



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

January 15, 2020

MEMORANDUM TO: Kevin Hsueh, Chief  
Radiation Protection and Consequence Branch  
Division of Risk Assessment  
Office of Nuclear Reactor Regulation

FROM: David Garmon, Health Physicist /RA/  
Radiation Protection and Consequence Branch  
Division of Risk Assessment  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF NUCLEAR REGULATORY COMMISSION  
PUBLIC MEETING ON DECEMBER 18, 2019 TO DISCUSS  
UPDATES TO THE RADIATION SAFETY CORNERSTONES

On December 18, 2019, the U. S. Nuclear Regulatory Commission (NRC) staff conducted a category 2 public meeting (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19339H971) to review changes to the reactor radiation safety inspection program that are being implemented as part of phase 2 of the Reactor Oversight Process (ROP) Enhancement efforts. Staff also discussed updates to the screening process for issues that are identified as part of inspections and considerations for future updates to the radiation safety significance determination process.

**Purpose**

Communicate the upcoming changes to the Radiation Safety Strategic Performance Area of the ROP including updates to Inspection Procedure (IP) 71124 attachments, Inspection Manual Chapter (IMC) 0612 Appendix E, "Examples of Minor Issues," and the radiation safety significance determination process.

**Meeting Summary**

NRC staff's presentation (ADAMS Accession No. ML19339H351) began with a brief overview of the ROP including the inspection finding process, more-than-minor screening and significance determination process. The NRC staff then discussed the updates that are being proposed to the IP 71124 attachments (IP 71124.01- IP 71124.08).

Enclosure:  
Meeting Attendance List

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The staff informed external stakeholders that as a part of phase 1 of the ROP Enhancement, as presented in SECY-19-0067, "Recommendations for Enhancing the Reactor Oversight Process," the staff is recommending that IP 71124.02, "ALARA (As low as is reasonably achievable) Planning and Controls," be retired and that selected portions of that procedure be transferred to another inspection procedure. The selected portions include: (1) ALARA aspects of significant radiological work, (2) implementation of ALARA work controls/worker practices and (3) evaluation of significant deviations from licensees' intended radiological outcomes.

Historical industry performance and the low risk associated with issues identified through ALARA inspections support the staff assessment that focused baseline inspection is no longer needed in this area. Nevertheless, risk-informed, performance-based oversight of ALARA performance will continue as part of other inspection efforts. The staff emphasized that these changes are still pending the Commission's approval. As staff awaits direction from the Commission, a revised IP 71124.02 will be issued with updated formatting consistent with current IMC 0040 guidance but without any changes to inspection scope.

Staff discussed a proposal to better risk-inform NRC oversight of radioactive effluents and radiological environmental monitoring by shifting the inspection frequency from biennial to triennial while maintaining the overall scope of oversight in these areas. The staff noted that the scope of oversight would not be changed because it is effective in evaluating the outcomes of licensee processes in the areas of effluents and environmental monitoring. The staff's proposal is based on operational data and the very low radiological risk associated with effluent and environmental monitoring. Staff presented how radioactive effluents from U.S. nuclear power plants represent a negligible amount of dose to the public and that effluents have continued to decrease, or remain at very low levels, since the advent of the ROP.

The staff also informed stakeholders that licensees are required to submit annual reports to the NRC to describe their radioactive effluents and environmental monitoring program results. The NRC reviews these annual reports and uses the annual effluent reports to develop NUREG/CR-2907, "Radioactive Effluents from Nuclear Power Plants," which provides industry-wide statistics regarding effluents.

In addition, the staff discussed plans to maintain a biennial inspection frequency for effluent monitoring equipment by moving the inspection requirement for this area to IP 71124.05. Staff acknowledges the advancements in technology and instrumentation design for certain types of radiation detection equipment but also recognizes that with these advancements in technology come some added complexities. Radiation detection instrumentation is also fundamental to radiation protection and licensee data from this instrumentation is used by NRC staff during oversight and event response. For these reasons the staff has proposed to maintain a biennial inspection frequency for effluent monitoring instrumentation. Staff plans to accomplish this by moving the inspection of effluent monitoring instrumentation to IP 71124.05 that is completed on a biennial frequency and that focuses on radiological instrumentation. In essence, this change would consolidate the NRC's inspection efforts in the area radiological instrumentation to one inspection procedure, IP 71124.05.

Staff also discussed a proposed oversight framework for the physical protection of category 1 and category 2 quantities of radioactive material at nuclear power reactor licensee facilities. The initial discussion provided background on Title 10, Chapter I, of the *Code of Federal*

*Regulations* (10 CFR) Part 37, “Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material” and nuclear plant security zones. Furthermore, the staff discussed the considerations in developing the proposed Part 37 oversight framework. These considerations consisted of NRC staff reviews of observations from initial Part 37 inspections that were conducted at 34 nuclear power reactor sites. The outcomes of these initial inspections concluded that category 1 and category 2 material is secure at U.S. nuclear power plants.

The inspection efforts revealed no areas of concern at licensed facilities leading staff to conclude that implementation of the requirements of Part 37 at these facilities is adequate. The security apparatus at commercial nuclear power plant facilities is robust and exceeds the requirements of 10 CFR Part 37 for material that is stored inside of the security protected area and other areas licensees have included in their 10 CFR Part 73 security plans. Additionally, the presence of highly trained security personnel at these facilities provides an additional deterrent and is a security provision that may be considered when evaluating the risk significance of Part 37 issues.

Staff also discussed how licensees can be exempt from certain requirements in 10 CFR Part 37 to the extent that the licensee’s activities are covered by the 10 CFR Part 73 security plan as described in RIS 2015-15, “Information Regarding a Specific Exemption in the Requirements for the Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material.” Prior to this public meeting, staff also shared a draft version of IP 71124.08 which contains the draft inspection guidance for the oversight of Part 37. Inspections in this area would be risk-informed and performance-based and completed with the resources that are already allocated for existing radioactive material control and transportation inspections in IP 71124.08. Staff presented and briefly discussed the draft inspection guidance for material security and transportation of category 1 and category 2 material.

An industry representative stated that with the inclusion of inspection guidance for 10 CFR Part 37 that the NRC staff is taking important resources away from radiation protection organizations at nuclear power reactor sites and making them focus on security programs and issues. Additionally, the representative stated this would prevent those radiation protection resources from focusing on radiation safety. In response, the NRC staff clarified that NRC IPs are meant to be guidance to NRC inspectors on how to implement the baseline inspection program of the ROP, not guidance to NRC licensees on how to meet NRC requirements. Staff further clarified that NRC IPs and inspectors conducting the inspections will not impact the licensee’s ability to focus on safety. Staff also noted that if radiation protection inspectors identify issues that could potentially impact the licensee’s 10 CFR Part 73 security plan that those issues would be referred to the NRC security inspectors for proper dispositioning.

The staff also discussed the revision to more-than-minor guidance contained in IMC 0612 Appendix E. The revisions to the guidance cover several technical areas but the staff’s presentation and discussions focused on health physics and 10 CFR Part 37 sections of the document. Staff noted that the revision clarifies how the examples relate to the more-than-minor screening questions, adds examples based on internal and external stakeholder feedback, and adds a section with examples to address performance deficiencies concerning 10 CFR Part 37.

In addition, staff discussed upcoming changes to the radiation safety significance determination process which is described in IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," and IMC 0609 Appendix D, "Public Radiation Safety Significance Determination Process." For IMC 0609 Appendix C, only administrative updates to reflect the current program are necessary. For IMC 0609 Appendix D, in addition to administrative updates, staff also plans to make changes to address the possibility of incorrect packaging being used for radioactive material shipments and to address issues pertaining to Part 37-related inspection findings. Staff reviewed the process for updating a significance determine process including steps that staff plans to take to seek stakeholder input through internal workshops and public meetings.

The staff ended the meeting by reviewing the schedule for implementation of revised inspection procedures, more-than-minor guidance and the significance determination process. Inspection procedures 71124.01-71124.04 are scheduled to be published by early January 2020 to support the start of the next inspection cycle. However, IPs 71124.05-71124.08 will not be published until 14 days after the staff notifies the Commission of the staff's proposed changes to those IPs. In addition to publishing the revised IPs, the staff is also working to provide regional inspectors with training on the inspection of 10 CFR Part 37 consistent with the IP at nuclear power reactor facilities prior to performing inspections on 10 CFR Part 37 at sites. Staff also informed external stakeholders that the revised more-than-minor guidance (IMC 0612 Appendix E) is scheduled to be published early January 2020. For the significance determination process updates (IMC 0609 Appendices C and D), the staff will start public engagement on those topics in spring 2020 with a goal of publishing the updated IMCs by Summer 2020.

### **Public Comments**

There were no comments from members of the public.

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**ADAMS Accession No: ML20009D703**

<b>OFFICE</b>	NRR/DRA/ARCB	<u>NRR/DRA/ARCB</u>
<b>NAME</b>	DGarmon	KHsueh
<b>DATE</b>	1 /14/ 2020	1/14/2020

**OFFICIAL RECORD COPY**

Meeting Attendance List:

A total of 49 people attended the meeting in person or via teleconference; however, only those wishing to be identified are listed below.

Greg Bowman	NRC	Ellen Anderson	NEI
Louis Carson	NRC	Steve Flickinger	Exelon
John Cassidy	NRC	Ashley Forbes	TCEQ
Anthony Dimitriadis	NRC	Johann Geyer	Ameren
David Garmon	NRC	Greg Haught	Arizona Public Service
Steven Garry	NRC	Jerry Hiatt	NEI
Paul Goldberg	NRC	Mark Lyate	Exelon
Zachary Gran	NRC	Coleman Clint Miller	PG&E
Natasha Greene	NRC	Larry Parker	Stars Alliance
Michael Hay	NRC	Daniel Shannon	Dominion Energy
Linda Howell	NRC	James Slider	NEI
Kevin Hsueh	NRC	Charles Sherman	Duke Energy
Jessie Janelle	NRC	Stephen Taylor	Southern Nuclear
Valerie Myers	NRC	Ozzie Vidal	Certrec Corporation
Steven Orth	NRC		
Alonzo Richardson	NRC		
George Smith	NRC		
Micheal Smith	NRC		
Binesh Tharakan	NRC		
Greg Warnick	NRC		

ENCLOSURE