RI - DNMS Licensee Event Report Disposition

Licensee: Defense Distribution Center

Event Description: 10 CFR 20.2201

License No: 37-30062-01 | Docket No: 03033261 | MLER-RI: 2009-020

Event Date: 10/19/09 | Report Date: 10/19/09 | HQ Ops Event #:

1. REPORTING REQUIREMENT

	10 CFR 20.1906 Package Contamination		10 CFR 30.50 Report
x	10 CFR 20.2201 Theft or Loss		10 CFR 35.3045 Medical Event
	10 CFR 20.2203 30 Day Report		License Condition
	Other		

2. REGION I RESPONSE

	Immediate Site Inspection	Inspector/Date	
	Special Inspection	Inspector/Date	
	Telephone Inquiry	Inspector/Date	11/2009
	Preliminary Notification/Report		Daily Report
x	Information Entered in RI Log	✓	Review at Next Inspection
	Report Referred To:		

3. REPORT EVALUATION

✓	Description of Event	✓	Corrective Actions
	Levels of RAM Involved		Calculations Adequate
✓	Cause of Event		Additional Information Requested from Licensee

MANAGEMENT DIRECTIVE 8.3 EVALUATION

NA	Release w/Exposure > Limits	NA	Deliberate Misuse w/Exposure > Limits
NA	Repeated Inadequate Control	NA	Pkging Failure>10 rads/hr or Contamination>1000x Limits
NA	Exposure 5x Limits	NA	Large# Indivs w/Exp>Limits or Medical Deterministic Effects
NA	Potential Fatality	NA	Unique Circumstances or Safeguards Concerns

If any of the above are involved: NA

	Considered Need for IIT		Considered Need for AIT

Decision/Made By/Date:

5. MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only) NA

	Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose)
	Medical Consultant Used-Name of Consultant/Date of Report:
	Medical Consultant Determined Event Directly Contributed to Fatality
	Device Failure with Possible Adverse Generic Implications
	HQ or Contractor Support Required to Evaluate Consequences

6. SPECIAL INSTRUCTIONS OR COMMENTS — Inventory justification problem Sources found

☑ Non-Public Inspector Signature: Thomas K. Thompson Date: 11/24/09

☐ Public-SUNSI REVIEW COMPLETE Branch Chief Initials: [illegible] Date: 12/01/09

Location of File: G:\Reference\Blank Forms Word\LER FORM.wpd

MINOR VIOLATION — DO NOT CITE.

Rev. 02/25/05

DEFENSE LOGISTICS AGENCY
DEFENSE DISTRIBUTION CENTER
2001 MISSION DRIVE
NEW CUMBERLAND, PA 17070-5000

IN REPLY REFER TO DES DDC-EE

November 16, 2009

Mr. Thomas Thompson
Division of Nuclear Materials Safety
Nuclear Regulatory Commission, Region I
475 Allendale Rd
King of Prussia, PA 19406-1415

Docket No. 030-33261
License No. 37-30062-01

Reference: Event No. 45444

Dear Mr. Thompson:

Attached is the written report, required by Code of Federal Regulations Title 10 Part 20.2201, describing the referenced event that was reported by telephone to the Nuclear Regulatory Commission Operations Center on October 19, 2009. The Department of Defense assets in question, containing radioactive material, were subsequently determined not to have been lost and the discrepancy noted was the result of a local process error.

In addition to the corrective actions described in the report to preclude any reoccurrences at the specific location, the Defense Distribution Center (DDC) will address this incident as it pertains to all other DDC locations with similar operations to heighten awareness and inform them to take actions as necessary to prevent the same type of incident. The Commanders and Radiation Protection Officers at these locations will be provided with details of the incident, the preventive measures will be integrated into the radiological training curriculum, and the event will be addressed as an area of concern during DDC radiological inspections and audits.

If you have any questions or need additional information, please contact Mr. David Mack at (717) 770-4762.

PATRICK MCCORMICK
Chairperson, Radiation Safety Committee

Enclosure:
Report of Radiological Incident

RECEIVED
REGION 1
2009 NOV 17 AM 11: 12

REPORT OF RADIOLOGICAL INCIDENT
AT DEFENSE DISTRIBUTION CENTER SAN DIEGO, CALIFORNIA (DDDC)

I. Description of Licensed Radioactive Material

One [redacted] of St[redacted] (Sr-90) i[redacted]rces, each of which contains one half ([redacted]). The radioactive source was contained in an In-Flight Blade Inspection System (IBIS). The IBIS contains a sealed radioactive source of 0.5 mCi sealed inside a small cylinder that is part of the shaft of the reset button. The sealed source is seated inside a shield built into the indicator which absorbs a significant percentage of the radiation energy emitted from the source. This source is transported in accordance with (IAW) Title 49 Code of Federal Regulations as a Radioactive Material Excepted Package with a maximum allowable dose rate of 0.5 milliRem/hr measured at the surface of the shipping package. This material is stored pending issue for military use under the national stock number (NSN) 6620-01-125-8904, and are tracked by serial number during the receipt and shipping process.

II. Description of Circumstances under which the Loss of Control Occurred

While p[redacted]n, a d[redacted]ncy was noted between the physical balance on hand and the [redacted] in the Distribution Standard System (DSS). DSS, the automated inventory system used by the DDC depots, r[redacted]s and o[redacted] An immediate search of the designated radioactive material storage area did not locate any other items of this NSN.

The p[redacted]howed a balance, indicating that a[redacted]r. Transaction history indicated several (46) Material Release Orders (MROs) since that time; however, not all of the MROs were closed (i.e., picked and shipped) at the time of this inventory. There were no reported receipts since the time of the September inventory. There were also no customer complaints reporting discrepancies in material orders received and no [redacted]ived an overage of material.

A [redacted] of the storage location after all transactions were processed was [redacted] Serial numbers were validated against those identified in DSS. The loss of materia[redacted] was retracted on November 2, 2009 as it was determined that no loss of material had occurred.

Root Cause(s):

A number of potential process weaknesses lead to the initial report of the inventory discrepancy.

- While available, handheld Radiofrequency transmitters were not used for all transactions causing delay in inventory balance updates (issues and re-warehousing not immediately accounted for).
- Unique Item Tracking (UIT) system not being fully implemented (i.e., items were registered and tracked by serial number but not updated in the established method).

Contributing Factor(s):

- This item is a very high transaction item which could compound the potential errors noted above.
- [redacted] the similar exterior packaging.

III. Disposition of Licensed Material Involved

The DDC Inventory Control Office cancelled the open inventory in DSS to allow all outstanding transactions to update available and on-hand quantity values. On 27 October 2009, a new inventory was dropped from DSS and provided to the Accountable Officer and Inventory Action Team located at DDDC. The location was inventoried and the on-hand balance was recorded to be 130 each. The updated DSS Inventory balance was noted to be 129 each which reflected an initial gain of one (1) each. Reconciliation revealed that an issue of one IBIS was recorded for the USS TARAWA which was undergoing decommissioning at the San Diego Naval Base. The item was never delivered to the TARAWA however the requisition was also never cancelled causing the inventory discrepancy. The DDC Inventory Control Office cancelled the requisition returning the available balance to 130 each which was confirmed by the physical on-hand count.

All radioactive material, including the initial suspected lost material, was maintained under the control of the Defense Distribution Center and ultimately accounted for.

IV. Exposures of Individuals to Radiation

The conclusion has been made that there was no loss, theft, or damage to the material; consequently, no abnormal exposures were encountered and no total effective dose equivalent to individuals outside unrestricted areas occurred.

V. Procedures or Measures that Have Been or Will Be Adopted to Ensure Against a Recurrence of the Loss of Control of Licensed Material

- DDDC personnel will be briefed on the importance of handling controlled items and maintaining accountability through the UIT and other established procedures.
- DDDC personnel will increase QA/QC evaluations of the radioactive material program.
- Materials will be repackaged so that each package only contains one item.
- Operational personnel will be instructed to utilize the RF for all transactions unless the RF signal is not available.

VI. Conclusion

All radioactive material is considered accounted for and no adverse health effects are likely to have resulted from this incident.

David C. Mack 11/12/09

David C. Mack Date
DDC Radiation Safety Officer

"On October 15, 2009, the Agency [State] was notified by the licensee that on October 14, 2009, they experienced a source disconnect while using an Amersham model 660 radiography camera containing a 45.3 curie Iridium (Ir) 192 source. The Radiation Safety Officer (RSO) stated that two radiographers were setting up for their first shot of the day. The guide tube they had was too short, so one of the radiographers connected an additional guide tube to the end of the existing guide tube, while the other radiographer prepared to perform the shot. Neither of the radiographers attached the guide tube to the camera. They then cranked the source out of the camera to perform their first shot. This caused the source to be pushed out of the camera, onto the floor of the shooting bay, and against the wall of a shooting bay. The camera operator felt that he had cranked the source out farther than it should have traveled for the shot and stopped cranking the source. He then tried to return the source to the camera. When the radiographer retracted the drive cable, the source was left loose on the shooting bay floor. The radiographer approached the shooting area with his dose rate meter and found the dose rates were elevated. The radiographer then secured the area and notified the RSO, who is specifically authorized on the license for source retrieval. The RSO developed a strategy to reconnect the source, and then successfully cranked the source back into the camera. No one involved with this event received an exposure exceeding any regulatory limit.

"The RSO stated that their investigation into the event determined that the root cause for the event was the failure of the two radiographers to follow procedure. He also noted a failure of the two radiographers to communicate adequately. The RSO stated that they will retrain all of their radiographers regarding their procedures for the proper connecting and disconnecting of equipment to their exposure devices. He also stated that this training would be repeated in their annual training in 2010."

Texas Incident: I-8678

Notified R4DO(Cain) and FSME (McIntosh).

General Information or Other	Event Number: 45444
Rep Org: DEFENSE DISTRIBUTION CENTER Licensee: DEFENSE DISTRIBUTION CENTER Region: 4 City: SAN DIEGO State: CA County: License #: 37-30062-01 Agreement: Y Docket: NRC Notified By: DAVID COLLINS HQ OPS Officer: CHARLES TEAL	Notification Date: 10/19/2009 Notification Time: 10:13 [ET] Event Date: 10/19/2009 Event Time: [PDT] Last Update Date: 10/19/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 20.2201(a)(1)(i) - LOST/STOLEN LNM>1000X	Person (Organization): LAWRENCE DOERFLEIN (R1DO) NEIL OKEEFE (R4DO) ANGELA MCINTOSH (FSME) MEXICO VIA FAX ()

This material event contains a "Less than Cat 3" level of radioactive material.

Event Text

STRONTIUM-90 PRESSURE INDICATORS MISSING DURING AN ANNUAL INVENTORY

"While conducting the Annual Radioactive Inventory [of pressure indicators], a discrepancy was noted in the on-hand balance of the subject NIIN (National Item Identification Number). The current electronic inventory balance was 138 ea, but a physical check of the location could only locate 136 for a shortage of 2 ea. An initial search of the Radioactive Materiel Storage Area did not locate the item. The Service Provider and Continuing Government Activity personnel will begin a review of all transaction since the last reconciled inventory in an attempt to identify potential transaction errors.

"The pressure indicator in its shipping container is authorized to ship as an expected package with an external dose rate of less than 0.5 mrem /hr on contact."

The pressure indicators contained 500 microcuries of Sr-90.

THIS MATERIAL EVENT CONTAINS A "LESS THAN CAT 3" LEVEL OF RADIOACTIVE MATERIAL

Sources that are "Less than IAEA Category 3 sources," are either sources that are very unlikely to cause permanent injury to individuals or contain a very small amount of radioactive material that would not cause any permanent injury. Some of these sources, such as moisture density gauges or thickness gauges that are Category 4, the amount of unshielded radioactive material, if not safely managed or securely protected, could possibly - although it is unlikely - temporarily injure someone who handled it or were otherwise in contact with it, or who were close to it for a period of many weeks. For additional information go to http://www-pub.iaea.org/MTCD/publications/PDF/Pub1227_web.pdf

This source is not amongst those sources or devices identified by the IAEA Code of Conduct for the Safety & Security of Radioactive Sources to be of concern from a radiological standpoint. Therefore is it being categorized as a less than Category 3 source

Power Reactor	Event Number: 45445
Facility: WATERFORD Region: 4 State: LA Unit: [3] [ ] [ ] RX Type: [3] CE NRC Notified By: JOE WILLIAMS HQ OPS Officer: PETE SNYDER	Notification Date: 10/19/2009 Notification Time: 14:13 [ET] Event Date: 10/19/2009 Event Time: 09:44 [CDT] Last Update Date: 10/19/2009
Emergency Class: NON EMERGENCY 10 CFR Section: 50.72(b)(2)(iv)(B) - RPS ACTUATION - CRITICAL 50.72(b)(3)(iv)(A) - VALID SPECIF SYS ACTUATION	Person (Organization): NEIL OKEEFE (R4DO)

Unit	SCRAM Code	RX CRIT	Initial PWR	Initial RX Mode	Current PWR	Current RX Mode
3	M/R	Y	100	Power Operation	0	Hot Standby

Event Text

MANUAL REACTOR TRIP FOLLOWING STUCK OPEN MOISTURE SEPARATOR HEATER RELIEF VALVE

"At approximately 0915 CDT on 10/19/09 a Waterford 3 Moisture Separator Heater shell-slide relief valve (RS-203B) inadvertently opened, causing reactor power to increase from 100% to approximately 100.27% Rated Thermal Power (RTP). Operations reduced Main Turbine-Generator load by approximately 26 megawatts to restore reactor power to less than 100% RTP. At approximately 0942 CDT, Operations commenced a rapid plant shutdown because the relief valve would not re-close. At approximately 0944 CDT, Operations manually tripped the reactor due to a low condenser hot well level, just prior to reaching the Condensate Pumps Trip setpoint, to avoid a loss of Main Feedwater event. The Plant Protection System (PPS) responded as designed, resulting in an uncomplicated reactor trip.

"Emergency Feedwater Actuation Signal (EFAS) was received on low Steam Generator level as expected from reactor trip at or near full power. Steam Generator levels remained above the EFAS injection level setpoint so that actual injection of Emergency Feedwater did not occur. No other PPS actuation occurred. The plant is currently being maintained in Mode 3.

"Waterford 3 plans to commence refueling outage (RF16) at this time, approximately 1 - 2 days earlier than scheduled.

The licensee notified the NRC Resident Inspector.