



Augustinus Ong, Chair, New Hampshire
Steve Seeger, Chair-Elect, Tennessee
David Crowley, Past Chair, North Carolina
Beth Shelton, Treasurer, Tennessee
Keisha Cornelius, Secretary, Oklahoma
Lisa Forney, Director, Pennsylvania
Libby McCaskill, Director, Oklahoma
Terry Derstine, Champion, Pennsylvania

October 6, 2021

Leira Cuadrado
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Ms. Cuadrado:

The OAS Executive Board (Board) appreciates the opportunity to comment on the Nuclear Regulatory Commission's (NRC) Inspection Procedures associated with Inspection Manual Chapter (IMC) 2800 "Materials Inspection Program" (RCPD-21-006)

The Board has completed our review of the revised Inspection Procedures from IMC 2800. We commend the working group tasked with developing these procedures and appreciate the effort they made to include helpful examples of inspector identified issues and events in real-world applications, and that they effectively illustrated the performance-based risk informed inspection approach.

The Board agrees with the description in the procedures, that observation of activities in progress, equipment, facilities and use areas etc., are a much better indicator of the licensee's overall radiation safety program than a focus on the review of records alone. Implementation of performance-based risk-informed inspections will benefit and improve the National Materials Program. We ask the NRC to remain flexible to more frequent targeted revisions to the inspection procedures. Over time there may be key additions required based on our growing regulatory knowledge, experience, new technologies or shifts in industry practices.

Based on our review of the information, the Board offers the following questions and comments:

GENERAL COMMENTS:

1. IMC 2800 §05.01(b), pg. 7, references "focus elements", will this section be updated in the future to include the new "Risk Modules" language?
2. Generally, there is inconsistent formatting within the procedures and among the procedures. We expect formatting will likely be addressed prior to issuance of the final documents but wanted to recognize that changes will need to be made so that the documents are consistent for ease of reading. It might also be helpful to include a table of contents to each inspection procedure.

Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, Wyoming

INSPECTION PROCEDURE (IP) SPECIFIC COMMENTS:

IP 87124 FIXED GAUGE PROGRAMS AND IP 87124 PORTABLE GAUGE PROGRAMS COMBINED COMMENTS:

1. IPs 87124 Fixed Gauge Programs and 87139 Portable Gauge Programs state under §87124-03, Specific Guidance for some risk modules, that the “target sample size for records review should be approximately ten percent.” Can you expand upon what you mean by ten percent, is it ten percent of the records from the past three years, since the last inspection, in the last year? And is there a reason this is found in only two of the ten IPs?
2. IPs 87124 Fixed Gauge Programs and 87139 Portable Gauge Programs, APPENDIX: ADDITIONAL INSPECTION ELEMENTS, Leak Tests, state that “If records of leak test results show contamination in excess of the regulatory requirements, then verify that the licensee made appropriate notifications and removed the source from service.” It may be appropriate to include that the inspector should verify that no contamination occurred, or if it did that it did not spread; and verify that the licensee is able to provide documentation supporting their findings.
3. IPs 87124 Fixed Gauge Programs and 87139 Portable Gauge programs describe on pg. 5 of each document that: “If a licensee is used to performing activities a certain way, it is likely that they will unconsciously continue this behavior, whether or not the inspector’s presence is known; therefore, the determination of whether to perform these observations on either an announced or unannounced basis should be left to the judgement of the inspector based on the circumstances at hand.”

First, this description is only found in these two IPs, it may be beneficial to include this information into all of them. Second, consider the addition of the following instruction found in the previous version of the IPs “The NRC Inspector shall not under any circumstances knowingly allow an unsafe work practice or a violation which could lead to an unsafe situation to continue in his/her presence in order to provide a basis for enforcement action.”

IP 87124 FIXED GAUGE PROGRAMS:

1. §87124-02 INSPECTION REQUIREMENTS, pg. 2, contains a typo, “Additional inspection elements that carry less risk can be found as an appendix to this inspection procedure A.” The capital “A” after the word procedure needs to be deleted.
2. §87124-03 INSPECTION GUIDANCE, Specific Guidance, 03.01 RM-1: SECURITY OF LICENSED MATERIAL, pg. 4, third bullet, “Fixed nuclear gauges will likely be mounted on equipment, but may also be in storage pending disposal, or temporarily stored due to an outage.” It may be important to note that some fixed gauges, densitometers or “densos”, are mounted onto pipes on trucks, commonly used in the oil and gas industry. These gauges are sometimes Generally Licensed Devices; however, they will often be added to a specific license to allow for installation, removal, and non-routine maintenance. This type of gauge is described in “IP 87123 WELL LOGGING AND TRACER STUDY PROGRAMS”, pg. 3, and referenced back to this procedure, however this procedure does not include any information on these types of devices.
3. §87124-03, INSPECTION GUIDANCE, Specific Guidance, 03.02 RM-2: OBSERVATION OF LICENSED ACTIVITIES, pg. 6, consider adding to the information box that “Sites may also require the use of intrinsically safe survey instruments to minimize the potential for spark”.

At least one of the other IPs includes information regarding training prior to entry of a licensed facility. Fixed gauge licenses at times also require training to enter a licensed facility. Consider including this statement in this IP, “Some areas may require special training prior to entry, and the inspector should be prepared to take the training or to conduct the inspection through alternate means. In rare instances, due to the nature of the associated hazards, the inspector may be prohibited from entry and must conduct the inspection through alternate means than direct, in-person observation. In addition, there are areas in some...facilities that may require a specific security clearance for entry, but this should be known prior to the inspection and appropriate means of inspection planned.” it may be an appropriate addition to the information box.

Examples of industries that may require training and/or security clearance are refineries, chemical manufacturing companies, and research facilities to name a few.

4. APPENDIX: ADDITIONAL INSPECTION ELEMENTS, Receipt and Transfer of Licensed Materials, states that the licensee should “perform appropriate receipt surveys” and that “If surveys of packages (whether during receipt or preparation for shipment) are not adequate to verify that radiation and contamination levels are within regulatory limits, then interview licensee staff...Deficiencies regarding instrumentation should be reviewed in more depth.”

10 CFR 20.1906(b)(1) states that each licensee shall “Monitor the external surfaces of a labeled package for radioactive contamination unless the package contains only radioactive material in the form of a gas or in special form...”

Further, *NUREG-1556 Volume 4, Rev. 1* states that “Typically, fixed gauge licensees that only engage in routine operations do not possess their own radiation survey meters because these licensees contract with service providers that perform the surveys required by 10 CFR 20.1501... Because many fixed gauge licensees are not required to possess a survey meter, applicants should preplan how they will obtain assistance in performing a radiation survey in the event of an emergency (e.g., obtain a survey instrument from the manufacturer, a consultant, another NRC or Agreement State licensee, or a local emergency response organization).”

The only mention of surveys in the NUREG document are those for surveys required by 10 CFR 20.1501, and those required for maintenance activities, and package receipt surveys are not included in the document at all. The description in this appendix does not appear to be aligned with the licensing guidance or the regulations and may cause confusion for inspectors.

5. APPENDIX: ADDITIONAL INSPECTION ELEMENTS, Fire Protection, first page of the appendix, the two bullets listed under “Fire Protection” should have their own header and be listed under “Dosimetry” or equivalent.

IP 87124 PORTABLE GAUGE PROGRAMS:

1. APPENDIX: ADDITIONAL INSPECTION ELEMENTS, Fire Protection, first page of the appendix, the two bullets listed under “Fire Protection” should have their own header and be listed under “Dosimetry” or equivalent.
2. APPENDIX: ADDITIONAL INSPECTION ELEMENTS, Receipt and Transfer of Licensed Materials, states that the licensee should “perform appropriate receipt surveys” and that “If surveys of packages (whether during receipt or preparation for shipment) are not adequate to verify that radiation and

contamination levels are within regulatory limits, then interview licensee staff...Deficiencies regarding instrumentation should be reviewed in more depth.

10 CFR 20.1906(b)(1) states that each licensee shall "Monitor the external surfaces of a labeled package for radioactive contamination unless the package contains only radioactive material in the form of a gas or in special form..."

Further, *NUREG-1556 Vol. 1 Rev. 2* suggests that the response by the licensee regarding radiation monitoring instruments be "We will either possess and use, or have access to and use, a radiation survey meter that meets the criteria in the section titled...in the event of an incident", and package receipt surveys are not included in the document at all.

The description in the appendix does not appear to be aligned with the licensing guidance or the regulations and may cause confusion for inspectors.

IP 87126 BROAD SCOPE ACADEMIC AND R&D PROGRAMS:

1. §87124-02 INSPECTION REQUIREMENTS, pg. 1 second paragraph there is an error, the list includes items 1) and 3) and is missing "2)".

IP 87140 SOURCE, SPECIAL NUCLEAR MATERIAL AND OTHER ALPHA EMITTER USE PROGRAMS:

No comments

IP 87141 LIMITED SCOPE ACADEMIC AND R&D PROGRAMS INCLUDING ANIMAL USE:

No comments

IP 87142 SEALED SOURCES AND DEVICES (OTHER) (THOSE USED IN MEASURING SYSTEMS, ANALYTICAL INSTRUMENTS, CALIBRATION AND CHECKING OF INSTRUMENTS, AND SIMILAR PURPOSES):

No comments

IP 87143 SELF-SHIELDED IRRADIATOR AND CALIBRATOR DEVICES:

1. §87143-03 Specific Guidance, 03.03 RM-3 SURVEYS FOR CONTAMINATION AND EXPOSURE CONTROL, pg. 8, first bulleted paragraph, add "Rev. 1" to NUREG-1556, Volume 5, Appendix N.
2. §87143-03 Specific Guidance, 03.04 RM-4: CALIBRATION OF SURVEY INSTRUMENTS, pg. 8, first bulleted paragraph, add "Rev. 1" to NUREG-1556, Volume 5, Appendix N.

IP 87144 VETERINARY USE:

No comments

IP 87130 NUCLEAR MEDICINE PROGRAMS:

1. Consider including the information provided in *NRC Information Notice 2021-02, 'Recent Issues Associated with Monitoring Occupational Exposure to Radiation from Licensed and Unlicensed Radiation Sources'* to this procedure. It may be best suited for § 87130-03 INSPECTION GUIDANCE, Specific Guidance, 03.04 RM-4: ASSESSMENT OF DOSE TO WORKERS AND THE PUBLIC, pg.10.

IP 87123 WELL LOGGING AND TRACER STUDY PROGRAMS:

1. While IP 87123 provides an overview of activities leading up to the well logging or tracing, it does not evaluate procedures that would be followed post use. Licensees may periodically experience flowback incidents after tracing activity occurs. The flowback incidents result in licensed material being “burped” out of the well and a loss of control of licensed material. It would be beneficial for inspectors to be guided by the procedure to inquire about such incidents, measures taken by the licensee to maintain control in the event of such an occurrence, and proper disposal options.
2. §87123-03 INSPECTION GUIDANCE, Specific Guidance, 03.01 RM-1: CONDUCT OF LICENSED ACTIVITIES, pg. 5 top of page: “These gauges, known as densitometers or “densos” will be mounted on short lengths of removable process piping or on vehicles involved in the operations. See IP 87124 for additional guidance on inspecting these fixed nuclear gauges.” IP 87124 (Fixed Gauges) doesn't include additional information regarding these types of gauges, a separate comment was included in the IP 87124 comments.
3. This IP uses figures with some lists in them pgs. 8, 15, and in the appendix. This is an effective way to insert lists into the procedures, you may consider adding them to some of the other procedures as well.
4. In several of the IPs there were boxes added that describe additional safety hazards associated with the facilities of that type of licensee. Those are easily identifiable while reading the document. In this IP, additional safety hazards are mentioned under §87123-03 INSPECTION GUIDANCE, General Guidance, pg. 3. Consider listing this information in a standalone box like in the other procedures.

Also consider adding information about additional training “Some areas may require special training prior to entry, and the inspector should be prepared to take the training or to conduct the inspection through alternate means. In rare instances, due to the nature of the associated hazards, the inspector may be prohibited from entry and must conduct the inspection through alternate means than direct, in-person observation.”

5. Consider adding a “Fire Protection” section to the procedure’s appendix.
6. A “Transportation” section needs to be added to this appendix. Transportation is an important element of well logging programs but is not found in this procedure.
7. A “Receipt and Transfer of Licensed Materials” needs to be added to this appendix. This is also an important element of well logging programs.

Organization of Agreement States

RCPD-21-006

Page 6 of 6

Once again, the Board appreciates this opportunity to comment. We are available should you have any questions or need clarifications to our responses.

Sincerely,

A handwritten signature in blue ink, appearing to read "Augustinus Ong", with a horizontal line underneath.

Augustinus Ong, Chair

Organization of Agreement States

NH Division of Public Health Services/Radiological Health Section

29 Hazen Drive

Concord, NH 03301-6503