



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

January 6, 2015

Mr. Charles Hillis  
Radiation Safety Officer  
Nuclear Diagnosis, Inc.  
P.O. Box 3371  
Springfield, MO 65808

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 03012966/2014001(DNMS) AND  
NOTICE OF VIOLATION – NUCLEAR DIAGNOSIS, INC.

Dear Mr. Hillis:

On December 15, 2014, through December 19, 2014, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at several of your facilities in southwest Missouri. 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. Mr. Ryan Craffey of my staff conducted an exit meeting with you by telephone on December 22, 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 one Severity Level IV violation of NRC requirements occurred. The violation was 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 violation concerned the licensee's failure to notify the final delivery carrier and the NRC Operations Center when removable radioactive surface contamination on labeled packages containing radioactive material exceeded the limits set by the U.S. Department of Transportation (DOT), as required by Title 10 of the *Code of Federal Regulations* (CFR) Part 20.1906(d)(1). The violation is cited in the enclosed Notice of Violation (Notice). The NRC is citing the violation in the Notice because the inspector identified the violation.

The inspector determined that the root cause of the violation was an oversight; your staff did not realize that the instrument from which the measurements were obtained indicated an acceptable limit for contamination that was ten times the actual level specified by the DOT for the circumstances. As corrective actions to restore compliance, your nuclear medicine technologist (NMT) manager committed to notifying the final delivery carrier of the occurrences (the NRC need not be notified as the agency is already aware of the occurrences through this inspection). As corrective actions to address recurrence, your NMT manager committed to addressing the discrepancy with the instrument's action level, to addressing a similar discrepancy in the facility's procedures for safely opening packages containing radioactive material, and to discussing the requirements for measurement of removable contamination with staff.

C. Hillis

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The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was or will be achieved is already adequately addressed on the docket in this letter. Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response if you choose to provide one, 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, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available without redaction.

Please feel free to contact Mr. Craffey 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. 030-12966  
License No. 24-17561-01

Enclosure:  
Notice of Violation

cc w/encl: Larry Albaugh, NMT Manager  
State of Missouri

C. Hillis

- 2 -

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Sincerely,

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

Docket No. 030-12966  
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Enclosure:  
Notice of Violation

cc w/encl: Larry Albaugh, NMT Manager  
State of Missouri

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## NOTICE OF VIOLATION

Nuclear Diagnosis, Inc.  
Springfield, Missouri

License No. 24-17561-01  
Docket No. 030-12966

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on December 15, 2014, through December 19, 2014, one violation of NRC 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 20.1906(b)(1) requires that each licensee shall monitor the external surface of packages labeled with a Radioactive White I, Yellow II, or Yellow III label for radioactive contamination unless the package contains only radioactive material in the form of a gas or in special form as defined in 10 CFR 71.4.

10 CFR 20.1906(d)(1) requires that the licensee shall immediately notify the final delivery carrier and the NRC Operations Center, by telephone, when removable radioactive surface contamination exceeds the limits of § 71.87(i) of this chapter.

Contrary to the above, on April 23 and June 25, 2014, the licensee received packages with a Radioactive White I label, the packages were not exempt from monitoring requirements for radioactive contamination, and the licensee did not notify the final delivery carrier and the NRC Operations Center when removable radioactive surface contamination on each package was found to have exceeded the limits of § 71.87(i) of this chapter. Specifically, the licensee recorded measurements of 7,276 and 2,247 disintegrations per minute (dpm) per 100 square centimeters (cm<sup>2</sup>), respectively, on the surfaces of packages containing unsealed byproduct material that had been received at Cox Medical Center in Branson, Missouri. These measurements exceeded the limit of 2,200 dpm per 100 cm<sup>2</sup>, specified in 49 CFR 173.443 for gamma emitting radionuclides, assuming a wipe efficiency of 10 percent. However, the licensee did not notify the final delivery carrier or the NRC Operations Center on either occasion.

This is a Severity Level IV violation (Section 6.9).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the letter transmitting this Notice of Violation (Notice). However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03012966/2014001(DNMS)" and send it 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.

Enclosure

Your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC 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.

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 6<sup>th</sup> day of January, 2015.