



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

JAN 08 2020

Thomas E. Peters, CPG, CHMM, RSO
Senior Project Manager
The Mannik & Smith Group, Inc.
1800 Indian Wood Circle
Maumee, OH 43537

Dear Mr. Peters:

This is in reference to your application dated October 8, 2019, for the renewal of Materials License #34-26110-02. Upon review of your application, I identified the following items needing additional or clarifying information:

1. As each renewal application is evaluated independent of any previously approved materials license, your application must include all supporting documentation including: Facility Diagram / Description and Radiation Protection Program.

Your renewal application either did not include or did not adequately address all required items. Therefore, I recommend that you revise and resubmit your application using the enclosed copy of Appendix B, "Suggested Format for Providing Information Requested in Items 5 through 11, of the U.S. Nuclear Regulatory Commission Form 313," from NUREG-1556, Vol. 1, Rev. 2, (Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses).

Additional items in this letter address the specific areas in which additional or clarifying information is requested. Further guidance regarding completion of the license application may be found in the enclosed copy of Section 8, "Contents of an Application," from the above referenced NUREG-1556, Vol. 1, Rev. 2.

2. Your license currently authorizes use of licensed material at temporary job sites. Though, Item 3 of the submitted license application did not identify your intention to continue to use temporary job sites. Please confirm that you would like to retain the authority to continue to use portable gauging devices at temporary jobsites. For additional guidance and reference, you may refer to Section 8.3 of NUREG-1556, Vol. 1, Rev. 2.
3. The submitted facility diagrams do not provide adequate information, which must include a description of all adjacent areas (including areas above and below) and information relevant to public dose and security.

Therefore, please resubmit annotated diagrams of your facilities, identifying all entrances and points of access, rooms, uses of the rooms, the location of the gauge storage area and its distance from occupied work areas. Include the direction of north and facility dimensions (or scale). Also, describe and label all adjacent areas to your facility (parking lot, neighboring buildings, streets, etc.). If your facility is a multistory and/or multitenant building, identify all floors and their uses, including areas occupied by other tenants. In addition, submit greater detail on your storage area.

If the gauges are stored in a cabinet or similar container, submit a diagram and description of the container and describe how it is secured to prevent its removal. For additional guidance and reference, you may refer to Section 8.9 of NUREG-1556, Vol. 1, Rev. 2.

4. Describe the security measures in place at your facilities to prevent unauthorized access or removal of your portable gauging devices (e.g., building locks, security system, fences, etc.). Note that a minimum of two independent physical controls that form tangible barriers must be used to secure portable gauges from unauthorized removal. For additional guidance and reference, you may refer to Section 8.9 of NUREG-1556, Vol. 1, Rev. 2, and 10 CFR 30.34(i), "Security requirements for portable gauges."

5. Title 10 Code of Federal Regulations (10 CFR) §20.1101 identifies that your Radiation Protection Program should address the ALARA philosophy of maintaining occupational radiation exposures as low as reasonably achievable.

The enclosed copy of Regulatory Guide 8.10, "Operating Philosophy for Maintaining Occupational and Public Radiation Exposures As Low As is Reasonably Achievable," provides additional guidance useful in developing ALARA policies and procedures. The ALARA component of your Radiation Protection Program should include:

- A. A management commitment to the ALARA philosophy; and
- B. An annual review to evaluate the effectiveness of your ALARA policy. This review should include the review of your Radiation Protection Program's content and implementation.

As this item is only advisory, no specific response or action is needed unless revisions to your procedures are made to address it.

6. Your application identifies that you will furnish and require all Authorized Gauge Users to wear a personnel monitoring dosimeter [film badges, thermoluminescent dosimeters (TLDs) or optically stimulated luminescent dosimeters (OSLDs)] when handling, using or working in the vicinity of the nuclear gauging devices. Your application identifies that you will obtain dosimeters from Mirion Technologies (GDS) Inc., or another NVLAP accredited dosimetry supplier.

In addition to the detection of gamma photons and beta particles, your personnel monitoring dosimeters should have the capability to detect neutron particles emanating from the Americium 241:Beryllium source in your Portable Gauging Devices. This is because the neutron radiation can represent up to 20% to 30% of your total dose. Please confirm that your personnel monitoring dosimeters are also capable of detecting neutron radiation. For additional guidance and reference, you may refer to Section 8.10.4, "Occupational Dose," of NUREG-1556, Vol. 1, Rev. 2.

7. The submitted Radiation Safety Program identifies that Leak Test and Inventory records will be retained for five (5) years. Please note that current regulation does not require these records to be retained for five (5) years. See also Condition 13, Subitem E, and Condition 16 of your license, in which the three (3) year interval is also indicated. To ensure flexibility, you may revise your procedures to commit to a less restrictive interval of three (3) years. As this item is only advisory, no specific response or action is needed unless revisions to your procedures are made to address it.

8. The submitted Radiation Safety Program, Item 2, "Radiation Safety Officer," includes a duplicate, but varying, list of the Duties & Responsibilities of the Radiation Safety Officer, from that provided in Item 7 of your application. I recommend that you consolidate the two listings of the Duties & Responsibilities of the Radiation Safety Officer.

I recommend that the Duties & Responsibilities identified in Item 7 be retained in your consolidated list as they appear to match that included in Appendix D, "Typical Duties and Responsibilities of the Radiation Safety Officer," from NUREG-1556, Vol. 1, Rev. 2. As this item is only advisory, no specific response or action is needed to address this item.

9. Your Emergency Procedure identifies that you will have one or more survey meters available for responding to radiation emergencies. Please confirm that your survey meters are:

- Calibrated periodically (e.g., annually) for the type of radiation to be monitored by a person holding a specific license authorizing the performance of survey meter calibrations; and
- Checked for functionality prior to use (including a battery check and response to a known radiation source).

Note that you must maintain access to a calibrated back-up survey meter when your primary meter is sent out for calibration.

10. U.S. NRC Information Notice 96-52, "Cracked Insertion Rods on Troxler Model 3400 Series Portable Moisture Density Gauges," and SS&D Registry Sheet #NC-646-D-130-S for the Troxler Model 3400 Series Portable Surface Moisture and Density identify that gauging devices should be returned every five years for a thorough manufacturer's inspection of the gauge, to include an extensive inspection of the extendable source rod and its pertinent welds.

Inspection of the source rod is important to ensure the detection of cracks, which might be expected to propagate over time and would then result in the complete failure and loss of control of radioactive material. This would result in a threat to public health, safety and security.

As this item is only advisory, no specific response or action is needed to address this item.

11. Your application identified that you intend to provide training to your staff through an In-House Training Program. To ensure compliance with the applicable regulatory requirements, your training program should address three separate, but overlapping training requirements, including:

- Instructions to Workers/Radiation Awareness training required by 10 CFR §19.12;
- Authorized User training required by 10 CFR §30.33; and
- HAZMAT Employee training required by 49 CFR Part 172, Subpart H.

Include a detailed description of your In-House Training Program. The description should include:

11. Continued:
- A. Names and qualifications of instructors, including their training and experience with nuclear gauges and their instruction experience;
 - B. The duration of training for each of the topics covered in the class;
 - C. The method of testing the knowledge of students, such as a written and practical examination, and whether the exams are open or closed book;
 - D. If an exam is used, the passing score, method of retesting students who do not pass, and an example of the test with the correct answers indicated; and
 - E. A description of the subjects covered in the class, which must include as minimum those described in the Appendix C, "Criteria for Acceptable Training Courses for Portable Gauge Users," of NUREG-1556, Vol. 1, Rev. 2.
12. Your application does not provide adequate Operating, Emergency and Security Procedures. The following are some specific areas that I identified, which you should consider expanding upon in your procedures:
- A. Include instructions for using Portable Gauging Devices according to the manufacturer's procedures and recommendations;
 - B. Expand upon your Security Procedures to address security implemented during transportation and storage (including storage at temporary job sites);
 - C. Expand upon your Operating Procedures to include specific prohibitions in your procedures concerning not touching, viewing or placing fingers, hands or any part of the body in the radiation field from an unshielded source rod;
 - D. Expand upon your Emergency Procedures to include instructions to refer injured persons for first aid and to remove them from the accident scene only when medically safe to do so;
 - E. Expand upon your Emergency Procedures to include instructions for Gauge Users and other potentially contaminated persons to not leave the accident scene until emergency assistance arrives;
 - F. Expand upon your Emergency Procedures regarding notification of proper personnel in the event of damage, loss, theft, or accident involving a portable gauging device. Consider inclusion of the U.S. NRC's 24-Hour Operations Center for Emergencies, (301) 816-5100.

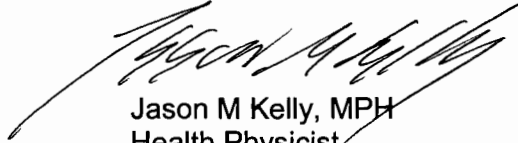
Complete guidance is included in NUREG-1556, Vol. 1, Rev. 2, Section 8.10.6, "Operating, Emergency, and Security Procedures," and Appendix G, "Operating, Emergency and Security Procedures."

For your reference, the program specific guidance for your license is NUREG-1556, Volume 1, Rev. 2 dated June 2016. This guidance is available on the NRC Web site at:
<https://www.nrc.gov/docs/ML1617/ML16175A375.pdf>

To continue the review of your amendment request, please submit a written response to this letter by February 8, 2020. Your response must be dated and signed by a licensee's representative and please reference Mail Control Number 616115 in the response. To expedite the licensing process, you may fax your response to (630) 515-1078. If you have any questions, you are welcome to contact me at (630) 829-9737 or Jason.Kelly@nrc.gov.

In accordance with Title 10 of the *Code of Federal Regulations* Section 2.390 of the U.S. Nuclear Regulatory Commission's (NRC) "Rules of Practice," a copy of this letter and enclosures will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason M Kelly", written over the printed name.

Jason M Kelly, MPH
Health Physicist
Materials Licensing Branch

License No. 34-26110-02
Docket No. 030-35072
Control No. 616115

Enclosure(s): As Stated