

# NRC INSPECTION MANUAL

NMSS/DFM

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INSPECTION MANUAL CHAPTER 0616

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FUEL CYCLE SAFETY AND SAFEGUARDS INSPECTION REPORTS

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## 0616-01 PURPOSE

01.01 Provide guidance on inspection report content, format, and style for preparing fuel cycle inspection reports.

01.02 Provide screening criteria to determine the minor and more-than-minor threshold for violations.

01.03 Ensure that all violations of U.S. Nuclear Regulatory Commission (NRC) requirements by fuel cycle facility licensees are appropriately dispositioned in accordance with the "NRC Enforcement Policy."

## 0616-02 OBJECTIVES

02.01 Clearly communicate significant inspection results in a consistent manner to licensees, NRC staff, and the public.

02.02 Provide conclusions about the effectiveness of the programs or activities inspected. The depth and scope of the conclusions should be commensurate with the depth and scope of the inspection.

02.03 Document the basis for the determination of significance for any enforcement action (EA), as appropriate.

02.04 Assess licensee performance in a periodic, short-term context, and present information in a manner that will be useful to NRC management in developing longer-term, broad assessments of licensee performance such as Licensee Performance Reviews (LPRs).

## 0616-03 DEFINITIONS

Agency Record. A record in the possession and control of the NRC that is associated with Government business.

Apparent Violation. A situation or circumstance that does not appear to meet NRC requirements and for which the NRC staff has not made a final enforcement determination. This definition is typically used to characterize potential Severity Level (SL) III or higher violations being considered for escalated EA or violations being considered for enforcement discretion.

Certificate Holder. An entity responsible for meeting certain NRC requirements defined in an NRC-issued Certificate of Compliance (CoC) (e.g., Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 71 or 72). Note that for the purposes of this Inspection Manual Chapter (IMC), the use of the term "licensee" includes certificate holder.

Closed Item. A matter previously reported as a violation, a written event report, or an unresolved item (URI), that the inspector concludes has been satisfactorily addressed based on information obtained during the current inspection.

Conclusion. An assessment that relates inspection results to the broader context of a licensee program.

Deviation. A licensee's failure to satisfy a written commitment, such as a commitment to conform to the provisions of applicable codes, standards, guides, or accepted industry practices when the commitment, code, standard, guide, or practice involved has not been made a requirement by the Commission.

NOTE: For 10 CFR Part 21 and vendor inspections, the term "deviation" generally refers to the definition given in Part 21 (i.e., "a departure from the technical requirements included in a procurement document").

Escalated Enforcement Action. A Notice of Violation (NOV) for any SL-I, II, or III violation (or problem); a civil penalty; or order based on a violation.

Inspection. The examination and assessment of any licensee activity regulated by the NRC to determine its effectiveness, to ensure safety, and/or to determine compliance. A single inspection report may encompass resident inspection, in-office document review, and/or one or more visits by Regional or Headquarters inspectors; however, a single report is normally limited to a specific period of inspection.

Inspection Document. Any material obtained or developed during an inspection that is considered to be an **agency** record (see **above**).

Integrated Inspection Reports. A fuel facility inspection report that typically combines inputs from all inspections (resident, regional, etc.) conducted within a specific period prescribed by management. Reactive inspections or other inspection activities may be reported separately from integrated reports. **Typically, integrated reports are issued for all operating fuel facility sites, with and without resident inspectors, and are issued each quarter to communicate our continued oversight and assessment of the facility to the public.**

Licensee. The holder of an NRC license, construction permit, or combined license. The provisions listed as applicable to "licensees" in this IMC are also applicable to vendors, **facility clearance**, and certificate holders.

Licensee-Identified. **Licensee-identified violations are identified as a result of deliberate observation by licensee personnel. Examples of deliberate observations that result in licensee-identified violations include (1) those identified during activities such as post maintenance testing, operator rounds, engineering walkdowns, or audits; and (2) degraded conditions identified during testing which do not result in test failure.**

Minor Violation. A violation that is less significant than a Severity Level IV. Minor violations do not warrant enforcement action and are not normally documented in inspection reports. However, minor violations must be corrected (See "**NRC Enforcement Policy**" Section 2.2.2.e). Appendix B to this IMC provides the minor screening criteria and examples of violations that can be considered minor.

Non-Cited Violation. A method for dispositioning a Severity Level IV violation that meets the criteria in Section 2.3.2 of the "NRC Enforcement Policy."

Noncompliance. A violation (regardless of whether it is cited or not), nonconformance, or deviation.

Nonconformance. A vendor's or CoC holder's failure to meet a contract requirement related to NRC activities, where the NRC has not placed the requirement directly on the vendor or CoC holder.

Notice of Violation. A written notice setting forth one or more violations of a legally binding requirement (see 10 CFR 2.201, "Notice of Violation").

NRC-Identified. See "NRC Enforcement Policy" Section 2.3.4.b.1 and 2.3.4.b.2.

Observation. A factual detail noted during an inspection **which is documented in an inspection report when the governing inspection procedure allows.**

Potential Violation. A potential **noncompliance** with a regulatory requirement, regardless of possible significance or severity level, that has not yet been formally dispositioned by the NRC.

Regulatory Commitment. An explicit statement to take a specific action, agreed to or volunteered by a licensee, where the statement has been submitted in writing on the docket to the NRC. This may include a response to an NOV, a commitment as part of a performance improvement program, etc.

Regulatory Requirement. A legally binding obligation such as a statute, regulation, license condition, or Order that is enforceable by the NRC.

Self-Revealed. **Self-revealed violations are those identified as a result of a condition that (1) become apparent through a readily detectable degradation in material condition, capability, or functionality of equipment or plant operations; and (2) does not meet the definition of licensee-identified or NRC-identified. Includes violations identified through an event. See "NRC Enforcement Policy" Sections 2.3.4.b.1 and 2.3.4.b.2.**

Sensitive Unclassified Non-Safeguards Information (SUNSI). Any information of which the loss, misuse, modification, or unauthorized access can reasonably be foreseen to harm the public interest, the commercial or financial interests of the entity or individual to whom the information pertains, the conduct of NRC and Federal programs, or the personal privacy of individuals.

Stand-alone Inspection Reports. **A fuel facility inspection report that is typically issued for a specific inspection activity that is not documented in an integrated inspection report. Typically, stand-alone reports are issued for INFOSEC, MC&A, Physical Security, reactive, and supplemental inspections.**

Unresolved Item. An issue associated with an inspection activity that requires more information to determine if it constitutes a noncompliance.

Vendor. A supplier of products or services to be used in an NRC-licensed facility or activity. In some cases, the vendor may be an NRC or Agreement State licensee (e.g., nuclear fuel fabricator, radioactive waste broker) or the vendor's product may be required to have an NRC CoC (e.g., certain transport packages such as spent fuel casks).

Violation. The failure to comply with a requirement.

Willfulness. See “NRC Enforcement Policy” Section 2.2.1.d

## 0616-04 RESPONSIBILITIES

All NRC inspectors assessing fuel cycle licensed activities should prepare inspection reports in accordance with the guidance provided in this IMC. General and specific responsibilities are listed below.

04.01 General Responsibilities. Each inspection of a licensee, vendor, and certificate holder shall be documented in a report consisting of a cover letter, inspection report **enclosure**, and attachments.

### 04.02 Inspectors.

- a. Inspectors should prepare inspection reports in accordance with the guidance provided in this IMC.
- b. Inspectors have the primary responsibility for ensuring that observations and noncompliances are accurately reported, that referenced material is correctly characterized, and that the scope and depth of conclusions are adequately supported by documented observations and noncompliances.
- c. Inspectors are responsible for ensuring that the content of the report does not conflict with the information presented at the exit meeting. If the report will differ significantly from the information provided at the exit meeting, the inspector (or the report reviewer) should discuss those differences with the licensee before the report is issued.
- d. Report writers and reviewers should ensure that inspection reports follow the general format given in this IMC, where appropriate.
- e. For inspections conducted by regional and resident inspectors, the report numbers should be issued per Regional Instructions and should be consistent with Agencywide Documents Access and Management System (ADAMS) templates.

The report number sequence is as follows: Docket No./Year (four digits) followed by the sequential number of the report in that year. The inspection reports' number sequence for the Division of Fuel Cycle Inspection (DFFI) inspections are 0700XXXX/20YY00X or 04000XXXX/20YY00X. Safeguards and Security inspection report numbers would be 0700XXXX/20YY40X.

- f. For all sites that possess classified matter, the lead inspector should ensure a screening of inspection reports is performed to verify that -no classified matter is contained within public reports.
- g. Inspectors should align the level of detail and scope of the inspection report with the risk of the activity.

#### 04.03 Branch Chiefs.

A branch chief, **or designee**, familiar with NRC requirements in the inspected area shall review each inspection report, prior to issuance, to ensure that the report follows the guidance given in this IMC.

- a. The management reviewer shall ensure that inspection noncompliances are consistent with NRC policies and technical requirements, that enforcement-related violations are addressed in accordance with the “NRC Enforcement Policy” and the “NRC Enforcement Manual,” and conclusions are logically drawn and sufficiently supported by observations and noncompliances.
- b. Management should ensure that a record of inspectors’ and reviewers’ concurrences are maintained on record. Management should ensure continued inspector concurrence when substantive changes are made to the report as originally submitted, and mediate disagreements that occur during the review process. As a minimum, substantial changes should be discussed with the inspector or inspectors involved to ensure continued concurrence, and disagreements that cannot be adequately resolved should be documented using the process described in Management Directive 10.158, “NRC Non-Concurrence Process.”
- c. The applicable branch chief is responsible for the report content, conclusions, and overall regulatory focus, and timeliness of inspection reports. Typically, stand-alone reports are issued no later than 30 calendar days after inspection completion. Inspection completion is normally defined as the day of the **onsite** exit meeting, **or the day of the last re-exit meeting, whichever is later**.
- d. The branch chief is responsible for issuing integrated reports for fuel cycle facilities **typically on a quarterly basis**. Typically, integrated reports are issued no later than **45** calendar days after **the last day of the quarter**.

#### 04.04 **Division of Fuel Management (DFM) – Inspection and Oversight Branch (IOB)**.

- a. **IOB** is responsible for providing interpretations and support for information contained in this IMC.
- b. **IOB** is responsible for answering questions related to program guidance.
- c. **IOB** is responsible for facilitating resolution of identified gaps in IMC directions and guidance.
- d. **IOB** is responsible for updating program guidance to address identified gaps

#### 0616-05 THRESHOLDS OF SIGNIFICANCE - SCREENING INSPECTION RESULTS

When conducting inspections, the NRC inspector reviews an appropriate sample of selected procedures, events, and operations; **the inspector** is not expected to monitor all the activities in progress, or to document every minor discrepancy that occurs. As part of maintaining a focus on safety, inspectors continually use NRC requirements, inspection procedures, industry



standards, regional and headquarters' guidance, and their own training and insight to make judgments about which issues are worth pursuing and which are not.

To communicate effectively, inspection reports must reflect judgment and prioritization: significant safety issues should be discussed in appropriate detail, and less significant issues should be discussed succinctly. To maintain some consistency in how minor issues are treated, report writers must recognize certain "thresholds of significance"; that is, they must use similar criteria in deciding whether an issue is important enough to document, important enough to track or follow up, etc.

The "NRC Enforcement Policy" and "NRC Enforcement Manual" acknowledges that some violations of minor safety, safeguards, environmental, and regulatory concern are below the level of significance of SL-IV violations. Because of their minor nature, these "minor" violations are not the subject of formal enforcement action and are not usually documented in inspection reports.

Appendix B, "Examples of Minor Violations," contains examples of minor issues which are violations of requirements but have insignificant safety, safeguards, or regulatory impact or have no more than minimal risk. The appendix explains how to determine whether or not the issue is minor.

## 0616-06 DOCUMENTING NONCOMPLIANCES

The primary guidance for all matters related to enforcement, including documentation, is given in the "NRC Enforcement Policy" and the "NRC Enforcement Manual." The following discussion summarizes certain aspects of that guidance related to inspection reports.

06.01 Types of Noncompliances. The manner of documenting a noncompliance in the inspection report depends on how that noncompliance will be dispositioned. A noncompliance may be addressed as a minor violation, a non-escalated enforcement action (i.e., a cited SL-IV violation or non-cited violation (NCV), a deviation, or a nonconformance), an apparent violation (AV), or as an escalated enforcement action (i.e., a SL-I, II, or III violation).

Note that if an issue is described in an inspection report in sufficient detail to conclude that a noncompliance has occurred, then that issue must be dispositioned as a violation, an apparent violation, or an NCV (for violations); or a Notice of Deviation or Nonconformance may be issued (for deviations and nonconformances). To simply document a noncompliance as a "weakness," "licensee failure," "observed discrepancy," or similar characterization without dispositioning it, is inappropriate. If a violation has not occurred, to avoid any confusion, it may be appropriate in certain situations to include a statement such as, "this issue does not constitute a violation of NRC requirements." If it cannot be determined if a noncompliance exists due to insufficient information from either the licensee or NRC, it may be treated as a URI. Note that minor violations are not normally documented in inspection reports (See 0616-12, "Minor Violations").

- a. Non-Escalated Enforcement Actions. Most violations of low significance (i.e., more than minor concerns) fall into the SL-IV category. If at the time of issuing the inspection report a violation has been categorized at SL-IV, then an NOV is generally sent out with the inspection report, as a "non-escalated" EA. The cover letter for reports that include non-escalated EAs should follow the appropriate "NRC Enforcement Manual" guidance.

Whether an NOV accompanies the report or is issued later, the designation of SL is made in the NOV itself. However, to substantiate the significance of the violation, the **four-part** format (Section 0616-07) should contain the logic for determining the significance with possible reference to a specific “NRC Enforcement Policy” violation example, if applicable.

Deviations and nonconformances are also considered non-escalated enforcement actions. When a licensee fails to meet a regulatory commitment or to conform to the provisions of an applicable code or industry standard, the failure may result in a Notice of Deviation. When a vendor or certificate holder fails to meet a contract requirement related to NRC activities, the failure may result in a Notice of Nonconformance. For specific guidance on documenting deviations and nonconformances, see “NRC Enforcement Manual” Sections 4.4 and 4.5, respectively.

- b. **Non-Cited Violations.** The criteria for dispositioning a violation as an NCV is laid out in the “NRC Enforcement Policy,” Section 2.3.2. SL-IV violations that are self-revealing or NRC-identified at facilities with an NRC-approved CAP should be dispositioned as NCVs using the four-part write-up as described in Section 0616-07, Documenting Violations Using the Four-Part Format. Licensee-identified SL-IV violations at facilities without an NRC-approved CAP should also be documented using Section 0616-07. Licensee-identified SL-IV violations at facilities with an NRC-approved CAP that meet the NCV criteria should be dispositioned with minimal documentation, as described in Section 0616-13, Licensee-Identified Violations.
- c. **Potential Escalated Enforcement Actions.** When an issue is being considered for escalated EA, the inspection report should refer to the potential violation as an “apparent violation.” The report should not include any speculation on the SL of such violations nor on expected NRC enforcement sanctions. Potential EAs, by their nature, require further Agency deliberation (and, usually, additional licensee input) to determine the appropriate SL and NRC action.

Similarly, reports that discuss apparent violations should be carefully constructed to avoid making explicit conclusions (i.e., final judgments) about the safety or safeguards significance of the issue. The report should include any available details that demonstrate safety or safeguards significance, or that would help in making such a decision and should also describe any corrective actions taken or planned by the licensee. However, because a potential escalated enforcement action automatically entails further evaluative steps, neither the inspection report details nor the accompanying cover letter should present a final judgment on the issue.

06.02 **Supporting Details and Discussions of Safety or Safeguards Significance.** The discussion of violations must be sufficiently detailed to substantiate any NRC safety, safeguards, and regulatory concerns and to support any enforcement action (EA) the NRC may choose to issue. The degree of detail necessary to support an EA is a function of the significance and complexity of the violation. At a minimum, for a violation, the report should state:

- a. What requirement was violated;
- b. How the violation occurred;

- c. When the violation occurred and how long it existed;
- d. Who identified it, and when;
- e. Any actual or potential safety consequence;
- f. The root cause (if identified); Whether the violation appears isolated or programmatic;
- g. What corrective actions have been taken or planned; and
- h. Who was involved with the violation (i.e., management, operators, technicians)?

Although supporting details clearly assist in determining the safety or safeguards significance of violations, inspectors should be cautious in making direct statements regarding safety or safeguards significance in the inspection report details. Violation SLs, as described in the "NRC Enforcement Policy," are based on the degree of safety or safeguards significance involved. In assessing the significance of a violation, the NRC considers four specific issues: (1) actual safety or safeguards consequences; (2) potential safety or safeguards consequences, including the consideration of risk information; (3) potential for impacting the NRC's ability to perform its regulatory function; and (4) any willful aspects of the violation. As a result, if an inspection report refers to a violation as being "of low safety or safeguards significance" (the meaning of which could be interpreted as implying that the violation did not result in any actual adverse impact on equipment or personnel), the writer may have inadvertently made it difficult for the NRC to subsequently decide that the potential for an adverse impact or the regulatory significance of the violation warrants issuance of a SL-III violation. Therefore, when characterizing the safety or safeguards significance of a violation, the inspector should address both the actual and potential safety or safeguards and regulatory consequences.

06.03 Violations Involving Willfulness. Inspection reports should neither speculate nor reach conclusions about the intent behind a violation, such as whether it was deliberate, willful, or due to careless disregard. As with any observation, the report discussion should include relevant details on the circumstances of the violation without making a conclusion about the intent of the violator.

EXAMPLE: "The technician failed to follow established sampling procedures, although he had informed the inspectors earlier that he had been properly trained on the use of the proper tools and technique;" not, "The technician deliberately failed to take quality assurance (QA) samples using established procedures."

Conclusions about the willfulness of a violation are agency **decisions and** are normally not made until after the Office of Investigation (OI) has completed an investigation. A premature or inaccurate discussion of the willfulness of an apparent violation in the inspection report could result in later conflicts based on additional input and review. Inspection reports that include potentially willful violations are to be coordinated with OI and the Office of Enforcement (OE).

#### 0616-07 DOCUMENTING VIOLATIONS USING THE FOUR-PART FORMAT

The four-part format should be used for documenting more-than-minor violations and is organized as follows:

- Introduction
- Description
- Analysis
- Enforcement

The following table should be used to document traditional enforcement violations, including severity level I through IV NOVs, severity level IV NCVs, and apparent violations. Note: the table for licensee identified NCVs is covered in Section 0616.13, “Licensee-Identified Violations.”

Table 1: Traditional Enforcement Violation

[Violation Title]	
Severity	Report Section
Severity Level [X] NCV/NOV [Tracking Number] Open/Closed EA-YY-XXX	[IP Number]
[07.01 – Introduction]	
<u>Description:</u> [07.02 – Description]  Corrective Actions: [07.02a – Corrective Actions]  Corrective Action References: [07.02b – Corrective Action Reference]	
<u>Analysis:</u> [07.03 – Analysis]	
<u>Enforcement:</u>  Severity: [07.04a – Severity Level]  Violation: [07.04b – Violation]  Enforcement Action: [07.04c – Enforcement Action]  [07.05 – Unresolved Item Closure]	

07.01 Introduction. The introduction should be one or two sentences that provide a brief discussion of the violation. This section does not need to stand alone because the description that follows will provide the supporting details. The introduction should include:

- The SL (or identification as an AV)
- The identification credit (self-revealing), NRC-identified, or licensee-identified). Note that this is not appropriate for AVs.
- The violation and whether it is an NCV, NOV, or AV.

1. Typically, an NCV is a non-willful violation. The “NRC Enforcement Policy” provides criteria that may allow a noncompliance to be characterized as an NCV despite evidence of willfulness. The criteria, as outlined in “NRC Enforcement Policy” Section 2.3.2, must be met to consider this designation. The inspection report should include additional discussion to address these criteria before providing the standard conclusive language. For example: “Although this violation is willful, it was brought to the NRC’s attention by the licensee, it involved isolated acts of a low-level individual without management involvement, the violation was not caused by a lack of management oversight, and it was addressed by appropriate remedial action. Therefore, this non-repetitive, licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section 2.3.2 of the ‘NRC Enforcement Policy.’”

07.02 Description. The description must describe the circumstances associated with the violation and include the supporting factual information that will be used to support the justifications used in the analysis and enforcement section determinations. Additionally, if the violation was determined to be NRC-identified because the inspector identified a previously unknown weakness in the licensee’s classification, evaluation, or corrective actions, the description should provide evidence that the licensee had identified the issue and had failed to properly classify, evaluate, and/or correct the problem. The description must include sufficient detail commensurate with the significance for the reader to understand the issue, evaluation of significance, and enforcement conclusions. Where applicable, the write-up should include a description of any positive licensee performance that mitigated a potential problem and influenced the significance. Most violations are based on relatively simple circumstances, can be described in less than one page and should rarely exceed two pages. Violations based on more-complex circumstances may merit more discussion.

- a. Short and (if applicable) long term corrective actions taken to restore compliance or ensure adequate safety. If the planned corrective action is still being evaluated, a sentence stating why continued noncompliance does not present an immediate safety or security concern.
- b. A reference to any licensee’s corrective action document number(s).

07.03 Analysis. The level of detail must allow a knowledgeable reader to reconstruct the decision logic used to arrive at the final conclusion. The analysis must include the following as applicable:

Applicable More-than-Minor screening questions found in IMC 0616 Appendix B and the reason why that question was answered “yes” for the violation.

Applicable Minor/More-than-Minor example (e.g., Operations/Chemical Safety example 1a).

Examples in “NRC Enforcement Policy” Section 6.0, “Violation Examples,” aligning with SL-I through SL-IV violations, if applicable.

Actual and potential safety or security significance, including a discussion of the safety margin and duration of the violation, as well as the regulatory consequences.

07.04 Enforcement. Violations are documented in accordance with the “NRC Enforcement Policy.” The enforcement section must include the following for violations which do not receive enforcement discretion (except as noted below):

- a. Logic used to determine the SL of the violation including a specific reference to the “NRC Enforcement Policy” examples as applicable. If an NOV is being used to disposition a violation normally dispositioned as an NCV, additionally describe the circumstances in accordance with Section 2.3.2 of the “NRC Enforcement Policy.” Because the SL of an AV has not yet been determined, the logic should describe why the violation is being considered for escalated enforcement.
- b. What requirement was violated and how it was violated (this requires a “contrary to” statement consistent with guidance in the “NRC Enforcement Manual,” using language that is parallel to that of the requirement).
- c. When the violation occurred and how long it existed.
- d. Specific enforcement actions, including documenting any enforcement discretion granted in accordance with an existing Enforcement Guidance Memorandum, should be documented.
- e. Tracking number and title resulting from the violation (e.g., NCV, NOV, or AV [Tracking Number], Title).
- f. A statement similar to **one of the following**:
  1. For NCVs: “This violation is being treated as an NCV, consistent with Section 2.3.2 of the “NRC Enforcement Policy.”
  2. For NOVs: “This violation is being cited because [reason], consistent with Section 2.3.2 of the Enforcement Policy.

07.05 Unresolved Item Closure. If the violation results in a URI closure, include a reference to URI [Docket Number(s)]/[Report Number]-[Unique Sequential Integer] being closed. (e.g., “This closes URI 07001234/2020001-01.”).

#### 0616-08 UNRESOLVED ITEMS (URIs)

08.01 Opening. An inspector should open a URI when an observation is identified but more information is required to determine if the observation is a noncompliance.

A URI cannot be used to determine the significance of a violation (**except when more information is needed to determine if a violation is minor or more than minor**), to track completion of licensee’s actions associated with a violation or an inspection question, or to determine if enforcement discretion should be granted for a violation. The action of documenting URIs is a commitment of future resources.

The URI should be documented using **the format shown in the table below**.

Table 2: Open Unresolved Item

Unresolved Item (Open)	[URI Title] [URI- Tracking Number]	[IP Number]
<p><u>Description:</u> [08.01a – Description]</p> <p>Planned Closure Actions: [08.01b – Planned Closure Actions]</p> <p>Licensee Actions: [08.01c – Licensee Actions]</p> <p>Corrective Action References: [08.01d – Corrective Action References]</p>		

- a. The description section should describe the issue with sufficient detail to allow another inspector to complete the inspection and document the effort. The description should clearly state that a URI was identified and indicate what additional information is needed to make the enforcement determination.
- b. The planned closure action section should identify the specific licensee or NRC actions needed to determine whether the issue of concern is a violation or if a violation is minor or more than minor.
- c. The licensee action section should describe any corrective actions taken to eliminate any perceived immediate safety or security concerns.
- d. The corrective action reference section should identify the licensee’s corrective action records.

URIs should not be documented in the inspection report cover letter. URIs appear under the List of Additional Tracking Items section of the report. URIs should be opened in the section for the inspection module in which they were found (e.g., Operational Safety).

08.02 Follow-up and Closure. The level of detail devoted to closing URIs depends on the nature and significance of the additional information identified. Documentation of the closure of a URI must include a summary of the topic and the inspector's follow-up actions, evaluation of the adequacy of any licensee actions, and determination of whether a noncompliance has occurred. Sufficient detail must be provided to justify closing the URI. If resolution to a URI was based on discussions between inspector(s) and DFM technical staff, concisely document the details of these discussions as the basis for the regulatory decision.

After the information needed to close a URI is obtained, document the closure as follows:

For a URI being closed to no violation, document the closure of the URI under the inspection procedure used to review and close the URI. The closed URI should be listed under the Additional Tracking Items section of the report and be documented in the Inspection Results.

For a URI being closed to a noncompliance, document the closure of the URI and the opening of the resultant noncompliance under the inspection procedure used to review and close the URI. The closed URI should be listed under the Additional Tracking Items section of the report and the resultant noncompliance should be listed under the List of Violations section of the report and be documented in the Inspection Results. Note: Minor violations

should not be listed under the List of Violations section of the report.

## 0616-09 DISCUSSED OPEN ITEMS

Use the following table to document open items being discussed.

Table 3: Discussed Item

[09a – Item Type] (Discussed)	[09b – Title and Tracking]	[IP Number]
<u>Discussion:</u> [09c – Discussion]		

Open Items such as unresolved items, apparent violations, and notices of violation requiring a response were assigned an open tracking status in a previously issued inspection report. Document discussed open items in the results section of the report under the inspection procedure associated with the sample or inspection activity that resulted in the opening of the item.

- a. Item Type. Describe the item type (e.g., “Unresolved Item”).
- b. Title and Tracking. Enter the previously used title and tracking number assigned when the item was opened in a prior report.
- c. Discussion. Capture follow up actions, pertinent facts gathered, and observations which may support a future disposition of the item.

## 0616-10 CLOSURE OF WRITTEN EVENT REPORTS

Fuel facilities are required to submit written reports to the NRC for certain previously reported event notifications in accordance with Parts 20, 30, 40, 70, 71, 73, and 95 requirements. Inspectors review these written event reports and document their review and closure, including revisions to written event reports, under the inspection procedure used to review and close the WER.

In general, written event report reviews should have a brief description of the event and reference the docketed written report. If a written event report review is already documented in a separate NRC correspondence, then close the written event report with a brief statement in an inspection report referencing the separate correspondence. In addition, document closure of the written event report as follows:

- a. No Violations. No NRC-Identified or Licensee-Identified Violations, and no Self-revealing Violations. Include a statement similar to “The Written Event Report was reviewed. No violations of NRC requirements were identified.”
- b. Minor Violations. Use guidance in Section 0616 Appendix B, “Examples of Minor Violations.” Document as specified in Section 0616-14, “Minor Violations, Observations, Assessments, and Very Low Safety Significance Issues.”



- c. Licensee-identified Violations. The safety significance and enforcement should be discussed per Section 0616-13, "Licensee-Identified Violations".
- d. NRC-Identified or **Self-revealing** Violations. NRC-Identified or Identified Through an Event Violations should use Section 0616-07, "Documenting Violations Using the Four-Part Format," if not previously documented.

#### 0616-11 CLOSURE OF CITED VIOLATIONS

After receipt of the licensee's response to an NOV and completion of any necessary inspections, document the closure of cited violations **under the inspection procedure used to review and close the NOV**. The level of detail required to document closure of cited violations depends on the extent of corrective actions conducted by the licensee. In general, the write-up must summarize the inspector's follow-up actions to evaluate the adequacy of any licensee actions and provide enough detail to justify closing the violation.

#### 0616-12 VIOLATIONS WARRANTING ENFORCEMENT DISCRETION

Bring violations that may warrant enforcement discretion to the attention of the Regional Enforcement Coordinator. Default to any overriding directions found in an Interim Enforcement Policy, an Enforcement Guidance Memorandum, or the Enforcement Manual. Unless otherwise directed, document violations receiving enforcement discretion in the results section of the report under the applicable inspectable area. Use the following table to document violations receiving enforcement discretion.

Table 4: Enforcement Discretion

Enforcement Discretion	[12.01 – Enforcement Action]	[IP Number]
<u>Description:</u> [07.02 – Description]  Corrective Actions: [07.02a – Corrective Actions]  Corrective Action References: [07.02b – Corrective Action References]		
<u>Enforcement:</u>  Significance/Severity: [07.04a – Severity Level]  Violation: [07.04b – Violation]  Basis for Discretion: [12.02 – Discretion]  [12.03 – Unresolved Item Closure]		

**12.01 Enforcement Action.** Identify the Enforcement Action Number and provide a title with a reference to any applicable Enforcement Guidance Memorandum (EGM).

12.02 Discretion. State why enforcement discretion is being granted. Include an appropriate statement such as:

“The NRC exercised enforcement discretion in accordance with Section [#.#] of the Enforcement Policy because [reason].”

Note: Violations must be assigned an enforcement action (EA) number, which can be obtained through the Regional Enforcement Coordinator. The cover letter must contain the required language for exercising enforcement discretion.

12.03 Unresolved Item Closure. If the granting of enforcement discretion results in a URI closure, include a reference to URI [Docket Number(s)]/[Report Number]-[Unique Sequential Integer] being closed. (e.g., “This closes URI 07001234/2020001-01.”).

### 0616-13 LICENSEE-IDENTIFIED VIOLATIONS

NRC policy requires that all identified violations be dispositioned in accordance with the “NRC Enforcement Policy,” regardless of who identified them. Particular attention should be given to screening all documented violations captured in docketed communications such as those associated with required reporting (10 CFR 40.60, 70.50, 70.52, 71.95, 73.71, 74.11, 74.43, 74.57, 74.59, 20.2201, 20.2202, 20.2203, and 95.57) and voluntary reports submitted at the licensee’s discretion.

13.01 Licensee-identified Violations. Licensee-identified violations which meet the requirements for an NCV in accordance with “NRC Enforcement Policy” Section 2.3.2, and are associated with a facility with an NRC-approved CAP, should receive minimal documentation, using the Traditional Enforcement Violation table with abbreviated writeups, shown below.-

Table 1a: Licensee-Identified NCV

Licensee Identified NCV	
Severity	Report Section
Severity Level IV NCV [Tracking Number] Closed	[IP Number]
[13.01a - Introduction]	
<u>Description:</u> [13.01b – Description]	
Corrective Action References: [13.01c - Corrective Action References]	
<u>Analysis:</u> [13.01d – Analysis]	
<u>Enforcement:</u>	
Severity: [13.01e – Basis for Severity Level Determination]	
Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.	

### [13.01f – Unresolved Item Closure]

For licensee-identified NCVs, document the following:

- a. **Introduction.** Insert a sentence stating that a licensee-identified, Severity Level IV non-cited violation is documented below.
- b. **Description.** Briefly describe (a few sentences) what requirement was violated and how it was violated (this requires a “contrary to” statement consistent with the guidance in the Enforcement Manual).
- c. **Corrective Action References.** Provide a reference to the licensee’s corrective action document number.
- d. **Analysis.** This section should be marked N/A.
- e. **Severity.** Briefly describe the SL-IV categorization in accordance with the “NRC Enforcement Policy” examples.
- f. **Unresolved Item Closure.** If the violation results in a URI closure, include a reference to URI [Docket Number(s)]/[Report Number]-[Unique Sequential Integer] being closed. (e.g., “This closes URI 07001234/2020001-01.”).

**13.02** Violations Identified During an Extent of Condition Review as Part of a Licensee Self-Assessment or Corrective Action Program **Review**. Under certain circumstances, a violation that can be classified as a non-cited violation (NCV) does not require documentation. This is generally justified when the licensee identifies a violation (or violations) via an extent of condition effort initiated by a self-assessment or corrective action program **further** examples of the violations exist. The inspector is not expected to cite the four violations nor report the details of those violations in the inspection report. Instead, the NRC report should assess the adequacy of the licensee’s extent of condition effort, including a clear reference to the name, dates, and general subject matter of the self-assessment or corrective action program initiative.

**NOTE:** This expectation only applies to SL-IV and non-willful violations. All violations that could be categorized at SL-III or above must be documented in the inspection report using the **four-part** write-up and given appropriate follow-up.

### 0616-14 MINOR VIOLATIONS, OBSERVATIONS, ASSESSMENTS, AND POTENTIAL ISSUES INVOLVING LACK OF CLARITY IN THE LICENSING BASIS

Minor violations **and observations** are not routinely documented in inspection reports. However, **observations** may be documented when specifically allowed by an inspection procedure or temporary instruction.

#### 14.01 Minor Violations.

**Minor violations should only be documented** when it becomes necessary to capture a required inspection activity or conclusion for the record such as closing out a written event report or URI.

When a minor violation is documented, sufficient detail must be provided to allow an informed, independent reader to understand the basis for the minor determination (See the NRC Enforcement Manual Section 2.1.1 for more information). **Minor violations should not be included in the List of Violations section or Additional Tracking Items section of the report. Document minor violations in the results section of the report under the applicable inspectable area, when necessary.** For minor violations, document using the following table:

Table 5: Minor Violation

Minor Violation	[IP Number]
Minor Violation: [14.01a – Minor Issue Description]	
Screening: [14.01b – Minor/More than Minor Screening Text]	
Enforcement: [14.01c – Enforcement]	
[14.01d – Unresolved Item Closure]	

- a. **Minor Issue Description.** Briefly describe the minor violation.
- b. **Minor/More than Minor Screening.** State the reason why the violation is minor in accordance with IMC 0616, Appendix B, More-than-Minor screening questions or the “NRC Enforcement Policy” as applicable.
- c. **Enforcement.** State that the licensee has taken actions to restore compliance and include a statement similar to the following: “This failure to comply with [requirement] constitutes a minor violation that is not subject to enforcement action in accordance with the ‘NRC Enforcement Policy’.”
- d. **Unresolved Item Closure.** If the minor violation results in a URI closure, include a reference to URI [Docket Number(s)]/[Report Number]-[Unique Sequential Integer] being closed. (e.g., “This closes URI 07001234/2020001-01.”).

#### 14.02 Observations/Assessments.

When specifically allowed by the IP, document observations in the results section of the report under the applicable inspectable area. Use the following table to document observations:

Table 6: Observation

Observation: [Observation Title]	[IP Number]
[Observation Description]	

Document the corrective action program and other supplemental (e.g., assessment conclusion regarding holding open or closing a cited violation) or infrequent abnormal assessments in the results section of the report using the following table. Note assessments are different than

observations because observations only communicate factual details and do not draw conclusions.

Table 7: Assessment

Assessment	[IP Number]
[Assessment Description]	

14.03 Potential Issues Involving Lack of Clarity in the Licensing Basis.

Use the following table to document issues in accordance with the “Potential Issues Involving Lack of Clarity in the Licensing Basis” process defined in IMC 2600. Do not use this table to document an issue that is a more than minor violation.

Table 8: Potential Issue Involving Lack of Clarity in Licensing Basis

Potential Issue Involving Lack of Clarity in Licensing Basis: [14.03a – Title]	[IP Number]
This issue is a current licensing basis question and inspection effort is being discontinued in accordance with the Potential Issue Involving Lack of Clarity process. No further evaluation is required.	
Description: [14.03b – Description]	
Licensing Basis: [14.03c – Licensing Basis]	
Significance/Severity: [14.03d – Significance]	
Corrective Action Reference: [14.03e – Corrective Action Reference #s]	
[14.03f – Unresolved Item Closure]	

- a. Title. Include a title which describes the issue
- b. Description. Describe the circumstances associated with the issue.
- c. Licensing Basis. Describe the licensee’s supporting basis on why the issue of concern is not in their licensing basis and any relevant information on the licensing basis developed during the inspection.
- d. Significance/Severity. Describe the logic used to determine that the issue of concern would not have screened as more than Severity Level IV per the NRC Enforcement Policy and per IMC 0616 Appendix B.
- e. Corrective Action Reference #. If documented by the licensee, provide a reference to any corrective action program document the licensee generated as a result of

discussions regarding the issue.

- f. **Unresolved Item Closure.** If a potential issue involving lack of clarity in the licensing basis results in the closure of a pre-existing URI, include a reference to the URI [Docket Number/Report Number-sequential integer] being closed to this issue. (e.g., "This issue closes URI 070XXXXX/2020001-01)."

## 0616-15 OTHER GUIDANCE

**15.01 Treatment of Third-Party Reviews.** Detailed NRC reviews of Institute of Nuclear Power Operations (INPO) evaluations, findings, recommendations, and corrective actions, or other third party reviews with similar information are not referenced in NRC inspection reports, tracking tools, or other agency documents unless the issue is of such safety significance that no other reasonable alternative is acceptable. INPO findings, recommendations and associated licensee corrective actions are not normally tracked by the NRC. If a finding **is of such safety significance that it** warrants tracking, it should be independently evaluated, **inspected**, documented, and tracked as a URI.

INPO findings, recommendations, corrective actions, and operating experience which are placed in the licensee's corrective action program, can be considered appropriate for inspection. Additionally, when documenting review of these issues, inspection reports should not refer to any proprietary INPO reports or documents, INPO reference numbers, or identify specific sites when referencing operating experience. If it is necessary to document review of an INPO document (i.e., an evaluation referring to the INPO document was an inspection sample), then state the reference number of the reviewed item and provide general words for the title, if applicable (e.g., "Condition Report 235235 concerning industry information on pumps.")

If documenting review of an INPO evaluation, in accordance with Executive Director of Operations Policy 220, include a short statement that the review was completed. Do not include a recounting or listing of INPO findings or reference a final INPO rating when documenting an INPO evaluation. Discuss the specifics of any significant differences between NRC and INPO perceptions with regional management.

**15.02 Treatment of Sensitive Unclassified Non-Safeguards Information (SUNSI) in Non-Security Related Reports.** SUNSI must not be made publicly available and must be segregated from other portions of the report which are to be made publicly available. This can typically be accomplished by creating and referencing a separate report enclosure which can be profiled in ADAMS as "Non-Publicly Available." The documents containing SUNSI must be marked in accordance with Management Directive 12.6, "NRC Sensitive Unclassified Information Security Program." The NRC policy for handling, marking, and protecting SUNSI is publicly available on the NRC Public Web site at <https://www.nrc.gov/docs/ML0417/ML041700603.pdf>. Additional staff guidance for handling of SUNSI is published on the NRC internal Web site at <https://drupal.nrc.gov/sunsi>.

**15.03 Amending Inspection Reports.** When it becomes necessary to correct an issued report, the previously issued report should generally be revised and reissued in its entirety under the same inspection report number. The revised report would receive a new and unique ADAMS accession number and should include an appropriate cover letter explaining why the report is being reissued. Note that a revised inspection report must not be used to document new violations or inspection activities which occurred after the initial report was issued. Also, note

that depending on the nature of the correction, it may be more appropriate to discuss the change in a future report, rather than to go back and reissue a complete report.

15.04 Plain Language. Inspectors will use plain language in reports. For additional guidance, inspectors should refer to NUREG-1379, "NRC Editorial Style Guide."

15.05 Graphics/Visual Aids. Use graphics (drawings, diagrams, photographs, or photocopies) if their inclusion will simplify describing a complex condition that would otherwise require substantially more text. Photographs of plant areas or equipment or photocopies of technical or vendor manual pages must be handled in accordance with IMC 0620, "Inspection Documents and Records." When including graphics, the following should be considered:

- a. Format as a jpeg and adjust size (height, width, and resolution) so as not to significantly increase overall file size.
- b. Locate on less than ½ page or put in an attachment.
- c. Center on page and left/right indented from the text.
- d. Include a unique identifier (Figure/Diagram/Photograph X) with a descriptive title (e.g., Breaker Trip Latch Alignment).

15.06 Caution Regarding the Creation of Staff Positions. The statement "No violations of more than minor significance were identified;" does not create a staff position. This language acknowledges the possibility that noncompliances existed but were not documented in the report (e.g., because the inspectors did not discover them or because any identified noncompliances were found to be minor).

However, if the inspection report states, "The licensee complied with [Requirement X]," as related to an issue of concern, that language would constitute a staff position. If the NRC subsequently determined there is a noncompliance with "Requirement X" related to the issue of concern, then the NRC may need to consider that discovery a change in staff position subject to the backfitting provisions.

As such, the staff must exercise caution and avoid creating staff positions by not documenting statements about the adequacy of the licensing basis or statements about licensee compliance (some exceptions may apply depending on the type of inspection).

## 0616-16 GUIDANCE FOR INSPECTION REPORT CONTENT

Inspection results shall be reported to the licensee by issuance of an inspection report consisting of a cover letter signed by the cognizant Branch Chief, Division Director, **Regional Administrator, or other designee**, depending on the significance of any violations, an NOV if applicable, an inspection cover sheet, and report details.

The NRC Inspection Report is the document that states the official Agency position on the inspection scope, any observations, **assessments**, noncompliances, **and/or** URIs noted by the inspectors, and any conclusions that were reached relating to the inspection. All enforcement, routine and escalated, and all other Agency actions that may result from an inspection (such as

Orders), will be based upon the associated inspection report. Inspection reports must be clear, accurate, consistent, and complete.

This section provides guidance on the contents of inspection reports for fuel facility inspections. Region II DFFI or DFM may prepare additional instructions or guidance on inspection reports based on the specific needs of the programs they manage. Flexibility is provided in this area because of the many disciplines covered by fuel cycle inspections. Because fuel cycle inspections cover a variety of inspections, the inspector is advised to use the template for the particular discipline as a starting point. Some disciplines call for a more detailed description than others. In general, provide enough detail that the report will be understandable and useful in the subsequent inspection(s).

**16.01 Cover Letter.** The purpose of the cover letter is to transmit the inspection report results. Inspection reports are transmitted using a cover letter from the applicable NRC official as delegated by NRC headquarters or the regions to the designated licensee executive.

- a. **Cover Letter Content.** Cover letter content varies somewhat depending on whether the inspection identified violations. In general, however, every cover letter is based on a standard letter from the “NRC Enforcement Manual” Appendix B (<https://www.nrc.gov/reading-rm/basic-ref/enf-man/app-b.html>) and has the same basic structure, as follows:

**Addresses, Date, and Salutation.** At the top of the first page, the cover letter begins with the NRC seal and address, followed by the date on which the report cover letter is signed and the report issued.

For cover letters transmitting report details with violations assigned an EA number, the EA number should be placed in the upper left-hand corner above the principal addressee’s name. The EA number should be placed into the ADAMS profile of the document for the case/reference number. Additionally, on event-related documents, the Nuclear Materials Events Database (NMED) number or Fuel Cycle Nuclear Materials Events Database (FCNMED) number should also be included on the document below the EA number.

The name and title of the principal addressee is placed at least four lines below the letterhead, followed by the licensee’s name and address. Note that the salutation is placed after the subject line.

- b. **Subject Line.** The subject line of the letter should state the facility name (if it is not apparent from the Addressee line), the docket or license number, and inspection subject. The words “NOTICE OF VIOLATION” (or “NOTICE OF DEVIATION,” etc.) should be included if such a notice accompanies the inspection report. The entire subject line shall be capitalized.
- c. **Introductory Paragraphs.** The first two paragraphs of the cover letter should give a brief introduction, including the type of inspection report, except for security and safeguards reports.
- d. **Body.** The body of the letter should discuss the most important topics first.



The cover letter is written to transmit the inspection report to the licensee's management, and to deliver the "big picture" message regarding the inspection. Because it is the highest-level document, it does not need to (and normally will not) detail all the items inspected and the inspection procedures used. It will note the areas covered by the inspection. The cover letter must never contain any significant information which is not also contained in the summary and supported in the report details.

The tone of the cover letter must have a correct balance. The NRC focuses on performance issues. If a licensee performed some activity 100 times, and succeeded 99 times, we will be most interested in the single failure. But that does not mean that the cover letter will make it appear that the licensee rarely did succeed. The safety and regulatory significance of any licensee failure will be a primary consideration, above and beyond the numerical frequency of failure compared to success.

The cover letter must always be consistent with the inspection report. In addition, it must be consistent with the information which the inspector conveyed to licensee managers at the exit meeting. If the inspector's understanding of the facts or the significance of the violations changes after the exit meeting, the NRC shall call the licensee and re-exit. The re-exit should be documented in the cover letter. There should never be any surprises in a cover letter to anyone who was present at the exit meeting.

Lastly, the cover letter usually should not contain recommendations. There should not be any statements to the effect, "The licensee needs to..." or, "The licensee should..." If the licensee is not meeting safety or regulatory requirements, the statements should clearly show those facts. If the NRC believes that a licensee cannot ensure the safety of its activities, then an Order or some similar official action may be appropriate. Guiding licensee decision-making **using** a cover letter to an inspection report is not the appropriate method for accomplishing this type of action.

The content of a publicly-available cover letter to a non-public inspection report and NOV should be limited. The cover letter should closely follow the template provided in the Enforcement Manual. The number and SL of the violations identified should be stated, if the violations are NCVs or SL-IV violations. The number of violations pertaining to escalated enforcement should also be stated; however, the specific severity level should not be given. In all cases, the content of the violations shall be withheld, and the NOV shall not be included on the public docket. The specific regulation that the licensee was in violation of should not be specified. The type of inspection (Material Control and Accounting (MC&A), physical security, information security, etc.) should not be specified in the publicly-available cover letter.

A publicly-available cover letter should accompany all security and safeguards -related inspection reports that include enforcement information, including but not limited to: choice letters, conference letters, predecisional enforcement letters, and final determination letters. In the instance that a security or safeguards-related inspection report does not contain a NOV, the publicly-available cover letter should clearly state this.

However, in rare and exceptional instances, the NRC may choose not to release a cover letter or enforcement document with security-related violations when the

information could potentially increase the security risk of a licensee or when another Federal agency requests the NRC not to issue any public notifications regarding a specific event. On a case-by-case basis, NRC senior management from the office issuing the cover letter of an enforcement document, the Office of Nuclear Security and Incident Response (NSIR), the Office of Enforcement (OE), the Office of the General Counsel (OGC) and the Office of Investigations (OI) (for cases involving OI reports) will determine when withholding a cover letter of an enforcement document is appropriate after reviewing specific circumstances of the case.

- e. Closing. The final paragraph consists of standard legal language that varies depending on whether enforcement action is involved.

The signature of the appropriate NRC official is followed by the docket number(s), license number(s), enclosures, and cc: list. The distribution list is then on the concurrence page. The LISTSERV® cc is meant for external recipients and the distribution list is for internal recipients. An example is below.

Docket No. 70-XXXX  
License No. SNM-XXXX

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV®

DISTRIBUTION:  
X. XXXX, RII (Director)  
X. XXXX, RII (BC)  
X. XXXX, RII (SRI)  
X. XXXX, RII (SPI)  
X. XXXX, RII (PI)  
X. XXXX, NMSS (PM)  
PUBLIC

Add additional NRC staff to the distribution list if needed.

- f. NOV (If Applicable). Licensees are officially notified that they have failed to meet regulatory requirements when NRC issues an NOV. An NOV may be sent to licensees as part of a package of documents which also includes a cover letter and associated inspection report. An NOV may be sent with a cover letter which refers to an inspection report that was distributed previously. An NOV should not be sent to the licensee in advance of the inspection report.

Every NOV must be clear, so that there is little doubt that the licensee (or other interested reader) can understand the basis for the violation. The licensee may not agree with the NRC basis, but they must understand the NRC position.

Every NOV must clearly state what requirement was not met. That may mean that the date and revision number of the applicable document will need to be provided. Then, a clear statement of what happened (including when and for how long, if the timing is

important) will be provided. The intention is that any interested reader will be able to clearly see and understand what the requirement was and how it was not met. For additional guidance on documenting violations, refer to the “NRC Enforcement Manual.” The NOV should be an enclosure to the cover letter. Additional guidance on EAs is found in Section 0616-06 of this document.

**16.02 Cover Page.** The report cover page gives a brief summary of information about the inspection. It contains the docket/certificate number, report number, Enterprise Identifier, licensee, facility name, location, dates of inspection, names and titles of participating inspectors, and name and title of the approving NRC manager.

**16.03 Summary.** Include a paragraph similar to the following and modify it to accurately describe the content of the report regarding violations, and licensee identified violations.

“The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee’s performance by conducting a(n) [integrated] inspection at [Site Name], in accordance with the fuel cycle facility inspection program. This is the NRC’s program for overseeing the safe operation of licensed fuel cycle facilities. Refer to <https://www.nrc.gov/materials/fuel-cycle-fac.html> for more information.”

- a. **List of Violations.** Copy the violation headers from the write-ups done for Section 0616-07, “Documenting Violations using the Four Part Writeup,” and Section 0616-13, “Licensee Identified Violations.” Organize the violation headers by the order they appear in the report. If no violations were identified, include a statement similar to “No violations of more than minor significance were identified.”, as appropriate under the List of Violations Section.
- b. **Additional Tracking Items.** Include a list of items opened, closed, and discussed which are not directly covered in the list of violations above. For each listed item, include the item type, tracking number, title, status, (i.e., Open, Closed, or Discussed), and a reference to the appropriate report section.

**16.04 Table of Contents (if applicable).** For reports that are considered complicated or are of significant length (e.g., the Report Summary section to the Exit Meetings and Debriefs section is more than 20 pages long), the writer should include a table of contents as an aid to clarity. This requirement does not apply to routine integrated and stand-alone inspection reports.

**16.05 Plant Status.** Include a Plant Status section, if appropriate. Briefly describe the overall operations at the facility and plant status for the report period. An example of plant status would be that normal production activities were ongoing or list degraded conditions which significantly affected operations. This summary is not needed for some inspections since plant operating status may not be relevant. Example plant status statements are as follows:

During the inspection period, routine fuel manufacturing operations and maintenance activities were conducted in the fuel processing areas, Uranium Recovery (UR) facility, and in the Research and Test Reactors and Targets (RTRT) facility.

The Framatome facility converts uranium hexafluoride (UF<sub>6</sub>) into uranium dioxide (UO<sub>2</sub>) for the fabrication of low-enriched fuel assemblies used in commercial light water reactors. During the inspection period, normal operations were ongoing.

16.06 Inspection Scopes. This section details the specific items such as equipment or programs that were inspected and the regulatory standards that were used to determine if the licensee was in compliance. In most cases, the approach that should be used in writing the scope should be consistent with the Inspection Procedure (IP) used in performing the inspection. When describing the Scope, it is acceptable to state either what the inspector(s) did, or what the inspection accomplished. That is, a Scope section could be phrased, "This inspection included a review (or observation, or evaluation, etc.) of...." or it could be written as, "The inspectors reviewed (observed, evaluated) the...." The Scope statements should also describe why certain items were inspected. For example, "...to determine compliance with...."

There should always be a readily identifiable connection between the stated Scope and the items that the inspector reviewed. Thus, if the Scope was to review personnel dosimetry records, the inspector should not include issues associated with packaging and shipping problems. The scope may, when germane to the inspection, include (1) how the inspection was conducted (i.e., the methods of inspection), (2) what was inspected, (3) approximately when each activity was performed, (4) where the inspection took place (i.e., what room(s) or buildings) and (5) the inspection objectives and/or criteria for determining whether the licensee is in compliance.

- a. Scope Paragraph. Include a paragraph similar to the following one at the beginning of the scope sections:

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Inspections were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2600, "Fuel Cycle Facility Operational Safety and Safeguards Inspection Program." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

- b. Individual Inspection Scopes. Following the general scope paragraph, subsequent sections include, when appropriate, the Functional Areas that are used in the Licensee Performance Review Process (IMC 2604). These Functional Areas are Safety Operations, Safeguards, Radiological Controls, Facility Support and Other Areas. These Functional Areas are further divided into sections defined by the inspection procedures, as listed in IMC 2600, Appendix B, "NRC Core Inspection Requirements." For inspection activities performed, identify the report section by the IP number and title. Then include a scope section about the specific inspection activity. An example is shown below.

88020 - Operational Safety

This is the scope text for IP 88020.

Identification of Safety Controls and Related Programs (IP Section 02.01)

This is the scope text for Section 02.01. The inspectors reviewed the following

safety controls:

- Safety Control XX and attributes Y and Z
- Safety Control XX and attributes Y and Z

All inspection scopes shall be listed under the IP that was used to conduct the review. The scope should focus on the activities conducted to follow-up on the issue, but it shouldn't mention any opinions about the adequacy of licensee actions. For follow-up on previously identified issues, inspectors should typically use the IP and Functional Area under which the item was originally opened. For event follow-up, the inspectors should use the IP and Functional Area most closely related to the event, or use IP 88075, "Event Follow-Up."

**16.07 Inspection Results.** Organize the inspection results (e.g. tabled information documented using Sections 0616-07 through 0616-14) in accordance with IMC 0616 Exhibit 1, grouped by IP, applicable IP section, and finally by the order of the table used in this IMC to document the results (except Table 7, "Assessment," which should be listed first when used). When there are no inspection results in the report, include a statement similar to, "No violations of more than minor significance were identified."

For safeguards reports that contain Official Use Only, Safeguards Information, or Classified Information, care must be taken to ensure the proper **screening review for classified matter is performed**. If all the information required by the Four-Part write-up will not be included to maintain the report at a lower classification, the Office of Enforcement should be consulted prior to issuance of the report. If it is determined that information cannot be removed, then the report must be classified at the appropriate level.

The inspector should note that the determination of willfulness associated with a violation is an agency decision and is normally made after the Office of Investigations has completed an investigation. A premature or inaccurate discussion of the willfulness of a violation in an inspection report could result in later conflict based on additional input and review. Do not speculate or draw conclusions about the intent behind a violation. Inspection reports that include potentially willful violations or that contain material that may be related to an ongoing investigation must be reviewed by the Office of Investigations and the Office of Enforcement prior to issuance.

**16.08 Exit Meetings and Debriefs.** This section appears following the **Inspection Results section of the** inspection report and briefly summarizes the exit meeting(s), which is/are also described in the first paragraph of the cover letter and identifies the most senior licensee manager who attended the meeting(s).

At the exit meeting, the inspectors should verify that the information the inspector reviewed during the inspection, **if intended to be included** in the report, is not proprietary or classified. If the licensee does not identify any material as proprietary, the **Exit Meetings and Debriefs section** should include a sentence to that effect. For fuel cycle facilities, most operations and information reviewed will be at least proprietary.

If the NRC's position on a noncompliance changes significantly after the exit meeting, that change should be discussed with the licensee before the report is issued.

Licensee responses should not be included in the summary.

16.09 Third Party Reviews (if applicable). In rare circumstances, it may be necessary to document the completion of third-party reviews in this section of a report. For example, state “The inspectors reviewed Institute on Nuclear Power Operations reports that were issued during the inspection period.” Omit this report section when there are no reviews.

16.10 Documents Reviewed. A list of the documents and records reviewed during an inspection must be included in the inspection report. The list need not include those reviewed documents and records already identified in the body of the report nor those which, upon review, were determined not to support the inspection scope and determinations.

The level of detail for listed documents must be sufficient to allow the NRC to retrieve the document from the licensee in the foreseeable future. Therefore, a unique identifier, which may include the tracking number, title, revision and/or date, must be provided for each document referenced.

16.11 Report Attachments (if applicable). If desired, attachments (e.g., escalated enforcement supporting details) may be referenced and added to the end of the inspection report. The attachments may be combined into a single attachment entitled "Supplemental Information" if desired.

16.12 List of Acronyms (if applicable). Acronyms should be spelled out when first used in inspection report text (e.g., Licensee Performance Review (LPR)). A list of acronyms should be included in the inspection report or referenced, when the report section is 20 pages or longer. When referenced, the list of acronyms should be made publicly available for publicly available reports.

16.13 Cover Letter Enclosures (if applicable). The inspection report, starting with the cover page, is typically cover letter Enclosure 1. An additional cover letter enclosure may be necessary to communicate an NOV.

## 0616-17 RELEASE AND DISCLOSURE OF INSPECTION REPORTS AND ASSOCIATED DOCUMENTS

17.01 General Public Disclosure and Exemptions. Except for report enclosures containing exempt information, all final inspection reports will be routinely disclosed to the public. Information that should not appear in an inspection report is described in 10 CFR 2.390 and 9.17. MD 8.8, “Management of Allegations,” addresses the manner in which an inspection report may be used to document allegation follow up activities. Minor violations revealed during allegation follow up shall not be included in the inspection report as a minor violation. IMC 0620, “Inspection Documents and Records,” provides guidance on acquisition and control of NRC records, including inspection-related documents.

Inspection reports containing “Official Use Only- Security Related Information” will not be disclosed to the public. The number and severity of violations contained within these reports, however, will be stated in a publicly-available cover letter. If the severity level of the violation is an NCV or Severity Level IV violation, then the specific level should be listed. If the severity level of the violation is Severity Level I – III, then the publicly-available cover letter should only state that the violation is escalated enforcement. The content behind these violations shall not be discussed on the public docket or in public meetings.

17.02 Release of Investigation-Related Information. When an inspector accompanies an investigator on an investigation, the inspector must not release either the investigation report or his or her individual input to the investigation report. This information is exempt from disclosure by 10 CFR 9.17, "Agency Records Exempt from Public Disclosure," and must not be circulated outside the NRC without specific approval of the Chairman (refer to OI Policy Statement 23).

Attachments:

Appendix A – List of Acronyms and Abbreviations Used in this Inspection Manual Chapter

Appendix B – Examples of Minor Issues

Exhibit:

Exhibit 1 – Standard Fuel Cycle Facilities Inspection Report Outline

END

APPENDIX A, LIST OF ACRONYMS AND ABBREVIATIONS USED IN THIS  
INSPECTION MANUAL CHAPTER

ADAMS	Agency Document and Management System
AIT	Augmented Inspection Team
AV	Apparent Violation
BC	Branch Chief
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
DD	Division Director
EA	Enforcement Action
FCNMED	Fuel Cycle Nuclear Materials Event Database
FCSS	Fuel Cycle Safety and Safeguards
FOIA	Freedom of Information Act
GPO	Government Printing Office
IIT	incident Investigation Team
IMC	Inspection Manual Chapter
IROFS	Items Relied On For Safety
LPR	Licensee Performance Review
MD	Management Directive
NCV	Non-Cited Violation
NMED	Nuclear Materials Event Database
NMSS	Office of Nuclear Material Safety and Safeguards
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
OD	Office Director
OE	Office of Enforcement
OI	Office of Investigations
PDR	Public Document Room
PI&R	Problem Identification and Resolution
QA	Quality Assurance
RA	Regional Administrator
SI	International System of Units
SL	Severity Level
TI	Temporary Instruction
URI	Unresolved Item
VIO	Violation

END



## APPENDIX B, EXAMPLES OF MINOR VIOLATIONS

The purpose of this appendix is to provide the NRC staff with screening criteria to support the minor/more-than-minor threshold determination for violations.

### Minor Violations

Minor violations do not reach the level of significance associated with Severity Level (SL) IV violations and are not typically the subject of formal enforcement action or documentation. (See “NRC Enforcement Manual,” Part 1, Section 2.1, “Minor Violations,” for more information).

While not normally documented, licensees must still correct minor violations in order to restore compliance.

### Screening Process

When determining whether identified violations can be considered minor, inspectors should first review the applicable examples in Section 6.0, “Violation Examples,” of the “NRC Enforcement Policy” to see if the violation aligns with any of the examples for SL-I through SL-IV violations. If so, the violation is more-than-minor. Otherwise, the inspector should review all relevant general and program area questions contained in IMC 0616 Appendix B. Each of the fuel cycle functional area questions may need to be considered to determine if the violation is more than minor. Inspectors should then consider the specific examples at the end of this appendix to inform their responses to the screening questions. In general, if the answer to all the applicable screening questions is no, then the violation is minor. Conversely, if the answer to any one of the screening questions is yes, the violation is generally more-than-minor.

However, for risk-based non-compliances the inspector should consider the overall risk associated with the non-compliance. Non-compliances that result in a failure to meet the likelihood requirements of §70.61(b), (c), or (d) should generally be considered more-than-minor. However, non-compliances that do not result in a failure to meet the likelihood requirements of §70.61(b), (c), or (d) are not necessarily minor as negative impacts to the ability of an IROFS to perform its intended safety function are generally significant. In considering the overall risk associated with the non-compliance, the inspector should assess 1) the overall change in risk resulting from the non-compliance and 2) any remaining risk margin above and beyond the likelihood requirements of §70.61(b) and (c). In assessing the overall change in risk resulting from the non-compliance, non-compliances involving a substantial change in the overall risk of the applicable accident sequence(s) are generally more significant than those that result in a negligible change in risk. An example of this is the failure of a passive engineered control, resulting in a risk index shift of -4, versus a simple administrative control resulting in a risk index shift of -2. In this case, the failure of the passive engineered control should generally be considered more significant than that of a simple administrative control. In assessing any remaining risk margin above and beyond the likelihood requirements of §70.61(b) and (c), non-compliances involving little to no remaining risk margin are generally more significant than those that involve substantial margin above and beyond the likelihood requirements of §70.61(b) and (c). An example of this is the failure of an administrative control, resulting in the overall likelihood of the applicable accident sequence(s) to shift from -6 to -4 at a facility whose ISA methodology defines “highly unlikely” as  $\leq -4$ , versus the failure of an administrative control resulting in the overall likelihood to shift from -8 to -6. Although both failures resulted in an overall change in risk of -2, the failures had different impacts to the remaining risk margin and likelihood of the accident sequence(s). For risk-based non-compliances involving a failure to

meet the Double Contingency Principle or §70.61(d), the inspector should consider the parametric sensitivity to the failure. In general, failures that affect a highly sensitive parameter should be considered more significant than those that affect a relatively insensitive parameter.

### Screening Questions:

#### General

1. Could the violation reasonably be considered a precursor to a significant event?
2. If left uncorrected, would the violation have the potential to lead to a more significant safety or safeguards concern? (e.g., the licensee or NRC got lucky by catching it, but it would have eventually lead to a more significant issue)
3. Is the violation indicative of a programmatic deficiency? (e.g., involves multiple examples of a failure to establish or implement an adequate program, process, procedure, management measure, or quality oversight function as described in the license application or license).

#### Integrated Safety Analysis (ISA)

4. Does the violation result in a change in risk such that the licensee fails to meet 10 CFR 70.61(b) or (c) performance requirements?
5. Does the violation involve a failure by the licensee to designate an engineered or administrative control as an IROFS as required by 10 CFR 70.61(e) and is it required to meet 70.61(b) or (c)?
6. Does the violation involve the failure of a management measure such that an IROFS would not be available or reliable to perform its intended safety function when needed as required by 10 CFR 70.61(e) and 70.62(d) and is it risk significant? Consider the risk of the non-compliance in accordance with the Appendix B preface.
7. For facilities without an ISA, does the violation represent a reduction in safety margin compared to the latest licensing documents and safety analysis?
8. Does the violation adversely affect the ability of an IROFS or safety related component to perform its intended safety function? Consider the risk of the noncompliance in accordance with the Appendix B preface.

#### Criticality Safety

9. Does the violation result in a failure to meet the double contingency principle?
10. Does the violation result in the criticality accident alarm system being unable to detect or activate an alarm signal (audible or visual) during a time period when fissile material was handled, used, or stored?
11. Does the violation result in the failure to ensure that all nuclear processes are subcritical with an approved margin of sub-criticality for all normal and credible abnormal conditions as required by 10 CFR 70.61(d)? Consider the risk of the non-

compliance in accordance with the Appendix B preface.

#### Fire Protection

12. Does the violation degrade the ability of a fire safety system or control to perform its intended safety function and is it determined to be risk or regulatory significant as defined in the Integrated Safety Analysis (ISA) or Fire Hazards Analysis (FHA)?

Consider the risk of the non-compliance in accordance with the Appendix B preface.

#### Plant Modifications

13. Does the violation involve a failure to properly perform a 10 CFR 70.72 evaluation where the licensee failed to obtain a license amendment for the change?
14. Does the violation represent a non-conservative error in a specification, computer program, design report, drawing, calculation, safety analysis, or other design document that adversely impacts nuclear safety (e.g., IROFS, criticality controls, radiological exposure of personnel, etc...)? Consider the risk of the non-compliance in accordance with the Appendix B preface.

#### Radiological Protection

15. Does the violation involve the failure to establish radiological controls and lead to a significant unplanned or unintended intake or dose to an individual?
16. Does the violation involve the ability of a radiation monitoring instrument to perform its intended safety function within a reasonable level of safety margin and considering the overall level of radiological hazard being monitored?
17. Does the violation involve the spread of contamination beyond designated controlled areas and does it result in either significant unplanned exposure (either external or internal) or multiple personnel contamination events?

#### Environmental

18. Does the violation involve the spread of contamination beyond designated controlled areas and does it result in either significant unplanned exposure (either external or internal) or multiple personnel contamination events?
19. Does the violation result in the inability of the licensee to adequately measure or characterize an effluent release?
20. Is the violation the result of improper calibration of an effluent monitor and does it result in a non-conservative inaccuracy in characterizing an effluent release?
21. Is the violation associated with the licensee's radiological environmental monitoring program and is it contrary to NRC regulations, license, license application, or environmental report?

#### Radiation Waste/Transportation

22. Does the violation result in exceeding radiation levels or 5 times the removable surface contamination limits for a transportation package as defined in 49 CFR 173 or 10 CFR Part 71?
23. Does the violation result in the breach of a transport package?
24. Does the violation involve a failure to identify the type, quantity, or form of the material and does it have the potential to result in unplanned personnel exposure or contamination?
25. Does the violation involve an NRC-approved transport package Certificate of Conformance (CoC) design documentation deficiency, maintenance/use noncompliance, or contents deficiency of minor safety significance (i.e., not a geometry, weight, enrichment, or moderator specification nonconformance)?
26. Does the violation involve a failure to meet a QA requirement and does it result in improper characterization, classification, or disposal of the waste?
27. Does the violation involve a failure to properly characterize, classify, label, track, or dispose of radioactive waste and does it result in (1) the failure to meet a disposal facility's waste acceptance criteria, or (2) unplanned personnel exposure or contamination?

#### Emergency Preparedness

28. Is the violation associated with a failure to implement a regulatory requirement during an actual emergency **or a failure to implement a regulatory requirement affecting the public during a graded exercise?**
29. Is the violation associated with the failure to comply with a regulatory requirement and does it at a minimum degrade (i.e., not fully effective or inappropriately delayed) the ability of the licensee to respond to an emergency as described in the licensee's Emergency Plan?
30. Does the violation render an Emergency Action Level (EAL) initiating condition (IC) ineffective? (EALs may be rendered ineffective by unavailability or non-calibrated instruments relied upon by the EAL, errors in calculation of the EAL threshold, and by deficiencies in classification procedures, Emergency Response Organization staffing or training, or any other capability necessary to complete the classification or declaration.)
31. Does the violation involve the failure of the licensee to identify and correct deficiencies identified during an emergency exercise, **audit, or internal and external feedback?**

#### Material Control & Accounting (MC&A)

32. Does the violation adversely impact or degrade the effectiveness of the MC&A program?
33. Does the violation represent more than an isolated failure to establish or implement an adequate program, process, procedure, or quality oversight function as described in the Fundamental Nuclear Material Control Plan (FNMC)?

Physical Security

- 34. Does the violation for Category I fuel cycle facilities adversely affect licensees' security system's and/or material control and accountability program's defense-in-depth approach and ability to protect against: (1) the design basis threat of radiological sabotage from external and internal threats or (2) the design basis threat of theft or diversion of special nuclear material from external and internal threats?
- 35. Does the violation for Category II and III fuel cycle facilities adversely affect licensees' security system's and/or material control and accountability program's ability to: (1) minimize the possibilities for unauthorized removal of special nuclear material or (2) facilitate the location and recovery of missing special nuclear material?
- 36. Does the violation for Conversion and Deconversion facilities adversely affect licensees' security system's and/or material control and accountability program's ability to: (1) protect hazardous chemical storage areas, (2) protect against radiological sabotage, or (3) protect against the loss, theft, or diversion of radiological materials, source material or byproduct material?

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Minor/More-than-Minor Examples

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- 1. Operations/Chemical Safety
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Example 1a: Operators were starting up a furnace from a maintenance shutdown. They were at a temperature hold point where combustible gas was to be admitted in an inert concentration. The operators attempted to admit the gas, but two sequential isolation valves, once opened, failed shut. The operators found the manual isolation valve shut (normally open unless recovering from a long-term shutdown) as the result of a required tag out of several components for the previous maintenance. The lock-out/tag out procedure requires steps or comments regarding system restoration following tag out release, specifically if the operating procedure does not cover component restoration. In this case, the reconfiguration instructions were missing.

The violation: The licensee failed to perform activities in accordance with site procedures as required by the license. The lock-out/tag-out (LO/TO) procedure requires steps or comments regarding system restoration following tag out release if the operating procedure does not cover component restoration.

Minor because: The system was isolated in a safe configuration with no adverse nuclear or radiological safety impact on equipment/personnel and no ability to proceed further.

Not minor if: The system was in an unsafe configuration that adversely impacted nuclear or radiological safety of equipment/personnel; or there were indications of a programmatic breakdown in the LO/TO process.

NOTE: A LO/TO violation that adversely impacts life safety (e.g., injury or fatality), but does not impact nuclear or radiological safety, is considered an Occupational Safety and Health Administration (OSHA) issue and is not enforceable under NRC requirements. Refer to the Memorandum of Understanding (MOU) between NRC and OSHA for additional information.

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Example 1b: The inspector determined that the licensee was using an outdated version of an operating procedure to perform a system valve/component line-up prior to start-up of an ammonium diuranate (ADU) conversion area processing system. Correct valve configuration was credited as an administrative IROFS in the ISA. Licensee procedures require personnel to verify the correct version of the procedure prior to use. The licensee credited procedure use and adherence and configuration management as management measures in the license application.

The violation: The licensee failed to implement management measures (procedure use and adherence and configuration management) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of Part 70.61.

Minor because: The procedure changes were minor or administrative; or the changes did not adversely impact the positioning or safety function of an IROFS.

Not minor if: The changes adversely impacted the positioning and safety function of an IROFS.

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Example 1c: Post-maintenance testing was performed on five IROFS furnace temperature controllers during an outage at a fuel facility manufacturer. All the required tests were performed, based on statements from licensee workers, but there was no record that an actual post-maintenance test was conducted on one of the controllers. Based on indication in the control room, all temperature controllers had comparable temperature readings including the controller that did not have documented post-maintenance test results. Furnace temperature readings were within the required operating range. Recordkeeping and reporting was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (recordkeeping and reporting) per 10 CFR 70.61(e) and 70.62(d) for an IROFS due to a

lack of documented test results (records) verifying that test requirements were satisfied.

Minor because: This was an isolated example of a record keeping issue of low safety significance. There was reasonable assurance that post-maintenance test requirements were met as evidenced by actual furnace temperature readings being within limits.

Not minor if: The temperature controller was determined to be degraded during subsequent testing and not capable of performing its intended safety function.

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Example 1d: A licensee procedure required specific IROFS valves on a locked valve list to be locked as indicated on plant Piping and Instrumentation Diagrams (P&ID's). Inspectors identified IROFS designated valves on the locked valve list that were not indicated as locked on the P&ID's. The licensee is required to implement a configuration management program to ensure that the information used to operate and maintain safety controls is kept current. Configuration management was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (configuration management) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: This is an insignificant drawing discrepancy; or the valves were found positioned/locked in positions did not adversely impact an IROFS safety function.

Not minor if: The valves were found positioned/locked in positions that adversely impacted an IROFS safety function.

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Example 1e: The inspectors identified that an operator performing IROFS-related duties failed to meet operator requalification training requirements. Training and qualification was credited as management measure in the license application.

The violation: The licensee failed to implement management measures (training and qualification) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: All operations continued to be performed in a safe and controlled manner and the operator, when interviewed, exhibited a clear understanding of

his/her assigned IROFS-related duties; or the discrepancy was the result of a minor administrative or training documentation error.

Not minor if: The operator incorrectly performed tasks that impacted the ability of an IROFS to perform its intended safety function; or when interviewed, the operator did not have a clear understanding of his/her assigned IROFS-related duties.

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Example 1f: The inspectors identified during a walkdown that the differential pressure readings for ventilation high-efficiency particulate air (HEPA) filters were outside their normal operational band. The operating procedure requires the operators to log the readings once per shift. The primary safety concerns are failure to detect a filter breakthrough (low differential pressure) or filter overloading (high differential pressure). The inspector reviewed the latest operator logs and determined that the operators had failed to log the readings during the previous two shifts. Procedure use and adherence was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (procedure use and adherence) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: Monitoring of HEPA filter differential pressure was not credited as an administrative IROFS in the ISA.

Not minor if: Monitoring of HEPA differential pressure was credited as an administrative IROFS in the ISA.

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Example 1g: During a walkdown, the inspectors identified that operators routinely left a chemical supply valve open following each filling of the chemical column. The procedure requires that the valve be closed between chemical fills. Valve position verification was credited as an administrative IROFS in the ISA. Procedure use and adherence was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (procedure use and adherence) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: Failure to properly position the valve did not adversely impact the safety function of the component/system.

Not minor if: Failure to properly position the valve did adversely impact the safety function of the component/system.



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Example 1h: During a walkdown of product staging columns, the inspectors identified numerous missing component identification tags, several tags on the floor, and loosely attached tags that had slipped away from components. Site conduct of operations procedures require that components be labeled. Procedure use and adherence was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (procedure use and adherence) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: Component labeling issues did not contribute to operational evolutions that adversely impacted nuclear safety (e.g., safety function of an IROFS) or radiological safety of personnel.

Not minor if: Component labeling issues did contribute to operational evolutions that adversely impacted nuclear safety or radiological safety of personnel.

NOTE: Component labeling issues that adversely impact personnel/life safety, but do not impact nuclear or radiological safety of personnel, should be handled by OSHA according to the MOU between OSHA and NRC.

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Example 1i: During a walk down, the inspectors identified numerous scales that were one to several days past their calibration due dates. The scales were designated as IROFS for the prevention of criticality. Maintenance, which includes calibration of IROFS equipment, was credited as a management measure in the license application.

The violation: The licensee failed to implement management measures (maintenance) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: Subsequent calibrations of the scales were satisfactory, requiring no adjustments; or the scales were not used since the last calibration; or the scales were out of calibration in the conservative direction.

Not minor if: Subsequent calibrations of the scales were unsatisfactory in the non-conservative direction.

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Example 1j: The licensee failed to implement adequate management measures,

resulting in a condition where an IROFS was unavailable, unreliable, or less reliable than assumed in the ISA.

The violation: The licensee failed to implement management measures per 10 CFR 70.61(e) and 70.62(d) to ensure that an IROFS remained available and reliable.

Minor because: The licensee maintained significant risk margin above and beyond the performance requirements of §70.61(b) and (c); or the overall change in risk resulting from the failure was low, *and* the licensee maintained some level of risk margin above and beyond the requirements of §70.61(b) and (c).

Not minor if: The failure resulted in no remaining risk margin above and beyond the performance requirements of §70.61(b) and (c); or the overall change in risk resulting from the failure was high, *and* the licensee did not maintain a significant level of risk margin above and beyond the requirements of §70.61(b) and (c).

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2. Criticality Safety

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Example 2a: During a criticality safety inspection, the inspector determined that the licensee failed to meet the double contingency principle which requires that at least two unlikely, independent, and concurrent changes in process conditions must occur before a criticality accident is possible.

The violation: The licensee failed to meet double contingency as required by 10 CFR 70.64(a)(9), which requires that the design provide for criticality control including adherence to the double contingency principle for new facilities or processes. For existing facilities, adherence to the double contingency principle is specified as a license condition.

Minor because: The licensee only documented a subset of the changes in process conditions that would have to occur to cause a criticality. Upon further review and discussions with the licensee, the inspector determined that an additional, although undocumented for double contingency, unlikely, independent, and concurrent change in process conditions would have had to occur to result in a criticality.

Not minor if: Upon further review, the inspector determined that criticality could occur without at least two unlikely, independent, and concurrent changes in process conditions.

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Example 2b: Following an audit of the licensee's Nuclear Criticality Safety (NCS)

program by external auditors the licensee failed to enter the findings the auditors identified into their corrective action program.

The Violation: Failure to enter audit findings into their corrective action program as required by procedure. The use of procedures is credited as a management measure in the license application.

Minor because: The finding identified by the external auditors was merely a programmatic improvement to the licensee's NCS program or an editorial change.

Not Minor if: The finding identified by the external auditors was a violation that the licensee failed to take corrective actions to correct.

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Example 2c: The licensee identified that a required NCS signature for work on an out of service component had not been obtained. Licensee management identified the issue almost immediately and corrected the situation by performing the required NCS review.

The Violation: Failure to obtain the required NCS review and approval per procedure.

Minor because: It was identified and corrected by the licensee before the system was returned to service, or upon return to service the component was still able to perform its intended safety function.

Not Minor if: It was identified after the system was returned to service; and the component was unable to perform its intended safety function.

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Example 2d: Inspectors observed that an NCS analysis had been performed using a different set of assumptions than those committed to in the license application. The inspectors determined that the modeled conditions adequately bounded the as-built configuration and were within the validated area of applicability.

The Violation: Use of technical practices contrary to those committed to in the license.

Minor because: Assumptions bounded the as-built conditions and were within the bounds of the validation report.

Not Minor if: The modeled conditions were not conservative or were significantly outside the validation's area of applicability (AOA), or resulted in a significant reduction in the approved margin of subcriticality for safety.

NOTE: To determine if the reduction in the margin of subcriticality is significant, or if the deviation from the AOA is significant, see Example j.

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**Example 2e:** An inspector noted that some NCS analyses had been performed by contractor NCS engineers (who were qualified by their organization). The inspector questioned whether the contract engineers had been qualified as licensee NCS engineers. The licensee stated that the contractor engineers had not completed the licensee's NCS engineer qualification program and initiated corrective actions to complete their qualification.

**The Violation:** Failure to qualify NCS engineers per the requirements of the license application.

**Minor because:** The inspector did not identify any safety concerns regarding the content of the analyses performed by the contractor engineers.

**Not Minor if:** The NCS engineer's had established and implemented controls in the field that were substantially incorrect, and did not provide a reasonable level of NCS assurance.

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**Example 2f:** This event involves a failure to perform a required test for the presence of moderator. The test has never detected an accumulation of moderator, which is subject to upstream controls. The licensee credited these upstream controls to prevent an accumulation of moderator from occurring.

**The Violation:** Failure to perform a required test for the presence of moderator.

**Minor because:** The required testing when completed did not detect an accumulation of moderator; and the licensee continued to meet double contingency.

**Not Minor if:** The required testing when completed did detect an accumulation of moderator; or the upstream and other controls or IROFS had been insufficient to maintain double contingency.

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**Example 2g:** The licensee returned the criticality alarm system to service following maintenance without performing the required post-maintenance test.

**The violation:** 10 CFR 70.24 requires the licensee to maintain a monitoring system capable of detecting a criticality accident. Maintenance was not conducted in accordance with procedures.

**Minor because:** The licensee later performed the required post-maintenance testing with no identified deficiencies.

**Not minor if:** When the licensee performed the required post-maintenance test, the alarm system failed.

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Example 2h: The licensee failed to post an area as a **moderator-controlled** area. Preventing the introduction of moderators into the area is credited as an administrative IROFS in the license application.

The violation: The licensee committed to post appropriate criticality safety precautions and prohibitions at the entrance to affected process areas in the license application.

Minor because: Failure to provide the posting was an isolated incident (e.g., sign was inadvertently removed or sign fell down) and no moderator material actually entered the room during the time the posting was missing.

Not minor if: Moderator material was found in or entered the room as a result of the deficient posting; or failure to meet double contingency.

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Example 2i: The inspectors determined through a review of documentation that the licensee failed to verify criticality safety dimensions following a facility modification. The dimensions were credited as a passive geometry control in the nuclear criticality safety analysis (NCSA).

The violation: The licensee failed to verify passive engineered NCS controls at the time of installation as required by the license application. The licensee is required to meet 10 CFR 70.61 performance requirements.

Minor because: The licensee performed the required measurements and determined that they were within the established dimensions (or acceptance criteria) as established in the NCSA.

Not minor if: The licensee performed the required measurements and determined that they were not within the established dimensions (or acceptance criteria) as established in the NCSA.

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Example 2j: The licensee's analysis demonstrating subcriticality under normal and/or credible abnormal conditions was performed with less than the minimum approved margin of subcriticality for safety, or outside the validated area of applicability.

The violation: Failure to demonstrate subcriticality under normal and credible abnormal conditions, including use of an approved margin of subcriticality for safety.

Minor because: The licensee subsequently performs an analysis (in accordance with the technical practices specified in the license application) demonstrating the process as it exists is subcritical with the appropriate margin or is able to extend the validated area of applicability to cover the calculations.

Not minor if: New parameters, controls, or limits, or physical or operational changes to the process, are required to demonstrate subcriticality with an adequate margin.

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Example 2k: The licensee's Criticality Accident Alarm System (CAAS) experienced a failure (e.g., loss of detector coverage, loss of annunciation, etc.) without compensatory measures being in effect in an area for which evacuation is required under 10 CFR 70.24(a) and (a)(3).

The violation: The licensee failed to establish or maintain the CAAS as required by 10 CFR 70.24.

Minor because: The failure occurred for an insignificant duration (e.g., less than or equal to 8 hours), compensatory measures were imposed within that time, the failure effected a very small area of the plant (e.g., a bathroom), or the failure only effected remote areas away from where SNM is handled, used, or stored, that would not be exposed to doses requiring immediate evacuation.

Not minor if: The CAAS failed to provide either detection or annunciation coverage for a significant time period (e.g., greater than 8 hours), without compensatory measures being in effect.

NOTE: For failures where the duration is not known, but the failure rate can reasonably be assumed to be constant, the average failure duration may be calculated as one half the duration since the CAAS was last known to be functional.

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### 3. Fire Protection

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Example 3a: NRC inspectors identified approximately 30 cubic feet accumulation of leftover packaging materials and other combustibles in a radiological shipping/storage facility. The building procedures limited combustible trash to about five cubic feet due to the building having not having a fire sprinkler system.

The violation: The license application requires the licensee to follow procedures. The licensee failed to follow building procedures that limit combustible trash to five cubic feet.

Minor because: The volume limit for combustibles was not credited as an administrative IROFS in the ISA Summary; or mitigative alternatives were established; or had it ignited, nuclear material would not have been impacted.

Not minor if: The volume limit for combustibles was credited as an administrative IROFS in the ISA Summary; or no mitigative alternatives were established; or had it ignited, nuclear material would have been impacted.

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Example 3b: The inspectors identified that a Class A fire extinguisher was located in an area used for the storage of Class B combustible liquids. The licensee credits proper fire-fighting techniques including proper use of a fire extinguisher as an administrative IROFS in the ISA Summary. The licensee committed to following applicable National Fire Protection Association (NFPA) codes in the license application.

The violation: The license application requires that portable fire extinguishers be of sufficient capacity and the proper type of suppression agent. The licensee failed to install a Class B fire extinguisher in a storage area for Class B combustible liquids.

Minor because: Only minimal quantities of combustible liquids are stored in the area; or there are no credible fire accident sequences for the specific area identified in the ISA Summary.

Not minor if: There were significant quantities of combustible liquids stored in the area; and credible fire accident sequences were identified in the ISA Summary.

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Example 3c: The inspectors discovered that the licensee failed to perform the required monthly inspection of a portable fire extinguisher. The fire protection program which includes applicable NFPA compliance is credited as an administrative IROFS in the ISA.

The violation: The licensee failed to perform the required monthly portable fire extinguisher inspection as required by NFPA 10 to which they committed in the license application. Applicable NFPA compliance is listed as an administrative IROFS in the ISA.

Minor because: The fire extinguisher was found to be operable when the required inspection was performed; or the extinguisher failed the required inspection, but there were additional operable fire extinguishers in the immediate area; or NFPA code compliance is not specified as an IROFS in the ISA.

Not minor if: The fire extinguisher failed the required inspection and there were no other operable fire extinguishers available in the immediate area.

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Example 3d: The licensee failed to obtain a hot work permit for welding/cutting during routine maintenance in a process room where significant quantities of uranium are stored. The hot work permit program is credited as an administrative IROFS in the ISA.

The violation: The licensee failed to use of hot work permits for welding/cutting activities as required by the license application.

Minor because: Precautions required by a hot work permit were in-place even though a permit was not obtained.

Not minor if: Precautions required by a hot work permit were not in-place.

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Example 3e: Inspectors discovered that the licensee failed to perform routine inspection, maintenance, and functional testing activities of fire detection/suppression systems. The fire systems are located in manufacturing building that processes various chemical forms and stores various containers of nuclear materials. The fire detection/suppression systems are credited as an IROFS in the ISA for the detection and suppression of a fire (high consequence event). In addition, the licensee application requires NFPA detection/suppression surveillance activities.

The violation: A specific section of the license application requires that IROFS be installed, tested, and maintained in accordance with approved procedures (also a management measure). Specifically, the licensee failed to ensure that critical fire detection and suppression systems were inspected/tested on a regular basis in accordance with approved procedures.

Minor because: The licensee subsequently performed the inspections, maintenance, and testing (surveillance) activities and found that all safety systems were operating in accordance with established acceptance criteria; or fire detection/suppression systems are not IROFS; or the system is tagged-out of service for a legitimate reason; or the tests were not required to assure functionality or operability of the system; or mitigative alternatives were established.

Not minor if: The licensee subsequently performed the inspections, maintenance, and testing (surveillance) activities and found that all safety systems were not operating in accordance with established acceptance criteria; or the issue is part of a larger breakdown in the fire protection or surveillance testing programs.

Also minor if: The fire safety systems were in another building that has no association with licensed materials or by-products of licensed materials.

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Example 3f: Inspectors were following up a licensee-identified event where the licensee had updated software on a fire detection/alarm computer system. The licensee performed a computer software modification that was not in accordance with the licensee's quality assurance program. The modification unknowingly caused an automatic phone dialer to stop functioning. The malfunction was later inadvertently discovered during an activation of the fire alarm.

The violation: A specific section of the license application requires the licensee to perform computer software modifications in accordance with the licensee's QA program. The license application states that the licensee must conduct its business in accordance with a system of Standard Operating Procedures, Company Standards, and Policy Guidelines. The licensee implemented revised computer programming contrary to the licensee's computer software procedures, and the software disabled the auto dialer.

Minor because: The fire detection system and auto-dialer were not credited as an IROFS in the ISA Summary.

Not minor if: The fire detection system and auto-dialer were credited as an IROFS in the ISA Summary; and the licensee was unaware of the failure and inadvertently discovered the issue during actual alarm activation.

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Example 3g: Inspectors identified that a new ventilation duct had been installed in a fuel pellet production area and the new duct was shielding a number of the existing fire sprinkler heads. The affected fire sprinklers were not repositioned resulting in a noncompliance with NFPA standards.

The violation: A license condition states that the licensee shall conduct authorized activities in accordance with the statements, representations, and conditions made in the license application. A specific section of the license application related to fire protection requires that fire sprinkler system be maintained in accordance with NFPA standards. The licensee failed to ensure that the fire sprinkler systems in specified manufacturing areas were installed in accordance with NFPA standards after a new ventilation duct was installed.

Minor because: The "Authority Having Jurisdiction" (AHJ), which may be the NRC or other State or local agency, approved the deviation from NFPA 13 standards; or the fire sprinkler systems were not identified as an IROFS.

Not minor if: The licensee conditions or licensee documentation required compliance with NFPA standards; or the sprinkler system was not in compliance with NFPA 13 standards and the licensee did not establish a deviation from the AHJ.

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Example 3h: Following a loss of power to a furnace, the inspectors identified a failure of both the procedure and the operator to adequately verify vessel status which resulted in a boot seal separation and a combustible gas flare. The procedure was inadequate in providing operator guidance to assess all areas of the furnace. The inspectors noted that the operator had all the physical information present to assess vessel status.

The violation: The licensee committed to following procedures in the license application. The activity (operator assessment of vessel status) was not performed in accordance with procedures.

Minor because: The combustible gas flare was a low consequence fire as evaluated by the licensee's ISA fire hazard analysis, and therefore, was not an IROFS.

Not minor if: Failure to adequately assess vessel status was credited as an IROFS in the ISA fire hazard analysis.

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Example 3i: The licensee failed to review and revalidate the fire hazards analyses for multiple uranium production buildings at least every five years in accordance with operations procedures. The inspectors identified several differences between the existing hazards analysis versus the actual and passive fire protection features within the production areas.

The violation: The license application states that the licensee must conduct its business in accordance with a system of Standard Operating Procedures Company Standards, and Policy Guidelines. The licensee's procedures required a five-year review and revisions as necessary to ensure the accuracy of the fire hazard analysis. The licensee had not reviewed or revised the document within the required period. Multiple inaccuracies were identified.

Minor because: The number and magnitude of the differences were of minor significance in that they would not negatively affect the ISA assumptions and accident sequences.

Not minor if: Based on a review of the applicable accident sequences in the ISA Summary, the inspector determined that the number and magnitude of differences did not support the licensee's ISA assumptions.

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Example 3j: The inspectors reviewed the ISA to verify that credible fire related scenarios were identified. The inspectors reviewed accident sequences in the ISA that involved a hot-oil heat-exchange system used in a uranium drying application, and the processing/location of uranium hexafluoride (UF<sub>6</sub>) cylinders. The ISA accident sequences were limited and did not

consider that an oil fire could adversely affect UF<sub>6</sub> cylinders being stored or undergoing processing in the bay area. The inspectors noted that a fire could overheat a UF<sub>6</sub> cylinder and cause a structural failure of the cylinder. The inspectors reviewed the ISA for accident sequences involving UF<sub>6</sub> cylinders and determined that the licensee had defined the release of UF<sub>6</sub> as a potential high consequence event as defined in 10 CFR 70.61.

The violation: 10 CFR 70.61(a) requires the licensee to evaluate compliance with the performance requirements of 70.61(b), (c), and (d) in the ISA, and apply engineered controls and/or administrative controls to the extent needed to reduce the likelihood of occurrence and/or the consequences of each credible high and intermediate consequence event. The licensee failed to evaluate whether IROFS were necessary to reduce the risk of a uranium hexafluoride cylinder failure as a result of a fire from the hot oil system.

Minor because: The licensee performed an evaluation and determined that existing hot oil system controls would have prevented a fire of an intensity required to result in a UF<sub>6</sub> cylinder failure.

Not minor if: The ISA Summary failed to include credible fire related scenarios that required the application of IROFS in order to meet 10 CFR 70.61 performance requirements.

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#### 4. Plant Modifications

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Example 4a: During a plant modification inspection, the inspector determined that post maintenance testing (PMT) was missed on an IROFS actuator valve for a bulk chemical supply system following a modification that relocated the valve and added a local power on-off switch. The licensee's procedures for modifications require PMT following modifications to IROFS components. The licensee credited procedure use and adherence as a management measure in the license application.

The violation: The licensee failed to implement management measures (procedure use and adherence) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61.

Minor because: The valve passed the subsequent PMT; therefore, the IROFS was available and reliable to perform its intended safety function.

Not minor if: The valve failed the subsequent PMT; therefore, the IROFS was not available and reliable to perform its intended safety function.

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Example 4b: During a plant modification inspection, the inspector discovered that a regulatory engineer assigned to complete a 70.72 evaluation had not completed the required training and was unqualified.

The violation: The licensee failed to ensure trained personnel completed the 70.72 evaluations. The license application states that indoctrination, training, and qualification of regulatory function engineers is performed in accordance with an approved procedure. The procedure provides specific actions including training that must be completed to become qualified.

Minor because: The 70.72 evaluation dealt with a non-safety related modification; or the 70.72 evaluation dealt with a safety-related modification, but no deficiencies were found with the 70.72 evaluation (e.g., the boxes on the form were properly checked, the evaluation was performed correctly, and evaluation came to the correct conclusion).

Not minor if: The 70.72 evaluation involved a safety-related modification and one or more deficiencies were found with the 70.72 evaluation when reviewed by the inspector. Specifically, one or more of the questions on the form were incorrectly answered as “no” instead of “yes” with regards to whether the change impacted the ISA. The inspector concluded that the licensee should have obtained prior NRC approval for the change by submitting a license amendment.

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Example 4c: During a system walkdown of IROFS, the inspector determined that a P&ID does not match the as-built configuration of the component/system.

The violation: The licensee failed to implement management measures (configuration management) as required by 10 CFR 70.61(e) and 70.62(d) to ensure that IROFS were available and reliable to perform their function when needed to comply with the performance requirements of 10 CFR 70.61. Specifically, the licensee failed to keep drawings and design information up-to-date as a result of facility modifications.

Minor because: The discrepancy is administrative in nature (e.g., typo, incorrect symbol, missing date, etc.); or the discrepancy is technical, but does not adversely impact the ability of an IROFS to perform its safety function.

Not minor if: The discrepancy adversely impacts the ability of an IROFS to perform its safety function (e.g., missing, installed in wrong location, configuration does not match description in ISA, etc.).

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Example 4d: The inspectors identified that the licensee failed to obtain the necessary interdisciplinary safety reviews for a recent design change that impacted nuclear criticality safety. The design change was not considered a like kind change.

The violation: The licensee failed to obtain the necessary interdisciplinary safety reviews for a recent design change that impacted nuclear criticality safety. The license application requires the licensee to follow procedures. The licensee's change control procedure requires that changes which do not qualify as like-kind changes be evaluated and approved before the change is made and the ISA is modified.

Minor because: The licensee completed the required review and no safety issues or deficiencies were identified;

Not minor if: Deficiencies were identified during the subsequent review that adversely impacted the safety function or reliability/availability of an IROFS; or an IROFS was determined to be failed or degraded as a result of the violation.

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Example 4e: During a plant mods inspection, the inspectors identified that the licensee failed to perform a 70.72 evaluation for a change to a UF<sub>6</sub> storage area operations procedure.

The violation: The licensee failed to perform a 70.72 evaluation for an affected procedure. 10 CFR 70.72(b)(3) requires that any change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel must be evaluated by the licensee before the change is implemented.

Minor because: The licensee subsequently completed the 70.72 evaluation and concluded that NRC pre-approval of the change was not required.

Not minor if: The licensee subsequently completed the 70.72 evaluation and concluded that NRC pre-approval of the change was required.

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Example 4f: The licensee recently completed a modification to add a new administrative control (IROFS) for accident sequences associated with the prevention of leaks involving UF<sub>6</sub> cylinder pigtailed in vaporizers. The new administrative control requires operations to inspect the cylinder for cleanliness and verify that loose material is removed prior to loading the cylinder into the vaporizer. The new requirements were documented in a revision to an operations procedure. During a modifications inspection, the inspectors reviewed operator training records and determined that the licensee failed to perform training on the new procedure prior to implementation.

The violation: The licensee failed to perform training on the new UF<sub>6</sub> cylinder pigtail leak test procedure prior to implementation. The license application requires the licensee to follow procedures. The licensee's change control

procedure requires that training be performed on any modifications to existing operating procedures prior to operation in order to meet 10 CFR 70.72(a)(3).

Minor because: The issue was a documentation error and the operators had received the required training; or the operators failed to receive the required training, but correctly performed the administrative control in the field.

Not minor if: The licensee failed to perform or incorrectly performed the new administrative control as a result of inadequate training.

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Example 4g: The licensee failed to provide a written evaluation for a 70.72 evaluation involving a recent modification to remove an IROFS from a specific accident sequence. The IROFS was needed to meet 10 CFR 70.61(b) and (c) performance requirements. The licensee provided the inspectors with a completed positive 70.72 screening checklist (e.g., yes/no check boxes), which required the licensee to complete a 70.72 evaluation. Upon review of the evaluation, the inspectors concluded that the evaluation only consisted of yes/no answers to the specific 70.72 questions. The licensee concluded that prior NRC approval was not required.

The violation: The licensee failed to provide a written evaluation for a 70.72 evaluation involving a recent modification to remove an IROFS from a specific accident sequence. 10 CFR 70.72(f) requires the licensee to maintain records of changes to its facility and the records must include a written evaluation that provides the bases for the determination that the changes do not require prior NRC approval.

Minor because: The licensee subsequently completed the written evaluation and the answers to the 70.72 evaluation questions were correct and NRC prior approval was not required.

Not minor if: The licensee subsequently completed the written evaluation and the inspectors concluded that the answers to the 70.72 evaluation questions were incorrect (e.g., bases for determination were incorrect or invalid); therefore, the licensee failed to obtain prior NRC approval for the change as required by 70.72.

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## 5. Radiation Waste/Environmental/Transportation

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Example 5a: The NRC requires the licensee to submit effluent monitoring reports within 60 days after January 1 and July 1 of each year (i.e., semi-annual effluent reports). The licensee failed to collect and analyze air samples from two ambient air monitoring stations over a 2-week period. The

licensee's environmental monitoring program requires weekly air samples. Even though the samples were not obtained data was still available from the two air monitoring stations and subsequently analyzed. Air samples were collected weekly as required by the licensee's program from the other environmental monitoring stations. Upon review of the data the inspector noted no adverse trend or elevated radionuclide concentrations detected at the other ambient air monitoring stations over the period in question.

- The violation: Activities involving Special Nuclear Material (SNM) were not performed in accordance with procedures as required by the license application.
- Minor because: The licensee was able to submit the semi-annual effluent report and demonstrate compliance with effluent release limits and dose to the public for the monitoring period and there is no evidence to indicate that effluent releases were greater than those reported in previous reporting periods.
- Not minor if: The air monitoring data was not recoverable or the licensee could not otherwise produce sufficient supporting documentation to calculate (or estimate) dose to the public resulting from effluent releases (10 CFR 20.1301) over the period in question.
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- Example 5b: The licensee failed to install tamper-indicating seals in their proper locations on a transportation package overpack.
- The violation: The Certificate of Conformance (CoC) requires that the package be prepared for shipment and operated in accordance with the Operating Procedures of Chapter 7 of the application, which requires that the package (overpack) tamper-indicating seals be installed in their proper location.
- Minor because: The package had not left the site and there was no evidence that the package had been tampered with.
- Not minor if: The package had not left the site and there was evidence that the package had been tampered with.
- Also not minor if: The package had left the site regardless of whether there was evidence that it had been tampered with.
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- Example 5c: The licensee failed to properly calibrate the final liquid effluent monitors prior to release of the liquid to the environment. Specifically, the secondary calibration sources used for the monitoring system were not of sufficient strength to meet channel calibration requirements.

The violation: 10 CFR 70.56, "Tests," Paragraph (c) requires tests of radiation detection and monitoring instrumentation used for effluent monitoring (10 CFR 70.59). The licensee failed to follow procedures as committed to in the license application.

Minor because: The effluent monitoring results are not used for emergency response decision making; or the quantities of radionuclides released to the environment do not challenge 10 CFR Part 20 public dose limits.

Not minor if: The effluent monitoring results are used to make critical decisions during a licensee response to an emergency; or the 10 CFR Part 20 public dose limits were challenged or exceeded.

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Example 5d: The licensee incorrectly filled out a waste manifest for a radioactive waste shipment to a low-level waste disposal facility. Specifically, the waste generator incorrectly listed the radionuclide activities for various isotopes of uranium.

The violation: 10 CFR 20.2006 and 10 CFR Part 20, Appendix G requires the waste generator to list the radionuclide activities of all radioactive waste shipments on a waste manifest (NRC Forms 540 and 541). The licensee failed to accurately list radionuclide activities for various isotopes of uranium.

Minor because: The error on the waste manifest was minor or administrative; or actual radionuclide quantities were less than what was reported on the waste manifest (conservative); and the shipment was in compliance with the waste disposal facility's waste acceptance criteria.

Not minor if: The actual radionuclide quantities were greater than the waste disposal facility's waste acceptance criteria or the error was associated with programmatic issues relating to the licensee's preparation and approval of radioactive waste shipments.

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Example 5e: The licensee's waste certification official failed to sign and date the shipment manifest prior to shipping a radioactive waste shipment to a land disposal facility.

The violation: 10 CFR Part 20, Appendix G requires the waste generator to certify the shipment by signing and dating the waste manifest.

Minor because: All information on the manifest was correct (e.g., waste was properly classified, described, packaged, marked, and labeled) and the failure to certify the shipment was administrative in nature.



Not minor if: The information on the manifest was incorrect (e.g., waste was not properly classified, described, packaged, marked, or labeled) or the error was associated with programmatic issues relating to the qualifications and/or availability of properly trained, qualified and certified radioactive material shippers.

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Example 5f: The licensee failed to document a transportation package inspection in accordance with the conditions specified in the CoC

The violation: The package Safety Analysis Report and the licensee's package operating procedure require that the licensee document package inspections.

Minor because: The licensee performed the package inspections in accordance with the licensee's package operating procedure, but failed to properly document the inspections (i.e., documentation contained minor or administrative errors).

Not minor if: The licensee failed to perform the required inspection which resulted in a non-conforming package being used to transport radioactive material.

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Example 5g: The licensee failed to make a determination that a transportation package(s) was proper for the contents to be shipped (i.e., failure to verify that package is in an unimpaired physical condition, proper installation of gasket and closure device, package was loaded and closed in accordance with written procedures, moderator or neutron absorber is present and in proper condition, contamination and radiation levels do not exceed Department of Transportation regulations, and temperatures do not exceed regulatory limits.)

The violation: 10 CFR 71.87, Routine Determinations, requires the licensee to perform various actions to ensure the package is proper for the contents to be shipped.

Minor because: The package had not left the site and the routine determinations were subsequently completed with no identified deficiencies or non-conformances.

Not minor if: The package had the left the site without performing the routine determinations.

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Example 5h: During a review of shipping records, the inspectors identified that the licensee made an error which resulted in mislabeling a shipment.

The violation: 10 CFR 71.91, "Records," requires each licensee to maintain shipping records for a period of 3 years after shipment for material not exempt under 71.10.

Minor because: The error was in the conservative direction; or the error was administrative in nature with no safety significance.

Not minor if: The error was in the non-conservative direction and resulted in the potential for personnel over-exposure.

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## 6. Radiological Protection

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Example 6a: A licensee properly performed a radiation or airborne contamination survey (e.g., air sampling), but the survey was not documented.

The violation: Failure to meet 10 CFR Part 20.2102/2103, which requires each licensee to maintain records of the radiation protection program including surveys or failure to perform activities in accordance with site procedures or the license application.

Minor because: The survey was actually performed and proper radiological controls were established; or the lack of a survey record led to a situation (e.g., supervision or health physics technicians being unaware of radiological conditions) that resulted in the failure to establish radiological controls, but did not result in significant unplanned or unintended uptake/dose to an individual.

Not minor if: The lack of a survey record led to a situation that resulted in the failure to establish radiological controls and resulted in unplanned or unintended dose to an individual that exceeded the limits of either 10 CFR 20.1201(e) or the equivalent of 10 CFR 20.1207, "Occupational Dose Limits for Minors."

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Example 6b: Radiation detection instruments (e.g., portable instruments or installed area radiation monitors) were not calibrated properly or not response checked prior to use in accordance with site procedures.

The violation: Failure to meet 10 CFR 20.1501(c), which requires that instruments and equipment used for quantitative radiation measurements be calibrated periodically or failure to perform activities in accordance with site procedures or the license application.

Minor because: When recalibrated or response checked, the as-found condition of the instrument was within acceptance criteria for the calibration or response

check, or provided conservative measurement (i.e., over-response).

Not minor if: When recalibrated or response checked, the as-found condition of the instrument was not within acceptance criteria for the calibration or response check and did not provide conservative measurement.

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Example 6c: A Health Physics technician provided job coverage or performed a task that the technician was not fully qualified to perform (e.g., a task performance qualification was not completed as required, or the Health Physics technician did not have adequate experience).

The violation: Failure to perform activities in accordance with site procedures or specific requirements contained in the license application.

Minor because: Either no errors or only minor errors were made by the Health Physics technician, who had completed basic Health Physics training and the error(s) did not result in unplanned or unintended uptake or dose to a worker that exceeded the limits of either 10 CFR 20.1201(e) or the equivalent of 10 CFR 20.1207, "Occupational Dose Limits for Minors."

Not minor if: One or more substantial errors were made by the technician while performing radiological surveys and monitoring for a radiologically risk significant task and the error(s) did result in unplanned or unintended uptake or dose to a worker that exceeded the limits of either 10 CFR 20.1201(e) or the equivalent of 10 CFR 20.1207, "Occupational Dose Limits for Minors."

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Example 6d: An item (e.g., tool) containing detectable licensed radioactive material (RAM) was inadequately surveyed and subsequently released from the radiological control area (RCA) of the facility. The tool was found in an area outside the RCA boundary not subject to radiological monitoring. The potential existed for the "contaminated" item to be released offsite beyond the owner controlled area.

The violation: Failure to perform activities in accordance with site procedures or the license application.

Note: A violation does not occur in the situation where an item with RAM has been properly surveyed using appropriate survey techniques, evaluated as not having detectable RAM, is released, and is later discovered as containing RAM when surveyed using a more sensitive survey method. In this case a detectable quantity is defined as contamination levels exceeding the monitoring setpoints established by the licensee for RCA exit monitors and/or levels exceeding those in Table 1 of Regulatory Guide 1.86, as applicable.

Minor because: An inadequate survey was performed for an item that was released and later discovered. The follow-up survey concluded that the item contained radioactive material with a measured dose rate that was indistinguishable from background (measured in a low background area, at a distance of 30 cm from the item with a micro-rem per hour type instrument that typically uses a 1" by 1" scintillation detector) and the calculated dose using a realistic exposure scenario was less than the limits of 10 CFR 20.1207, "Occupational Dose Limits for Minors."

Not minor if: An inadequate contamination survey was performed for an item that was released from the RCA and later discovered in a plant area not subject to radiological monitoring controls. The follow-up survey concluded that the measured dose rate is distinguishable from background. The calculated dose using a realistic exposure scenario is in excess of the limits of 10 CFR 20.1207, "Occupational Dose Limits for Minors" and the contamination levels did not exceed the quantities listed in 10 CFR 20 Appendix C.

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Example 6e: An inadequate radiation survey did not identify a radiation area (i.e., dose rates were greater than 5 mrem/hr at 30 cm and  $\leq$  100 mrem/hr at 30 cm).

The violation: Failure to meet 10 CFR 20.1101, which requires the licensee to ensure that occupational doses are As Low As Reasonably Achievable (ALARA) or failure to perform activities in accordance with site procedures or the license application.

Minor because: Radiological conditions existed such that the dose to an uninformed worker (e.g., a worker who had not been briefed on or reviewed radiological conditions) was not likely to exceed 2 mrem in any 1 hour (2 mrem/hr) or 50 mrem in a year.

Not minor if: Radiological conditions existed such that the dose to an uninformed worker was likely to exceed 2 mrem in any 1 hour (2 mrem/hr) or 50 mrem in a year.

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Example 6f: The inspectors discovered an unlocked High Radiation Area (HRA) during a routine tour/inspection. Locked entryway control was the only feature used to control access to the HRA.

The violation: Failure to meet 10 CFR 20.1601(a)(3), which requires that entryways to HRAs be locked.

Minor because: The HRA was conservatively posted. The highest radiation level was  $\leq$  100 mrem/hr at 30 cm (i.e., the radiological conditions did not actually constitute an HRA area in accordance with the regulatory definition of an

HRA).

Not minor if: The radiation levels exceeded 100 mrem/hr at 30 cm (i.e., an HRA actually existed and was not barricaded).

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Example 6g: An improper entry was made into a High Radiation Area (HRA).

The violation: Failure to meet 10 CFR 20.1101, which requires the licensee to ensure that occupational doses are ALARA. Radiation Work Permit (RWP) requirements are established for the radiological protection of workers and are to be followed as prescribed by specific RWPs.

Minor because: The individual was authorized for entry into an HRA (e.g., authorized by radiation protection personnel or by RWP), was made aware of the radiological conditions in the area (e.g., during a pre-job briefing or a review of radiation survey results), but the individual signed in on the wrong RWP, and complied with the instructions of the correct RWP.

Not minor if: The individual was not authorized to enter an HRA or; the individual was authorized for entry, but was not made aware of the radiological conditions (e.g., did not get briefed or did not review radiological surveys) or; the individual was authorized to enter an HRA, was made aware of the radiological conditions and given specific radiological instructions, but took unauthorized actions that significantly changed the radiological conditions or; the individual continues work in an HRA after receiving an electronic dosimeter (ED) alarm without taking the prescribed procedural actions as defined in the licensee's radiation protection program/procedures (e.g., stopping work, leaving the area and contacting Health Physics) or; the individual takes actions that involved the bypassing of physical controls (e.g., bypassed the barrier around a locked high radiation area, or an individual bypassed an interlock on a calibration source); and the dose received to the individual(s) challenge or exceed the RWP limits.

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Example 6h: Work activities were ongoing within the material access area (or controlled zone) that was covered by a RWP. The inspector noticed that an individual was not wearing a respirator as required by the job-specific RWP. As part of the investigation, the licensee required the affected individual to submit a bioassay sample in accordance with the licensee's bioassay procedure. As a result, the licensee determined that the individual received a significant uptake of soluble uranium.

The violation: The licensee is required to follow their procedures per license conditions. RWP requirements are established for the radiological protection of workers and are to be followed as prescribed by specific RWPs. 10 CFR 20.1201 specified occupational dose limits for adults including soluble

uranium uptake.

Minor because: Failure to follow RWP requirements did not result in exposures and/or uptakes in excess of regulatory limits (> 10 mg soluble uranium or > 10% of annual occupational dose limits).

Not minor if: Failure to follow RWP requirement did result in exposures and/or uptakes in excess of regulatory limits (>10 mg soluble uranium or > 10% of annual occupational dose limits).

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Example 6i: The NRC requires licensees to limit the soluble uranium intake by an individual to less than 10 milligrams in a week. The licensee established an administrative limit of 1 milligram in a week. Contrary to the licensee's program, an operator was exposed to 1.3 milligrams of soluble uranium over a 7-day period based on bioassay results. Routine radiological surveys and breathing zone air sampling failed to identify that the operator was exposed to uranium concentrations exceeding the administrative limit.

The violation: The licensee failed to identify that the operator was exposed to uranium concentrations exceeding the administrative limit.

Minor because: This was a licensee administrative limit. The worker was within Federal limits.

Not minor if: The licensee's multiple processes by which to determine potential intakes by workers did not identify an actual intake were identified of failures to satisfy radiation protection procedures indicating a failure to maintain and implement programs to keep exposures as low as reasonably achievable; or the operator exceeded the 10 mg/week regulatory requirement.

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Example 6j: During a walkdown, the inspectors identified the collapse of a contamination control enclosure installed to control potential airborne contamination in support of scheduled maintenance on a potentially contaminated furnace. Sealing tape peeled away resulting in openings in the enclosure, impacting the intended purpose of the enclosure, namely to contain any potential airborne material generated during the maintenance activity from escaping the enclosure.

The violation: Activities were not performed in accordance with radiological contamination control procedures and requirements of the associated RWP/ALARA planning package or associated work instructions.

Minor because: The licensee had not begun work and radiological surveys and airborne samples revealed no radiological issues.

Not minor if: Work was in progress and surveys/samples indicated an uncontrolled spread of airborne contamination requiring additional radiological controls in other areas.

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## 7. Integrated Safety Analysis

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**Example 7a:** The licensee failed to perform a daily functional test of a dry rad waste collection scale so that a significant quantity of uranium will not accumulate in a waste drum. The functional test is credited as an IROFS in the ISA for the prevention nuclear criticality which is considered a high consequence event.

**The violation:** A specific section of the license application related to configuration management (also a management measure) requires that IROFS be installed, tested, and maintained in accordance with approved procedures. Specifically, the licensee failed to ensure that the scale was functionally tested in accordance with an approved procedure.

**Minor because:** Subsequent functional testing was completed satisfactory with no identified deficiencies.

**Not minor if:** Subsequent functional testing resulted in the failure to meet specified test objectives or acceptance criteria.

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**Example 7b:** The inspector discovered a mathematical error during the review of an ISA dose consequence calculation.

**The violation:** 10 CFR 70.61 requires IROFS for events that exceed performance requirements for the worker and public. Specifically, 10 CFR 70.61(b) requires that high consequence events be made highly unlikely.

**Minor because:** The error did not result in an increase in the consequences that exceeded 10 CFR 70.61 performance requirements (e.g., the unmitigated consequences remained intermediate for an unlikely event).

**Not minor if:** The error did result in an increase in the dose to the worker or public that exceeded 10 CFR 70.61 (b) performance requirement. The licensee was required to establish IROFS to reduce the likelihood from unlikely to highly unlikely.

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**Example 7c:** During a review of IROFS calibration records, the inspector identified that the licensee failed to perform instrument calibration at the frequency

established in the ISA.

The violation: The licensee failed to perform instrument calibration at the frequency established in the ISA. 10 CFR 70.62 requires the licensee to implement management measures (work control system) to ensure that IROFS are designed, implemented, and maintained to ensure they are available and reliable to perform their safety function when needed.

Minor because: The instrument was subsequently sent out for calibration and the as-found condition was within established acceptance criteria or provided a conservative measurement (e.g., over-response); or the instrument was not used since the last calibration.

Not minor if: Following recalibration, the instrument was found outside of the established acceptance criteria or did not provide a conservative measurement (e.g., under-response).

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Example 7d: A water leak or fire occurred in the records storage vault and resulted in damage to records involving 10 CFR 70.72 evaluations.

The violation: The licensee failed to maintain records of changes to its facility until termination of the license as required by 10 CFR 70.72(f).

Minor because: The licensee could reasonably reconstruct the records if permitted to do so by the license application.

Not minor if: The records were heavily damaged (e.g., illegible) and the licensee was either not permitted to or unable to reconstruct the records.

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Example 7e: The licensee declared an IROFS vacuum breaker inoperable as a result of a failed surveillance test (e.g., test was performed but failed to operate). Only one IROFS remained available and reliable to prevent a nuclear criticality accident. Inspector follow-up concluded that the licensee failed to implement a management measure or license requirement.

The violation: Failure to implement management measures to ensure that IROFS were available and reliable to perform their intended safety function as required by 10 CFR 70.61(e) and 70.62(d).

Minor because: The violation (such as a failure to implement a management measure or license requirement) identified by the inspectors did not contribute to the failure of the IROFS.



Not minor if: The failure was the direct result of an inadequate management measure or a failure to implement a management measure; or the failure of the IROFS was not within its analyzed failure rate assumed in the ISA.

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8. Emergency Preparedness

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Example 8a: The inspector requested for review the agreement letter with the offsite Volunteer Fire Department (VFD) to verify that an agreement was in effect detailing the type of support provided by the offsite VFD, the type of training provided to the offsite VFD by the licensee, and the frequency for reviewing and updating the agreement.

The violation: The licensee failed to update the agreement letter for the offsite VFD as required by Section 4.0 of the Emergency Plan, "Local Offsite Assistance," requires in part that "Agreement Letters are renewed every four years." The agreement letter for the offsite VFD was last updated and reviewed 5 years ago.

Minor because: The offsite and onsite contacts assigned the responsibility for maintaining the agreement current and who were signatories to the agreement letter were unchanged and when interviewed regarding the agreement, the offsite contact for support services acknowledged that the support and services agreed to in the previous letter remained in effect. Training was being provided on an annual basis as required by the Emergency Plan. Annual site familiarization tours were provided by the site to the offsite VFD, and the offsite VFD participated with the site fire brigade on an annual basis during drills in addition to participated in the past two NRC graded exercises.

Not minor if: The onsite fire brigade was trained strictly to handle incipient fire-fighting responsibility and there were no drills or training conducted with offsite VFD; or the offsite VFD management had changed along with a large turnover in staffing but no training or site familiarization tours were provided.

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Example 8b: The inspector examined an emergency response kit to determine the adequacy of contents and operational readiness status of the emergency equipment stored inside the kit. Three air samplers and electronic dosimeters were found out of calibration. The calibration sticker showed that the air sampler was last calibrated more than a year ago and no determination could be made regarding the last calibration performed on the dosimeters as there was no calibration documentation available.

The violation: The licensee failed to maintain equipment in their emergency response kit. The license requires the licensee to maintain and execute the response measures in the Emergency Plan. The Emergency Plan requires that “Inventory and maintenance be carried out in accordance with approved procedures.” Emergency preparedness implementing procedures require that instruments be calibrated on a semi-annual basis.

Minor because: Emergency response kits with identical but calibrated equipment and contents were available elsewhere onsite and accessible to emergency response personnel. In addition, several backup survey instruments, air samplers and dosimeters were available in the Radiation Safety office. The equipment with the expired calibration sticker was checked pre-calibration and determined to be within the calibration range and deemed operational.

Not minor if: No other calibrated emergency equipment or emergency kits with calibrated equipment were available and or readily accessible to responder; or non-calibrated equipment was used to address an actual emergency.

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Example 8c: The inspectors observed that no offsite response organizations were present to observe or participate in the biennial graded exercise and that the licensee simulated contact with these organizations. The inspectors reviewed the licensee’s preparations for the biennial exercise through discussions with the Health Physics specialist, who had responsibility for coordination of emergency preparedness. These discussions revealed that the requirement to invite the responsible offsite response organizations to participate in the exercise had been overlooked.

The violation: The licensee failed to invite offsite response organizations to participate in biennial onsite emergency exercises as required, in part, by 10 CFR 40.31(j)(2)(xii) or 10 CFR 70.22(ai)(3)(xii).

Minor because: The offsite response organization is not required to participate in the exercise. The licensee is required to offer the opportunity, but the offsite organization is not required or obligated to participate.

Not minor if: The offsite response organizations have requested and expressed an interest in participating in training, drills, and or exercises but the licensee has not been responsive to any and all requests from offsite support groups; or during an actual event, the response by an offsite support group and/or the coordination between the licensee and the offsite support group resulted in an inadequate response to protect the plant, workers, public, and the environment.

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Example 8d: The inspector determined an individual assigned as an alternate to the

emergency organization with responsibility to maintain a chronological listing and sequence of the events was not trained in accordance with the Emergency Plan requirements. Three other individuals including the primary assigned to the position were trained. The licensee's Emergency Plan required that all members of the emergency organization be trained annually.

The violation: The licensee failed to ensure that all members of the emergency organization be trained annually as required by their Emergency Plan. The license requires the licensee to maintain and execute the response measures in the Emergency Plan. The Emergency Plan states, in part, that "training regarding the actions they are required to perform during an emergency will be provided on an annual basis." One individual was last trained 2 years prior to the date of the inspection.

Minor because: There were three other individuals assigned this role in the emergency organization with current training qualifications. The responsibility associated with this position did not involve risk significant activity or decision-making.

Not minor if: The individual that performed the specific role in the emergency organization did not have current training qualifications and the position involved risk significant activities or decision-making.

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Example 8e: During an annual emergency preparedness inspection, the inspectors discovered that the licensee failed to correct a deficiency identified during the last biennial exercise. The inspectors reviewed the condition report (CR) and determined that the licensee's emergency response staff was unfamiliar with the Radiological Assessment Systems for Consequence Analysis (RASCAL) dose assessment software. One of the identified corrective actions was to send the affected staff to off-site RASCAL training. The inspectors reviewed the training records of the affected staff and determined that the training was incomplete. The condition report had been open for the past 12 months.

The violation: The licensee failed to correct a deficiency identified during the last biennial exercise as required, in part, by 10 CFR 70.22(i)(3)(xii) that deficiencies found by the critiques must be corrected.

Minor because: The licensee had corrected the deficiency, but failed to properly close-out the condition report; or the licensee sent the affected personnel to the off-site training (licensee could provide training certificates), but failed to update their training records; or the affected staff was replaced with other staff who were formally trained on the RASCAL software; or the licensee had scheduled the training, but not yet completed the training due to course availability.

Not minor if: The licensee had taken no actions to correct the critique deficiencies.

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9. Material, Control, and Accountability

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**Example 9a:** The inspectors conducted a performance test of the licensee's item control program at a Category (CAT) III fuel facility. All selected items, with one exception, were verified by direct observation to be physically present at the storage location indicated by licensee's records. The one exception was a waste item, containing three grams of U-235. The licensee traced the item to a waste box manifest and discovered that the item was transferred to the waste box a month prior, without performing the appropriate documentation in the nuclear material accounting database.

**The violation:** The licensee failed to perform the appropriate documentation in the nuclear material accounting database to be capable of measuring the unauthorized removal of substantial quantities of material as required, in part, by 10 CFR 74.31(c)(6).

**Minor because:** The U-235 content for the missing item was less than 500 grams.

**Not minor if:** The U-235 content of the missing item was greater than 500 grams; or the licensee failed to enter the issue into their corrective action program.

**Example 9b:** The licensee failed to perform the physical inventory every 12 months as required by NRC regulations at a CAT III fuel facility.

**The violation:** The licensee failed to perform the physical inventory every 12 months as required by 10 CFR 74.31(c)(5).

**Minor because:** The inventory was performed and did not result in any missing inventory that exceeded the allowable 9,000 grams of U-235 or 0.25 percent of the active inventory.

**Not minor if:** The inventory was performed and did result in missing inventory that exceeded the allowable 9,000 grams of U-235 or 0.25 percent of the active inventory.

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**Example 9c:** The licensee fails to remove a Material Balance Area (MBA) custodian from having access to the MC&A accounting system when the individual's training and qualification had expired.

**The violation:** The licensee failed to remove a Material Balance Area (MBA) custodian from having access to the MC&A accounting system when the individual's training and qualification had expired. 10 CFR 74.59(c), "Personnel Qualification and Training," requires the licensee to assure that personnel

who work in key positions where mistakes could degrade the effectiveness of the material control and accounting system are trained to maintain a high level of safeguards awareness and are qualified to perform their duties and/or responsibilities.

Minor because: The individual did not perform custodian duties (e.g., MC&A transactions, movement of SNM, application of tamper-indicating devices, etc.) since the training and qualifications expired.

Not minor if: The individual performed MBA custodial duties.

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10. Physical Security

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Example 10a: An unarmed or armed security officer patrolling buildings, conducting safety observations, fire brigade, or emergency medical team (EMT) activities, or posted within the site owner controlled area, protected area, and/or controlled access area for duties not associated with implementing the NRC-approved security plan is found inattentive. Activities not involved with implementing the NRC-approved security plan can be conducted by any trained and qualified employee, and the site chose to assign site security this activity.

The violation: Failure to perform activities in accordance with site procedures.

Minor because: The inattentive unarmed or armed security officer was conducting this activity and had no other duties associated with implementing the NRC-approved security plan, regulatory requirements, and any other applicable Commission requirements such as an Order or Confirmatory Action Letter.

Not minor if: If the security officer is unarmed or armed and conducting this activity in conjunction with certain activities (not all activities will be more-than-minor) associated with implementing the NRC-approved security plan, regulatory requirements, and any other applicable Commission requirements such as an Order or Confirmatory Action Letter.

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Example 10b: The licensee's security fence is required to be a specific height. The NRC discovers that, in one section, the fence is not at the required height.

The violation: Failure to meet the license condition that requires the licensee perform activities in accordance with its NRC-approved security plan and/or Order Commitments.

Minor because: The inner protected area (PA) boundary fence continues to meet the minimum height required by NRC regulations. The inner PA fence

effectively performs the function as the demarcation of the PA, ensures assessment of penetration attempts, and delays attempts of unauthorized exits from the PA.

Not minor if: The inner PA fence does not provide delay attempts at unauthorized exits from the PA and/or the intrusion detection system was not operable in any part of the isolation zones upon discovery.

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Example 10c: Licensee does not perform testing of perimeter intrusion detection system for all potential exploitation methods within the adversary characteristics.

Violation: Failure to meet 10 CFR 73.46(g) that requires a test and maintenance program for intrusion alarms, emergency exit alarms, communications equipment, physical barriers, and other physical protection related devices and equipment.

Minor because: When performance tested in accordance with the adversary characteristics, the intrusion detection system detects attempted penetration of the PA.

Not minor if: The intrusion detection system fails to detect attempted penetration of the PA for one exploitation method.

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Example 10d: The inspectors discovered that the weapons course of fire did not include all of the elements required by the Commission approved training and qualification plan (T&QP).

Violation: Failure to meet weapons training and qualification requirements in accordance with 10 CFR Part 73, Appendix B and the licensee's T&QP and implementing procedures.

Minor because: The elements are contained in another course of fire, used for qualification, and are trained at the same periodicity and proficiency standards as the weapons training course of fire.

Not minor if: The elements are not trained in another course of fire in a manner to support proficiency in the use of the assigned weapon or that meets the prescribed standards in the weapons course of fire. For example, an element not trained in a manner to support proficiency in the course of fire would be the licensee not requiring tactical reloading while conducting specific maneuvers and this is not included in the handgun or rifle course of fire.

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Example 10e: An armed or unarmed security officer entered the PA boundary near a vehicle access gate without being searched. The officer mistakenly

walked across a PA boundary to speak to the driver of a vehicle.

The violation: Failure to identify and search all individuals for firearms, explosives, and incendiary devices at the PA boundary.

Minor because: Central Alarm Station (CAS) Operator identified it and the officer immediately exited.

Not minor if: The licensee failed to immediately identify the officer crossing the PA boundary without being searched and therefore did not detect unauthorized activities at the PA boundary.

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Example 10f: A security officer performing security response related duties failed to inform their supervisor that they were taking prescription medication as required by the site's fitness-for-duty (FFD) procedures. Additionally, the employee indicated that the type of medication does not have any physical or mental affects that would impair the officer's FFD suitability to perform security duties. This was confirmed by the licensee's medical review officer (a licensed physician).

Violation: Failure to meet the licensee's written FFD procedure that is required by 10 CFR 26.27.

Minor because: A licensed physician confirmed that the medication would not impair the officer from performing their security duties.

Not minor if: The medication could have impaired or prevented the officer from effectively implementing their security response duties.

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Example 10g: A security officer performing access control functions (x-ray machine operator) at the access control facility discovered that their gas mask filters had exceeded the expiration date by two days. Upon discovery, the licensee relieved the officer of duties until they were provided current gas mask filters. The officer was one of the committed armed contingency responders. The licensee conducted an extent of condition review and determined that the issue was isolated and all other gas mask filters issued to officers were up-to-date.

The violation: Failure to meet the requirements of 10 CFR 73.46(g)(5) and the NRC-approved security plan, for ensuring a physical protection related subsystem was maintained in operable condition.

Minor because: The success of the licensee protective strategy was not contingent on the duties of the access control officer if they were attacked by gas at that location. The final access control officer controlled all critical shutdown points. The officer was not previously assigned to response position that

could be significant to the licensee's overall protective strategy during the time that the gas mask filter was expired.

Not minor if: The issue involved a security officer whose duties as a committed responder were significant to the licensee's implementation of their overall protective strategy.

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Example 10h: A licensee employee self-reported that they had entered the site PA and inadvertently brought with them a small mace spray container that is considered by the licensee's written security implementing procedures to be a contraband item and prohibited from being inside the PA.

Violation: Failure to control prohibited items in accordance with the licensee's security implementing procedures, and the NRC-approved security plan, for controlling items that are prohibited from the PA.

Minor because: The item was a small mace spray that was not used as a threat to the licensee and it was self-reported by the employee.

Not minor if: The employee attempted to use the mace as a threat and the event lead to a substantial security consequence (i.e., able to mace several tactical responders in a short period of time). If such a situation could happen with a coordinated attack, it has the potential to lead to a substantial security consequence.

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Example 10i: The licensee failed to perform the weekly security lighting inspections as required by the licensee's written procedure. Upon discovery, the licensee immediately conducted the lighting inspection and discovered one small area inside the PA that was below the required illumination level for assessing unauthorized activities inside the PA. The licensee, using closed-circuit television, assessed the area from the CAS and the operator was capable of assessing activities in the affected area. The security department immediately submitted a work order request to get the lighting repaired.

Violation: Failure to meet the licensee's written procedures and NRC-approved security plan for security systems weekly testing.

Minor because: The area affected failed below the required illumination level. However, the licensee demonstrated that illumination in the area was sufficient to detect unauthorized activity.

Not minor if: It was determined that it was a significant degradation in the licensee's ability to adequately assess unauthorized activity in the area. For example, very low level lighting covering a large part of the PA that was not observable from the CAS and/or Secondary Alarm Station (SAS) and no compensatory measures were in place.



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Example 10j: An event occurs where the licensee discovered that the SAS officer was found inattentive (appeared to be sleeping or unresponsive). At the time of the discovery, two qualified alarm station operators were performing duties inside the CAS.

The violation: Failure to maintain a primary and secondary alarm station as required by 10 CFR 73.46(e)(5).

Minor because: The acceptable compensatory measure for a loss of one alarm station is to have two qualified operators inside the operational alarm station.

Not minor if: At the time of the event, there is only one qualified operator inside the operational alarm station or the inattentive officer's actions are determined to be willful.

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Example 10k: During the conduct of a limited scope test at the access control portal, an access control security officer performed a search on an individual who failed the walk-through metal detector while entering the PA access control facility. The access control security officer, as required by the licensee's procedure, performed a handheld metal search on the individual. However, the officer's search failed to detect the training firearm on the individual resulting in the potential for the individual to enter the PA with a firearm.

The violation: Failure to detect attempts to introduce unauthorized material into the PA as required by 10 CFR 73.45(f)(2).

Minor because: The licensee has established a limited scope performance testing program that tests aspects of the overall security program. The program requires very strict safety controls and notification to management and the shift supervisor prior to being conducted. The failure was performed under a safe controlled environment for testing purposes. The officer was immediately removed from the duties to be retrained. Another qualified access control officer was posted at the access control point to perform access control functions.

Not minor if: The test was performed during an NRC inspection.

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Example 10l: An NRC inspector requested to review a licensee's in-transit security response program for shipping Special Nuclear Material (SNM). Although the licensee had a security program for in-transit shipments, they informed the NRC inspector that they were not responsible for security of the shipments once the shipment departs their site. Since the licensee

delivered the SNM to the carrier for transport, the inspector requested written confirmation that the receiver accepted responsibility for in-transit security. The licensee was unable to provide written confirmation.

The violation: Failure to properly arrange for in-transit physical protection of SNM of low strategic significance as required by 10 CFR 73.67(g)(1)(v), which requires that a licensee agree in writing to arrange for the in-transit physical protection when they are not the shipper.

Minor because: The licensee had in place an adequate in-transit physical protection program to respond if needed. In addition, there had not been an in-transit security event requiring them to respond.

Not minor if: There had been an in-transit security incident involving a shipment that the licensee was required to respond to but failed to do so.

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Example 10m: The licensee conducted an audit of the random security inspections required to be performed by the shift security officers. During the audit the licensee noticed on the inspection log that 3 days prior to their audit, one of the inspected locations (i.e., exterior UF<sub>6</sub> cylinder pad within the Controlled Access Area [CAA]) was not inspected for anomalies by the shift security officer.

The violation: Failure to adequately conduct random security inspections as required by the licensee's written security procedure and the NRC-approved security plan.

Minor because: The licensee conducted an investigation and extent of condition review that revealed no anomalies and the officer responsible for the check indicated that he simply failed to check the area. The area is located within the CAA and is observable by security officers. In addition, the licensee's investigation revealed that there were no issues in the area and all material was accounted for.

Not minor if: At the time of the event, there was a discovered anomaly.

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Example 10n: During an outside walkdown, the inspectors identified less than the required foot candles illumination between large storage boxes and other adjacent dimly lit areas. The licensee implemented temporary lighting until permanent lighting modifications could be implemented.

The violation: Failure to adequately illuminate the physical perimeter as required by the licensee's written security procedures and the NRC-approved security plan and regulations.

Minor because: The licensee conducted an investigation and extent of condition walkdown that revealed no other anomalies and determined that the dimly

lit area was the result of recently moved storage items within the protected area which is observable by security officers.

Not minor if: A reportable event resulted as a result of the lighting degradation.

END

## Exhibit 1: Standard Fuel Cycle Facilities Inspection Report Outline

Cover Letter (IMC 0616 Section 16.01)  
Cover Page (IMC 0616 Section 16.02)  
Summary (IMC 0616 Section 16.03)  
Table of Contents (IMC 0616 Section 16.04)  
Plant Status (IMC 0616 Section 16.05)  
Inspection Scopes (IMC 0616 Section 16.06) – Outline provided below  
Inspection Results (IMC 0616 Section 16.07) – Outline provided below  
Exit Meetings and Debriefs (IMC 0616 Section 16.08)  
Third Party Reviews (IMC 0616 Section 16.09)  
Documents Reviewed (IMC 0616 Section 16.10)  
Report Attachments (IMC 0616 Section 16.11)  
List of Acronyms (IMC 0616 Section 16.12)  
Cover Letter Enclosures (IMC 0616 Section 16.13)

Report Section      Inspection Procedure Title

### SAFETY OPERATIONS

88015	Nuclear Criticality Safety
88020	Operational Safety
88055	Fire Protection
88135.02	Resident Inspection Program Plant Status Activities
88135.04	Resident Inspection Program ISA Implementation
88135.05	Resident Inspection Program Fire Protection (Annual and Quarterly)
88135.17	Resident Inspection Program Permanent Plant Modifications
88135.19	Resident Inspection Program Post-Maintenance Testing
88135.22	Resident Inspection Program Surveillance Testing

### SAFEGUARDS

81335	Physical Protection of Shipment of SNM-MSS (non-public)
81340	Physical Protection of Shipment of SNM-LSS (non-public)
81431	Fixed Site Physical Protection of SNM-LSS (non-public)
81700.01	Category I FLE Cycle Facility Strategic Special Nuclear Material Security Controls (non-public)
81700.02	Category I FLE Cycle Facility Access Control Measures (non-public)
81700.04	Category I FLE Cycle Facility Equipment Performance, Testing and Maintenance (non-public)
81700.05	Category I FLE Cycle Facility Physical Protection Program and Protective Strategy (non-public)
81700.06	Licensee Conducted Force-on-Force Exercises at Category I FLE Cycle Facilities (non-public)

- 81700.07 Category I FLE Cycle Facility Security Training (non-public)
- 81700.08 Category I FLE Cycle Facility Fitness for Duty Programs (non-public)
- 81700.10 Protection of Safeguards Information at Category I FLE Cycle Facilities (non-public)
- 81700.11 Annual Observation of Licensee Conducted Force-on-Force Exercises at Category I FLE Cycle Facilities (non-public)
- 81810 Protection of Safeguards Information (non-public)
- 81815 Authorization for Access to National Security Information (NSI) & Restricted Data (RD) (non-public)
- 81820 Physical Protection Facility Approval and Safeguarding of National Security Information (NSI) & Restricted Data (RD) (non-public)
- 96001 Contingency Response-Annual Force-on-Force Testing Category I FLE Cycle Facilities (non-public)
- IMC 2683 IPs As Listed (non-public)

#### RADIOLOGICAL CONTROLS

- 86740 Inspection of Transportation Activities
- 88030 Radiation Protection
- 88045 Effluent Control and Environmental Protection

#### FACILITY SUPPORT

- 88050 Emergency Preparedness
- 88051 Evaluation of Exercises and Drills
- 88070 Plant Modifications (Annual)
- 88072 Plant Modifications (Triennial)
- 88161 Corrective Action Program (CAP) Implementation at Fuel Cycle Facilities

#### OTHER AREAS

- 40100 Independent Safety Culture Assessment Follow-up
- 71152 Problem Identification and Resolution
- 71153 Follow-up of Events and Notices of Enforcement Discretion
- 84850 Radioactive Waste Management - Inspection of Waste Generator Requirements of 10 CFR Part 20 and 10 CFR Part 61
- 88003 Reactive Inspection for Events at Fuel Cycle Facilities
- 88005 Management Organization and Controls
- 88010 Training
- 88071 Configuration Management Programmatic Review
- 88075 Event Follow-Up

88161	Corrective Action Program (CAP) Implementation at Fuel Cycle Facilities
92701	Follow-Up
92702	Follow-Up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, and Orders
92709	Contingency Plans for Licensee Strikes or Lockouts
92711	Implementation of Licensee Contingency Plans During a Strike/Lockout
92712	Resumption of Normal Operations After a Strike
93001	OSHA Interface Activities
93100	Safety-Conscious Work Environment Issue of Concern Follow up
93800	Augmented Inspection Team
93812	Special Inspection
95003.02	Guidance for Conducting an Independent NRC Safety Culture Assessment

ATTACHMENT 1  
Revision History for IMC 0616

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional, Non-Public)
N/A	07/29/08 CN 08-021	This new IMC is for the use of FCSS and Region II inspectors. These Offices will no longer use IMC 0610.	No	ML081640248
N/A	ML11314A098 12/21/11 CN 11-042	Revision to include discussion of the significance of the violation	No	
N/A	ML14071A139 07/28/14 CN 14-017	Major rewrite. Updated NRC Enforcement Policy section numbers, added requirement to use four-part violation format, deleted Appendices B and C. and added new Appendix B, Examples of Minor Issues.	Yes	ML14142A309
N/A	ML15112A050 06/15/15 CN 15-011	Removed documentation requirement to include minor violations identified during allegation follow up.  Inspection reports containing OUO-Security Related Information will not be disclosed to the public. The associated cover letters will be disclosed to the public and will include the number and severity levels of violations. Addition per SRM-SECY-14-0034.	No	ML15112A055

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional, Non-Public)
N/A	ML16098A162 06/27/16 CN 16-014	Corrected an inaccurate statement in minor/more-than-minor example 7.e of Appendix B. Specifically, the language referring to crediting IROFS from other accident sequences to ensure the accident remains highly unlikely was removed from the 'not a violation if' section and the phrase "an inadequate management measure" was added to the 'not minor if' section.	No	Comments vetted through meetings with Region II
N/A	ML16160A380 08/15/17 CN 17-014	Deleted the definitions Inspector Follow-up Item (IFI) and Finding. Revised Section 8 to improve the four-part-write up process by removing redundancies and providing more guidance on documenting AVs. Clarified Sections 11.01 and 11.02. In Section 14 moved the four-part write-up guidance from the Inspection Scope sub-section to the Conclusions sub-section. Clarified the high-level guidance in the beginning of Appendix B and deleted the 4 <sup>th</sup> General screening question that referred to a violation only associated with paperwork and no clear nexus to safety. Added two more-than-minor examples to Appendix B (1.j and 2.k).	No	Comments vetted through meetings with Region II
N/A	ML21082A281 04/01/21 CN 21-017	Revised to update organization changes, include additional definitions, and to reflect new method of documenting inspection reports using the RRPS/ISTAR auto report generator. Removed "not a violation if" statements to maintain focus on the intent of the guidance - screening criteria to support the minor/more-than-minor threshold determination for issues that have been determined to be violations.	Complete by February 2021	N/A