constant Surveillance  
 HIGH RADIATION - signs posted  
 Daily equipment check performed in accordance with KAKVIK  
 Asset Management's O&E procedures

REMARKS: Document any equipment malfunctions noted during daily check or operation  
-None

Revision 2

Radiographer's Name Robert Lorenz Radiographer's Signature Robert Lorenz



**DAILY RADIATION JOB SHEET**  
**RADIOACTIVE MATERIAL SHIPPING DOCUMENT**  
 For Iridium 192 Sealed Sources  
 (UTILIZATION LOG)

Kakivik Asset Management  
 111 W. 16th Ave Suite 100  
 Anchorage, AK 99501  
 (907) 770-9400

CUSTOMER/COMPANY Conoco Phillips / KAM DATE 1-13-07  
 LOCATION Kuparuk PROJECT No AK000157  
 JOB DESCRIPTION RT ITEM(S) PIPE

EXPOSURE DEVICE: Make/Brand INC Model IR-100 Serial No 6631  
 SOURCE: Type/Sealed Source Ir-192 Serial No 5744 Curies 92.2  
 SURVEY METER: Make/Brand INC Model 2 Serial No 901088 Cal. Exp Date 6-5-07  
 Make/Brand INC Model 2 Serial No 900708 Cal. Exp Date 5-11-07

EXPOSURE DEVICE: Check Out 60 mR/hr@Surface 7:00 AM/PM Check In 60 mR/hr@Surface 3:00 ~~AM~~PM  
 NOTE: Do not remove device if surface reading exceeds 200 mR/hr.  
 TRANSPORTING VEHICLE: Survey of all four outside surfaces  Does  Does not exceed 2 mR/hr on transport vehicle  
 Driver seat survey  Does  Does not exceed 1 mR/hr Passenger seat survey  Does  Does not exceed 1 mR/hr  
 Survey of exposure device prior to returning it (each time) to the vehicle storage container:  
60 mR/hr 60 mR/hr 60 mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr \_\_\_\_\_ mR/hr

Radiographer Asst. Radiographer	Film Badge Number	Rate Alarm S/N		Dosimeter S/N		Dosimeter Reading		Total mR Reading
		Cal Due	Cal Due	Start	End of Day			
I. Abbott Rad.	148	52539	634453	Ø	4	4		
		16-JUN-07	9-NOV-07					
R. Calkins Asst. Rad.	198	40156	634769	Ø	4	4		
		5-APR-07	9-NOV-07					
R. Rodemaker Rad.	032	36900	8766	Ø	1	1		
		12-MAR-07	22-SEP-07					
Asst. Rad.								

**PHYSICAL SURVEY**

2 mR/hr@ 80 Feet # of exposures 6 total exposure time 25 (in minutes)

BARRICADE EQUIPMENT:  Sign  Rope  Cone  Tape  
 Light  Other(s) \_\_\_\_\_

SHIELDING USED:  Tungsten  Steel  Lead  Concrete  
 Other(s) Distance  
 Constant Surveillance  
 HIGH RADIATION - signs posted  
 Daily equipment check performed in accordance with KAKIVIK Asset Managements O&E procedures

2 mR/hr@ 80 Feet

2 mR/hr@ 80 Feet

REMARKS: Document any equipment malfunctions noted during daily check or operation

Source locked out attached is letter of explanation

Revision 2

Radiographer's Name Isaac Abbott Radiographer's Signature Isaac Abbott