



September 28, 2009

To: Director
Office of Nuclear Materials Safety and Safeguards
Nuclear Regulatory Commission
Washington, D.C.

Subject: Premature Lock out of INC IR-100 Exposure Device

To Whom It May Concern,

On September 27, 2009 radiographers working for Kakivik Asset Management, LLC, Nuclear Regulatory Commission Materials License No. 50-27667-01 experienced a premature lock out of an Industrial Nuclear Corporation IR-100 exposure device.

The radiographers were performing radiography at the ConocoPhillips North Slope oil field located at Kuparuk, Alaska. At the conclusion of an exposure the exposure device, serial number 6631 containing source serial number O249, was surveyed, the guide tube removed and the shipping plug inserted. The device was moved to the transport vehicle for removal of the cranking assembly. When the cranking assembly was removed it was noted that the pigtail was not fully in the safe and secure position. The Night Lead radiographer was notified of the situation and the exposure device was monitored until his arrival.

Matt Murray, IRRSP certified, serial number 130452, who has been trained to do so, was able to reset the lock and place the source in the safe and secure position. Mr. Murray noted that there was "a fair amount of ice" built up in the locking mechanism. The lock was de-iced and the exposure device was returned to service.

It should be noted that the North Slope of Alaska is now entering into the winter months. At the time of the incident the temperature was approximately 25 degrees with blowing snow and dirt conditions.

Michael Bryan, certified by the State of Louisiana, serial number 157159, did not notice any readings higher than normal when he performed the survey of the exposure device. Mr. Bryan was accompanied by Rickey Bailey, IRRSP certified, serial number 180121.

A similar incident occurred with this particular exposure device (s/n 6631) in September of 2008.



Inspection • Engineering • Program Management

Kakivik has experienced a total of six of these incidents since June of 2008.

It is the practice of Kakivik Asset Management to have each exposure device given annual maintenance by INC each time the source is exchanged. This camera would have received this maintenance during the first week of September based on the receiving report dated September 4, 2009. The source previously contained in the exposure device was disposed in March of 2009.

Please find attached documentation for Mr. Bryan, Mr. Bailey and Mr. Murray and their incident reports, also attached is the Daily Radiation Job sheet for that day, receiving report, annual wipe test and disposal record for the source previously contained in the exposure device.

If I may be of further service or there are additional questions please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Keenan E. Remele". The signature is fluid and cursive.

Keenan E. Remele
RSO

Tel: [REDACTED]
Cell: [REDACTED]
Fax: [REDACTED]
Email: [REDACTED]

CC: Region IV
James Thompson
Larry Donovan



KAKIVIK
Incident Report Form

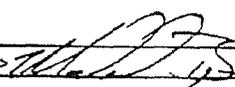
EMAIL or FAX to RSO WITHIN 8 HOURS OF INCIDENT

FAX: 907.770.9450

FAX: 907.770.9450

To be filled out by each person involved.

Attach additional sheets if needed.

OFFICE LOCATION Kuparuk, AK		CASE OR FILE NO.	TYPE (CHECK ONE): <input type="checkbox"/> RADIATION SAFETY
LOCATION OF INCIDENT Kuparuk, AK		TELEPHONE NO. [REDACTED]	<input type="checkbox"/> EQUIP. MALFUNCTION <input type="checkbox"/> OTHER
EMPLOYEE(S) NAME Michael Bryan		EMPLOYEE. NO. 10622	TELEPHONE NO.
JOB TITLE Level II Radiographer	ASSISTANT / RADIOGRAPHER Ricky Bailey	DATE / TIME OF OCCURRENCE 9-26-09	
NAMES OF WITNESSES OR INVOLVED R. Bailey, Matt Murray			
BRIEF DESCRIPTION OF INCIDENT <p>ON 9-26-09 Michael Bryan and Ricky Bailey were performing RT on 2C pad. On our last shot at that location I Michael Bryan cranked in the source and approached the camera to survey it. I did a 360° survey and didn't notice any higher reading than normal. I proceeded to disconnect the quick tube and put the plug in, the plug went in fully and gave me no reason to suspect malfunction. I then took the camera into the truck to disconnect the cables, at this time I noted the lock had malfunctioned. We immediately called our Night Lead for assistance.</p> <p>Approx. Temp. 25°F</p>			
30. DATE OF REPORT (M/D/Y)		31. REPORT PREPARED BY (PRINT NAME / TITLE):	
		SIGNATURE → 	



**KAKIVIK
Incident Report Form**

EMAIL or FAX to RSO WITHIN 8 HOURS OF INCIDENT

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FAX: 907.770.9450

To be filled out by each person involved.

Attach additional sheets if needed.

OFFICE LOCATION Kuparuk, AK		CASE OR FILE NO.	TYPE (CHECK ONE): <input type="checkbox"/> RADIATION SAFETY
LOCATION OF INCIDENT Kuparuk, AK		TELEPHONE NO. [REDACTED]	<input type="checkbox"/> EQUIP. MALFUNCTION
EMPLOYEE(S) NAME Ricky Bailey		EMPLOYEE NO. 10488	<input type="checkbox"/> OTHER
JOB TITLE RT II Radiographer	ASSISTANT / RADIOGRAPHER Mike Bryan	DATE / TIME OF OCCURRENCE 9-26-09	

NAMES OF WITNESSES OR INVOLVED
Mike Bryan / Matt Murray

BRIEF DESCRIPTION OF INCIDENT

While performing RT on ZEDLGL on 9-26-09, The exposure device (Camera) became locked out. The temperature was 25° F.

When Mike Bryan cranked the camera in, he proceeded with a survey meter and did a 360° survey of the camera. When he did not notice any high readings, he then disconnected the quick tube and inserted the plug. The plug went all the way in so there was no reason to think anything was wrong. He then carried the camera into the truck to disconnect the cranks when he then noticed the lock had malfunctioned. Then we called the night Foreman and continued to monitor the boundaries until he arrived and unlocked the device.

30. DATE OF REPORT (M/D/Y) 9-26-09	31. REPORT PREPARED BY (PRINT NAME / TITLE): Ricky Bailey Level 2	SIGNATURE →
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KAKIVIK

KAKIVIK
Incident Report Form

EMAIL or FAX to RSO WITHIN 8 HOURS OF INCIDENT

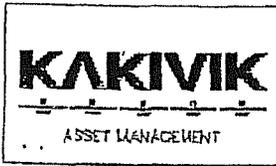
FAX: 907.770.9450

FAX: 907.770.9450

To be filled out by each person involved.

Attach additional sheets if needed.

OFFICE LOCATION Kuparuk, AK		CASE OR FILE NO.	TYPE (CHECK ONE): RADIATION SAFETY
LOCATION OF INCIDENT Kuparuk, AK		TELEPHONE NO. [REDACTED]	<input checked="" type="checkbox"/> EQUIP. MALFUNCTION OTHER
EMPLOYEE(S) NAME MATT MURRAY		EMPLOYEE NO. 10099	TELEPHONE NO. (907) 715-6714 cell
JOB TITLE Foreman	ASSISTANT / RADIOGRAPHER N/A	DATE / TIME OF OCCURRENCE 9/27 APPX. 2:00 AM	
NAMES OF WITNESSES OR INVOLVED Mike Bryan, Ricky Bailey			
BRIEF DESCRIPTION OF INCIDENT I received a call @ 2:03 AM, 9/27 Regarding a source lockout in which the LV-II had pulled the key from the camera. Upon arriving on site, I surveyed the camera and got a reading of about 90-95 mR/hr on the "Hot Spot". I then took the lock apart to get the ball in the correct position. While the lock was apart, a fair amount of ice was noted around the collar w/ the pin. As I asked if the camera was in the snow and the crew told me that it had not. The ice could be from condensation or blowing snow. I reassembled the lock and it seemed to work fine and functioned normally.			
Respectfully Matt Murray			
30. DATE OF REPORT (M/D/Y) 9-27-09	31. REPORT PREPARED BY (PRINT NAME & TITLE): MATT MURRAY / Foreman	SIGNATURE → <i>Matt Murray</i>	



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

KAKIVIK Asset Management
 111 W 15th Suite 100
 Anchorage, AK 99501
 (907) 770-9400
 RSO 907-532-7305
 Chamtrac 800-424-9300

CUSTOMER/COMPANY London Phillips DATE 9-26-09
 LOCATION Kuparuk PROJECT No AK000157
 JOB DESCRIPTION RT ITEM(S) Pipe

EXPOSURE DEVICE: Make/Brand JNC Model IR-100 Serial No 6631
 SOURCE: Type/Sealed Source IR-192 Serial No 0249 Curies 79.2
 SURVEY METER: Make/Brand JNC Model 2 Serial No 901091 Cal. Exp Date 12-30-09
 Make/Brand NDS Model ND2000 Serial No 65042 Cal. Exp Date 2-21-10

EXPOSURE DEVICE: Check Out 70 mR/hr@Surface 7:20 AM Check In 70 mR/hr@Surface 5:40 AM
 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

Radiographer	Film Badge	Rate Alarm S/N		Dosimeter S/N		Dosimeter Reading		Total mR Reading
		Number	Cal Due	Cal Due	Start	End of Day		
R. Bailey	Rad. 346	46980	8-5-10	134997	10-29-09	0	3	3
M. Bryan	Asst. Rad. 407	35527	12-11-09	190853	3-18-10	0	4	4
	Rad.							
	Asst. Rad.							
	Rad.							

PHYSICAL SURVEY

2 mR/hr@ 110 Feet # of exposures 6 total exposure time 65 (in minutes)

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

2 mR/hr@ 110 Feet SHIELDING USED Tungsten Steel Lead Concrete
 Other(s) Distance
 Constant Surveillance
 HIGH RADIATION - signs posted
 Daily equipment check performed in accordance with KAKIVIK Asset Management's O&E procedures

REMARKS: Document any equipment malfunctions noted during daily check or operation
Camera locked out. Foreman came out to assist.

Revision 6 4/16/09

Radiographer Name R. Bailey Radiographer Signature RB



RADIOACTIVE MATERIALS TRANSPORT

Survey Record (parts 34.21 & 71.47)

LOCATION: Kuparuk JOB No. AK000157 DATE: 9-4-09

SURVEY PERFORMED BY: T. Bates TITLE: Radiographer

MANUFACTURER	<input type="checkbox"/> Exposure Device <input type="checkbox"/> Gauge <input type="checkbox"/> Changer <input type="checkbox"/> Drum <input type="checkbox"/> Box <input type="checkbox"/> Crate <input type="checkbox"/> Case <input type="checkbox"/> Storage Model and Serial Number	SOURCE TYPE MODEL NUMBER	SOURCE SERIAL NUMBER	SOURCE ACTIVITY CURIES
<u>TNC</u>	<u>1r100/4631</u>	<u>1r192/32</u>	<u>0249</u>	<u>97ci</u>

NOTE: Surveys must be made on all containers (Type B & Overpacks) when receiving and shipping sources

SURVEY	OVERPACK		<input checked="" type="checkbox"/> Exposure Device <input type="checkbox"/> Changer <input type="checkbox"/> Storage	<input type="checkbox"/> Exposure Device <input type="checkbox"/> Changer <input type="checkbox"/> Storage	OTHER
	HIGHEST READING ON OVERPACK AND DEVICE	1 METER (39.375")	SURFACE	SURFACE CONTACT	1 METER (39.375")*
	<u>1m/hr</u>	<u>16m/hr</u>	<u>70m/hr</u>	<u>N/A</u>	<u>N/A</u>

* Complete this survey only if any of these devices are shipped or received without an overpack

OVERPACK INSPECTION:	Check	<input checked="" type="checkbox"/> Labeling	<input type="checkbox"/> Inner Bracing	<input type="checkbox"/> Outer Condition
mark indicates satisfactory		<input checked="" type="checkbox"/> Bolt/Nut	<input checked="" type="checkbox"/> Hinge/Ring	<input type="checkbox"/> Screws

If highest reading on any container is less than 50 mR/hr at the surface and does not exceed 1mR/hr at 1 meter (Transport Index), use Yellow Label II. If the measurement exceeds 1 mR/hr or 50 mR/hr, use Yellow Label III.

Do not transport or use exposure device with source if reading exceed 200 mR/hr at it's surface and/or 10 mR/hr at 1 meter. CONTACT THE OFFICE OF THE RSO IF EITHER OF THESE READINGS EXCEED THE STATED LIMITS.

SURVEY METER

Model: Tnc Model 1 SIN: 901088 Calibration Due: 2-5-2010

CHECK ALL THAT APPLY	<input checked="" type="checkbox"/> Source Received	<input type="checkbox"/> Source Transferred	<input type="checkbox"/> Source Disposed
<input type="checkbox"/> Survey on receipt of Overpack	At: <u>Kuparuk, AK</u>		
<input checked="" type="checkbox"/> Survey on receipt of Exposure Device <input type="checkbox"/> Changer	At: <u>Kuparuk, AK</u>		
<input type="checkbox"/> Survey of Exposure Device <input type="checkbox"/> Changer <input type="checkbox"/> after transfer of source from changer <input type="checkbox"/> Exposure Device	To: _____		
<input type="checkbox"/> Survey of Exposure Device <input type="checkbox"/> Changer <input type="checkbox"/> Prior to Transport	To: _____		
<input type="checkbox"/> Survey of Overpack prior to transport	To: _____		