



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

September 11, 2014

Mr. Garland Smith  
Corporate Radiation Safety Officer  
IRISNDT, Inc.  
1115 West 41<sup>st</sup> Street  
Tulsa, OK 74107

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 03038734/2014001(DNMS) AND  
NOTICE OF VIOLATION – IRISNDT, INC.

Dear Mr. Smith:

On August 1, 2014, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at your facility in Griffith, Indiana, with continued in-office review through August 20, 2014. The purpose of the inspection was to review activities performed under your NRC license to ensure that activities were being performed in accordance with NRC requirements. The purpose of the in-office review was to examine elements of your access authorization program not available during the on-site inspection. Mr. Ryan Craffey of my staff conducted a preliminary exit meeting with you and Mr. Nathan Cox of your staff on August 1, 2014, and a final telephonic exit meeting with you on September 11, 2014 to discuss the inspection findings.

During this inspection, the NRC staff examined activities conducted under your license related to public health and safety. Additionally, the staff examined your compliance with the Commission's rules and regulations as well as the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC has determined that two Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The first violation concerned the licensee's failure to conduct an inspection program of the job performance of radiographers in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 34.43(e). The inspector determined that the root cause of the violation was a misunderstanding of NRC requirements. As corrective action, you and your staff committed to making arrangements to complete all necessary observations of radiographer job performance.

Enclosures 2 and 4 contain Sensitive  
Unclassified Non-Safeguards Information.  
When separated from Enclosures 2 and 4, this  
transmittal letter and Enclosures 1 and 3 are  
decontrolled.

G. Smith

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This violation is cited in the enclosed publicly available Notice of Violation (Notice)(Enclosure 1). The NRC is citing the violation in the Notice because the inspector identified the violation. The second violation is of a security-related nature. Details of the violation are available in the enclosed Security Addendum (Enclosure 4). The violation is cited in the enclosed non-public Notice of Violation (Notice) (Enclosure 2). The NRC is citing the violation in the Notice because the inspector identified the violations.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notices when preparing your response. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the Information Notice on the NRC's website at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In addition, the NRC identified one open item for further review. The open item, regarding calibration intervals for electronic dosimetry, is described in the enclosed inspection report (Enclosure 3). The NRC will continue to review this open item and you will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, Enclosures 1 and 3, and your response to the publicly available Notice will be made available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>.

Enclosures 2 and 4 contain security-related information and their disclosure to unauthorized individuals could present a security vulnerability; therefore, Enclosures 2 and 4 and your response to the non-public Notice will not be made available electronically for public inspection. Please mark the top of each page of your response "Security-Related Information – Withhold under 10 CFR 2.390." To the extent possible, your responses to both Notices should not include any personal privacy, proprietary, or safeguards information.

G. Smith

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Please feel free to contact Mr. Craffey of my staff if you have any questions regarding this inspection. Mr. Craffey can be reached at 630-829-9655.

Sincerely,

*/RA/*

Aaron T. McCraw, Chief  
Materials Inspection Branch  
Division of Nuclear Materials Safety

Docket No. 030-38734  
License No. 35-32791-01

Enclosures:

1. Notice of Violation (Public)
2. Notice of Violation (Non-public)
3. Inspection Report No. 03038734/2014001(DNMS) (Public)
4. Security Addendum to Inspection Report (Non-public)

cc w/encls: Nathan Cox, Regional Radiation Safety Officer  
cc w/o encls 2 & 4: State of Indiana

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N. Bishop

- 3 -

Please feel free to contact Mr. Craffey of my staff if you have any questions regarding this inspection. Mr. Craffey can be reached at 630-829-9655.

Sincerely,

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Aaron T. McCraw, Chief  
Materials Inspection Branch  
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4. Security Addendum to Inspection Report (Non-public)

cc w/encls: Nathan Cox, Regional Radiation Safety Officer  
cc w/o encls 2 & 4: State of Indiana

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NOTICE OF VIOLATION

IRISNDT, Inc.  
Griffith, Indiana

Docket No. 030-38734  
License No. 35-32791-01

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on August 1, 2014, with continued in-office review through August 20, 2014, one violation of NRC safety requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of the *Code of Federal Regulations* (CFR) Part 34.43(e)(1) requires that an inspection program of the job performance of each radiographer and radiographer's assistant must include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation at intervals not to exceed 6 months.

Contrary to the above, as of August 1, 2014, the licensee failed to ensure that the inspection program included observations at intervals not to exceed 6 months. Specifically, the licensee believed that the required interval for observations was 12 months, and as a result, had not observed the performance of five active radiographers and ten radiographer's assistants in the last 6 months.

This is a Severity Level IV violation (Section 6.3).

Pursuant to the provisions of CFR 2.201, IRISNDT, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance was or will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Your response to this Notice will be made available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available without redaction.

Enclosure 1

Notice of Violation

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If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 11<sup>th</sup> day of September 2014.



**PART I - LICENSE, INSPECTION, INCIDENT/EVENT AND ENFORCEMENT HISTORY**

1. AMENDMENTS AND PROGRAM CHANGES SINCE LAST INSPECTION:

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
0	5/12/14	New RSO and mailing address

IRISNDT, Inc. previously conducted radiography in NRC jurisdiction under NRC License No. 42-32791-01 (Docket No. 030-38283).

2. INSPECTION AND ENFORCEMENT HISTORY:

The NRC conducted inspections of IRISNDT on September 16, 2013 and August 21, 2012. No violations of NRC requirements were identified as a result of these routine inspections.

3. INCIDENT/EVENT HISTORY:

There have been no incidents or reportable events since the last routine inspection.

**PART II - INSPECTION DOCUMENTATION**

1. ORGANIZATION AND SCOPE OF PROGRAM:

IRISNDT was authorized by NRC Materials License No. 35-32791-01 to use licensed material for industrial radiography and materials analysis. The licensee conducted these operations at temporary job sites in NRC jurisdiction using material stored at their field station in Griffith, Indiana.

Since the last inspection, the licensee had expanded its operations significantly. The Regional Radiation Safety Officer (RSO) in Griffith oversaw five radiographers and ten assistants, all newly hired, along with five radiographic exposure devices (four with iridium-192, one with selenium-75) and an americium-241 materials analyzer stored at the Griffith facility.

The Regional RSO in Tulsa, Oklahoma recently assumed the duties of Corporate RSO (listed on the license), after the previous RSO stepped down due to illness.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87121, 87137

Focus Areas Evaluated: All

The inspector toured the licensee's facility to evaluate the licensee's measures for material security, hazard communication and exposure control. The inspector found that all radioactive material were adequately secured.



The inspector was unable to observe the conduct of radiographic operations during the course of the inspection, as the only job site available that day was over four hours from Griffith. Instead, the inspector observed demonstrations of radiographic operations.

Through interviews with the Regional RSO, Corporate RSO, and other radiography staff, the inspector found that the licensee's staff was knowledgeable and conscientious of radiation safety and security principles and licensee procedures for use, storage and transportation of licensed material and associated equipment.

The inspector reviewed a selection of the licensee's safety-related records, including use logs, quarterly equipment, truck and shop checks, quarterly inventories, sealed source leak tests, survey instrument and dosimetry calibration records, available radiographer audits, annual program audits and training records. The inspector also reviewed the licensee's dosimetry records, which indicated a maximum annual exposure of 521 mrem whole-body in 2013.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Using a Canberra MRAD213 survey instrument calibrated on April 4, 2014, the inspector conducted independent surveys at the licensee's facility. The inspector found no readings which would indicate residual contamination or exposures to members of the public in excess of regulatory limits.

4. VIOLATIONS, NCVs, AND OTHER ISSUES:

A. Inspections of Radiographer Job Performance

On August 1, 2014, during a review of the licensee's records related to training, the inspector found that the licensee had only performed a handful of observations of the job performance of radiographers and radiographer's assistants on staff at the Griffith location. Nearly half of those who had conducted radiographic operations recently had not been subject to any observations since being hired, and of those who had, one had not been subject to observations in nearly 11 months, and another (the Regional RSO himself) had not been subject to observations in nearly 22 months.

The Regional RSO stated that he believed such audits were only required annually, and in fact had been planning on completing these audits by September, one year from when many of the individuals conducting radiographic operations had been hired. The Regional RSO was also unaware that he too was subject to observations every 6 months, even though he was the one primarily responsible in Griffith for performing the observations.

The licensee's failure, as of August 1, 2014, to ensure that the inspection program of the job performance of radiographers and assistants included observations at intervals not to exceed 6 months is a Severity Level IV violation of 10 CFR 37.43(d).

The inspector determined that the root cause of the violation was a misunderstanding of NRC requirements. As corrective action, the licensee committed to making arrangements to complete all necessary observations of

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radiographer job performance, including enlisting the help of a newly hired radiation safety assistant to perform some of the observations.

B. Calibration of Electronic Dosimetry

On August 1, 2014, during a review of calibration records for electronic direct reading dosimeters, the inspector found that four dosimeters had not been checked for correct response to radiation within the last 12 months, as required by 10 CFR 34.47(c).

The licensee received these dosimeters from the manufacturer in November 2013. The factory calibration records included with the dosimeters indicated that three had been checked in April 2013, and the fourth in June 2013. The manufacturer also included documentation which stated:

*This electronic device is not subject to calibration “drift” in storage. The factory calibration is fully valid for the dosimeter initial use. Customers are advised to consider the date the device is place[d] “in service” to calculate the “next due” calibration. Customers should consider the factory calibration date (provided on the certificate) for information only.*

Following the manufacturer’s recommendation, the Regional RSO placed the units in question into service in November 2013 and set the calibration due date for November 2014, an interval which in all four cases was greater than 12 months since the original factory calibration.

The dosimeters in question appeared to respond in a similarly to radiation fields as the inspector’s survey instrument. Moreover, recent daily readings from these dosimeters did not appear to differ significantly from readings made prior to April 2014, or from readings taken by older units which had been checked as required.

The licensee’s use of direct reading dosimeters which had not been checked for correct response to radiation within the last 12 months represents an open item relating to 10 CFR 34.47(c) pending further NRC review.

5. PARTIAL LIST OF PERSONNEL CONTACTED:

# Nathan Cox – Regional RSO  
Paul Powers – Corporate Safety Manager  
#& Garland Smith – Corporate RSO

# Attended preliminary exit meeting on August 1, 2014  
& Attended telephonic exit meeting on September 11, 2014

-END-