**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

April 4, 2018

Mr. Dane McInturff
Radiation Safety Officer
SGS North America, Inc.
2628 North Hemlock Circle
Broken Arrow, OK 74012

SUBJECT: NRC ROUTINE INSPECTION REPORT 030-38486/2018-001

Dear Mr. McInturff:

This letter refers to the routine, unannounced inspection conducted on March 7, 2018, at your facility in Broken Arrow, Oklahoma. The inspection was an examination of activities conducted under your license as they relate to public health and safety, to confirm compliance with the U.S. Nuclear Regulatory Commission's (NRC) rules, regulations, and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records. The preliminary inspection findings were discussed with you on March 7, 2018. A final telephonic exit briefing was conducted with you on March 19, 2018.

Based on the results of this inspection, the NRC identified one unresolved item regarding the use of Instadose devices to satisfy the regulatory requirements found in Title 10 of the *Code of Federal Regulations* (CFR) Part 34 for personnel monitoring during radiographic operations. The item is described in the enclosed report. The NRC will continue to review this open item and you will be advised by separate correspondence of the results of our deliberation on this matter. Because this item remains under NRC review, you are not required to respond to this matter at this time. Please be advised that the number and characterization of the issues described in the report may change as a result of further NRC review.

However, if you choose to respond, and if Security-Related Information is necessary to provide an acceptable response, please mark your entire response Security-Related Information in accordance with 10 CFR 2.390(d)(1) and follow the instructions for withholding in 10 CFR 2.390(b)(1). In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Document Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions regarding this letter or the enclosed report, please contact Mr. James Thompson at 817-200-1538, or the undersigned at 817-200-1455.

Sincerely,

***/RA/***

Michael C. Hay, Chief
Materials Licensing and Inspection Branch
Division of Nuclear Materials Safety

Docket: 030-38486
License: 35-29433-01

Enclosure:
Inspection Report 030-38486/2018-001

cc:
Michael Broderick, Director
Radiation Management Section
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

NRC ROUTINE INSPECTION REPORT 030-38486/2018-001 – DATED APRIL 4, 2018.

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| X SUNSI Review by: **JLT** | | ADAMS ☒ Yes ☐ No | | Keyword: NRC-002 |
|---|---|---|---|---|
| OFFICE | RIV:MLIB | RIV:MLIB | C:MLIB | |
| NAME | PJHernandez | JLThompson | MCHay | |
| SIGNATURE | **/RA by JLThompson For/** | **/RA/** | **/RA/** | |
| DATE | 04/03/18 | 04/03/18 | 04/04/18 | |

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

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|---|---|
| Docket: | 030-38486 |
| License: | 35-29433-01 |
| Report: | 2018-001 |
| Licensee: | SGS North America, Inc. |
| Location Inspected: | 2628 North Hemlock Circle<br>Broken Arrow, OK 74012 |
| Inspection Dates: | March 7, 2018 |
| Exit Meeting Date: | March 19, 2018 (telephonic) |
| Inspector: | Pete J. Hernandez, Health Physicist<br>Materials Licensing and Inspection Branch<br>Division of Nuclear Materials Safety |
| Accompanied By: | James L. Thompson, Senior Health Physicist<br>Materials Licensing and Inspection Branch<br>Division of Nuclear Materials Safety |
| Approved By: | Michael C. Hay, Chief<br>Materials Licensing and Inspection Branch<br>Division of Nuclear Materials Safety |
| Attachment: | Supplemental Inspection Information |

Enclosure

## EXECUTIVE SUMMARY

### SGS North America, Inc.
### NRC Inspection Report No. 030-38486/2018-001

This was a routine, unannounced inspection of licensed activities at a non-destructive testing company authorized by the U.S. Nuclear Regulatory Commission (NRC) Materials License 35-29433-01 to use byproduct material in NRC jurisdiction. The inspection included a review of the records and activities at temporary job sites in NRC jurisdiction. This report describes the results of this inspection. This inspection was of limited scope because it was in the agreement state of Oklahoma.

During the inspection, the inspector identified one unresolved item regarding the licensee's use of Instadose devices to satisfy the regulatory requirements in Title 10 of the *Code of Federal Regulations* Part 34 for personnel monitoring during radiographic operations.

This unresolved item remains under NRC review.

## REPORT DETAILS

### 1 Program Overview (87121 and 87137)

1.1. Inspection Scope

This was an unannounced, routine inspection of SGS North America, Inc. (SGS) which was performed at their main office at 2628 North Hemlock Circle, Broken Arrow, Oklahoma on March 7, 2018. SGS is authorized by NRC Materials License No. 35-29433-01 to use byproduct material for industrial radiography in areas of NRC jurisdiction. The licensee conducts industrial radiography in the NRC states of Michigan and Missouri and has licenses in Louisiana, Ohio, Oklahoma, Pennsylvania, and Texas. Records for work in Missouri are kept in Oklahoma, and records for work in Michigan are kept in Ohio.

The NRC inspector used inspection procedures IP 87121 – Industrial Radiography Programs, and IP 87137 – 10 CFR Part 37 Materials Security Program. For both procedures the inspection was limited to reviewing records of work performed in NRC jurisdiction, records related to only those employees who had performed work in NRC jurisdiction, and discussion with the Radiation Safety Officer about those activities.

### 2 Personnel Monitoring (87121)

2.1. Inspection Scope

On March 7, 2018, the inspector reviewed the licensee's use of personnel monitoring devices in Missouri. The inspector conducted an interview with the Radiation Safety Officer (RSO), and examined a selection of the calibration records, dosimetry and job site records associated with those jobs.

2.2. Observations and Findings

The licensee RSO stated that they had been using Instadose direct ion storage dosimeters since November 18, 2011. The Instadose devices are approved for use in the agreement states where SGS has licenses. In using these Instadose devices, the licensee no longer had a need to exchange or replace these devices periodically with Mirion Technologies, the manufacturer and National Voluntary Laboratory Accreditation Program (NVLAP) processor. Instead, the licensee's procedures and practice was to gather the Instadose devices from their monitored staff and download the dose via a USB port on a monthly basis to the licensee's computers. This dose was then used as the dose of record for these monitored individuals.

10 CFR 34.47(a) states, in part, that the licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor.

10 CFR 34.47(a)(3) states that film badges must be replaced at periods not to exceed one month and other personnel dosimeters processed and evaluated by an accredited NVLAP processor must be replaced at periods not to exceed three months.

The use of Instadose devices from the date of the license issuance on November 18, 2011, relative to the above regulatory requirements is an unresolved item, which remains under NRC review.

The inspector reviewed occupational exposure records for the three individuals and found that the maximum annual whole-body exposure was 1,300 millirem in 2017. The records for the direct reading dosimeters, operating alarming ratemeters, and survey meters used in NRC jurisdiction showed that all of the devices were within calibration when they were used. The licensee site RSO was also aware of the Regulatory Issue Summary (RIS) 2017-006 regarding the use of combination dosimetry devices during industrial radiography but had not implemented it.

2.3. Conclusions

The inspector identified one unresolved item regarding the licensee's use of Instadose devices to satisfy the regulatory requirements in 10 CFR Part 34 for personnel monitoring during radiographic operations.

## 3 Other Areas Inspected (87121 and 87137)

3.1. Inspection Scope

On March 7, 2018, the inspector arrived at the licensee's Broken Arrow, Oklahoma facility where he conducted an interview with the RSO, and reviewed a selection of relevant records.

3.2. Observations and Findings

SGS operates 10 radiography crews, each with a radiographer and an assistant. At the time of the inspection, the licensee had only worked 7 days since the last inspection in NRC jurisdiction. The assistant RSO, who is a carded radiographer, worked all 7 of those days with either one of two other individuals serving as the assistant radiographer.

The inspector and the RSO discussed the activities the licensee had performed in NRC jurisdiction since the last inspection in March 2017. All three individuals had been deemed trustworthy and reliable and all of the individuals had received annual radiation safety training, biannual hazmat training, annual operations and emergency procedures manual training.

The licensee kept records of leak tests for their Iridium-192 cameras and the depleted uranium shielding, none of which had any signs of contamination. The sources are changed out at the licensee's main office and picked up by the crew using the camera.

3.3. Conclusions

The inspector reviewed other areas of the licensee's radiation safety program and observed no violations in these areas.

## 4 Exit Meeting Summary

The NRC inspector presented the preliminary inspection findings at the conclusion of the onsite inspection on March 7, 2018, with the RSO. The inspector discussed the unresolved item with the licensee's RSO via a telephonic exit meeting on March 19, 2018. The licensee acknowledged the findings and did not dispute any of the details presented during the exit call.

## SUPPLEMENTAL INSPECTION INFORMATION

### PARTIAL LIST OF PERSONS CONTACTED

Dane McInturff, Radiation Safety Officer

### INSPECTION PROCEDURES USED

| | |
|---|---|
| 87121 | Industrial Radiography Programs |
| 87137 | 10 CFR Part 37 Materials Security Programs |

### ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

| | | |
|---|---|---|
| 030-38579/2018-01 | Unresolved Item | The use of Instadose devices relative to 10 CFR Part 34 is an unresolved item, which remains under NRC review. |

### LIST OF ACRONYMS AND ABBREVIATIONS USED

| | |
|---|---|
| ADAMS | Agencywide Document Access and Management System |
| CFR | *Code of Federal Regulations* |
| NRC | Nuclear Regulatory Commission |
| NVLAP | National Voluntary Laboratory Accreditation Program |
| OSL | Optically Stimulated Luminescence |
| RSO | Radiation Safety Officer |
| TLD | Thermal Luminescence Dosimeter |