SENIOR REACTOR ANALYST AND RISK ANALYST SUPPORT EXPECTATIONS

0609.03-01   PURPOSE

The NRC Senior Reactor Analysts (SRAs) and risk analysts perform critical roles in the implementation of the Reactor Oversight Process (ROP) and the Significance Determination Process (SDP). The purpose of this guidance is to provide a high-level framework that describes the roles and responsibilities of the SRA and headquarters (HQ) risk analyst positions as they relate to the ROP and SDP. The information contained in this inspection manual chapter (IMC) is guidance aimed at promoting a common understanding of the responsibilities of these positions and consistency across the NRC regions and headquarters.

0609.03-02   GUIDANCE

The SRAs are trained to help achieve specific expectations and tasks in support of the ROP. These tasks are important in helping NRC management gain risk-insights for decision-making and for communicating with internal and external stakeholders. To successfully achieve these tasks, all SRA's are expected to support the following:

- Advance Risk-Informed Thinking and Decision-Making (RIDM) - Support agency-wide initiatives to advance RIDM, including the Be riskSMART initiative.

- Risk-informed Regulation Activities - Support implementation of NRC's risk-informed regulatory activities to successfully accomplish the agency's mission. The SRAs are expected to participate in and/or provide leadership on task forces or small working groups for risk-informed activities. The SRAs are a resource and point of contact for all risk-related topics in the ROP. The SRA efforts would be focused on risk-informed activities associated with improvements to the ROP.

- ROP Implementation - Evaluate the safety significance of 1) plant events in support of the reactive inspection program, 2) inspection findings in support of the SDP, 3) Notice of Enforcement Discretion (NOED) requests, and 4) any other technical issue that could benefit from risk-informed decision-making, using quantitative and qualitative assessment techniques and applicable guidance documents. Based on the safety significance evaluations and insights, provide timely recommendations to NRC management, including expectations on resources (i.e., time and level-of-effort), to support effective risk-informed decisions. Perform peer reviews of risk analyses and evaluations completed by other risk analysts and SRAs. Support reactor inspection staff by providing risk-insights to improve the inspection sample process and assist in the implementation of issue screening questions. Provide insights during end-of-cycle assessment meetings.

- Risk Communication - Provide effective communication regarding risk-informed applications with internal and external stakeholders through interactions with other agency probabilistic

risk assessment (PRA) groups, licensees, reactor vendors, other Federal agencies, National Laboratories, international organizations, and other stakeholders.

- Train Technical Staff and Management in Risk-informed Applications - Support the qualification and training of reactor inspectors, particularly in the SDP and risk-informed inspection sample selection. Provide periodic refresher training (and initial training) to regional management (i.e., regional SERP members) and other technical staff as necessary to ensure a common understanding of risk-informed techniques and applications (e.g., uncertainty, SDP, MD 8.3, NOED, PRA techniques) in support of risk-informed decision-making. Provide support to SRA candidates during their qualification and training and provide mentorship throughout the process.

- Support Revisions to ROP and SDP-related Guidance - Participate and attend, as often as possible, SDP-related meetings (e.g., monthly SRA phone call between HQ and the regional offices, SRA counterpart meetings, ROP monthly public meetings). Review and provide comments on revisions to IMC 0609, and its associated attachments and appendices, other ROP-related IMCs and inspection procedures (IPs), and the RASP Handbook.

- Awareness of PRA State-of-the-Art - Maintain awareness of risk assessment capabilities, licensee-generated risk insights, and NRC-generated risk insights. Maintain a general awareness of overall industry risk insights and integrate these risk perspectives with other regulatory concepts (e.g., defense-in-depth, licensing basis, performance history), to provide recommendations to NRC management for inspection effort focus. Maintain exposure to evolving PRA best practices and techniques through attendance and participation in PRA-related conferences.

- Maintain SRA Qualifications - Maintain inspector and SRA certifications in accordance with the guidance in IMC 1245, Appendix C9, "Senior Reactor Analyst Training and Qualification Program."

Headquarters-based SRAs and risk analysts that support ROP activities are also responsible for these support expectations:

- Advance Risk-Informed Thinking and Decision-Making (RIDM) - Support agency-wide initiatives to advance RIDM, including the Be riskSMART initiative.

- Risk Communication - Maintain NRC management awareness of significant PRA and/or SDP issues and changes via periodic communications and meetings with technical staff.

- ROP Implementation - Provide specific risk assessment assistance to region-based SRAs and inspectors by performing peer reviews of SDP, MD 8.3, and NOED risk analyses and additional support as requested.

- Train Technical Staff and Management in Risk-informed Applications - Support the qualification and training of risk analysts. Provide periodic refresher training (and initial training) to HQ management (i.e., HQ SERP members), and other technical staff as necessary, to ensure a common understanding of risk-informed techniques and applications (e.g., uncertainty, SDP, MD 8.3, NOED, PRA techniques) in support of risk-informed decision-making. Provide support to regional SRA candidates during their qualification and training process (i.e., HQ rotation).

- <u>Support Revisions to ROP and SDP-related Guidance</u> - Participate and attend, as often as possible, SDP-related meetings (e.g., monthly SRA phone call between HQ and the regional offices, SRA counterpart meetings, ROP monthly public meetings). Review and provide comments on revisions to IMC 0609, and its associated attachments and appendices, other ROP-related IMCs and IPs, and the RASP Handbook.

- <u>Awareness of PRA State-of-the-Art</u> - Maintain awareness of risk assessment capabilities, licensee-generated risk insights, and NRC-generated risk insights. For HQ risk analysts, continue professional development in the PRA field through training and education opportunities. Maintain exposure to evolving PRA best practices and techniques through attendance and participation in PRA-related conferences.

0609.03-03   REFERENCES

IMC 0609, Attachment 1, "Significance and Enforcement Review Panel Process"

Risk Assessment Standardization (RASP) Handbook, Volumes 1 - 4

Management Directive (MD) 8.3, "NRC Incident Investigation Program"

NRC Enforcement Manual, Appendix F, "Notices of Enforcement Discretion"

IMC 1245, Appendix C9, "Senior Reactor Analyst Training and Qualification Program"

ADM 504, R.2 Qualification Program - Appendix M, "Reliability and Risk Analyst"

END

ATTACHMENT 1

Revision History for IMC 0609.03

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public Information)
N/A	04/21/00 CN 00-007	This manual chapter supports the New Reactor Oversight Program for significant determination of findings. The significance determination process detailed in the manual chapter is designed to characterize the significance of inspection findings for the NRC licensee performance assessment process using risk insights, as appropriate.	N/A	N/A
N/A	08/16/01 CN 01-015	0609.04 has been renamed 0609.03.	N/A	N/A
N/A	ML061590488 07/26/06 CN 06-018	Revision updates the management expectations for Senior Reactor Analyst located in the regional offices and headquarters.	N/A	ML061590493

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public Information)
N/A	ML101400526 06/02/11 CN 11-009	Revision updates references and adds expectation for SRAs to maintain their SRA and inspector certifications by attending required training courses. The SRA is expected to participate in periodic communications and meeting and conduct inspection staff refresher training. Provide comments and improvements to the RASP handbook based on field use and support the RASP User Group, when possible.	N/A	ML103490443
N/A	ML14314A921 04/29/15 CN 15-008	Several significant changes to the guidance were made based on recommendations from the SDP Business Process Improvement (BPI) Report (ML14318A512) and the ROP Independent Assessment (ML14035A571)	N/A	ML15072A323
N/A	ML20218A888 10/09/20 CN 20-050	Minor revision based on the 5-year periodic update requirement. Better documentation of the peer-review process was considered (consistent with the recommendation in FBF 0609-2179) but was not pursued in this revision pending inclusion of an agreed upon process and/or checklist in another official document, perhaps the RASP Handbook.	N/A	ML20223A028