

NRC INSPECTION MANUAL

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INSPECTION MANUAL CHAPTER 0375

IMPLEMENTATION OF THE REACTOR OVERSIGHT PROCESS AT REACTOR FACILITIES IN AN EXTENDED SHUTDOWN CONDITION FOR REASONS NOT RELATED TO PERFORMANCE

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0375-01 PURPOSE

To establish guidance for the implementation of the Reactor Oversight Process (ROP) at plants in an extended shutdown condition for reasons not related to performance (i.e. emergent technical challenges).

To ensure that when the plant is in an extended shutdown condition for reasons not related to performance, the Nuclear Regulatory Commission (NRC) communicates unified and consistent oversight in a clear and predictable manner to the licensee, the public, and other stakeholders.

To ensure other federal agencies, such as the Federal Emergency Management Agency (FEMA), the Environmental Protection Agency (EPA), the Department of Justice (DOJ), and the Department of Homeland Security (DHS), and State and local government representatives are involved and informed as necessary.

To document the required regulatory and licensee actions taken, the resolved technical issues leading to approval for restart (if required), and the eventual return of the plant to the routine ROP.

To provide assurance that the plant will be operated in a manner that provides adequate protection of public health and safety following restart.

0375-02 OBJECTIVES

02.01 To establish guidance for when this Inspection Manual Chapter (IMC) should be initiated and concluded.

02.02 To provide guidance for developing an inspection plan outlining the specific inspections related to the return of the plant to power operation and any necessary changes to baseline inspection.

02.03 To provide guidance concerning the applicability of the Performance Indicators (PIs) that may not be applicable to an extended shutdown condition.

02.04 To provide a mechanism for communicating the status of NRC oversight activities to internal and external stakeholders.

02.05 To provide guidance on the establishment of an oversight panel to help coordinate oversight and facilitate internal and external communications.

02.06 To verify that licensee corrective actions are sufficient prior to restart; if required.

0375-03 APPLICABILITY

This manual chapter may be implemented during an extended shutdown for reasons not related to performance.

Consistent with IMC 0608, "Performance Indicator Program," an extended shutdown is defined as an outage lasting 6 months or longer. IMC 0375 provides guidance for ROP implementation

at plants that had been operating (before they entered into an extended shutdown) under the provisions of the ROP and IMC 0305, "Operating Reactor Assessment Program." A plant in extended shutdown implementing the guidance of 0375 will still be assessed using IMC 0305 and the Action Matrix.

An operating commercial nuclear power plant may shut down for a variety of reasons, potentially involving events or conditions not directly related to a significant performance and/or operational concern. The maintenance required to return the plant to service during such outages could be outside the realm of what is accomplished during shorter planned outages such as refueling outages (RFO) and could be complicated by unanticipated technical or design issues that may have resulted in the shutdown.

Prior to 2011, guidance from IMC 0350 had been used in combination with informal guidance to oversee plants in extended shutdowns. If an extended shutdown is not related to significant performance and/or operational concerns, IMC 0350 and the negative connotations associated with the extent of increased oversight are not appropriate. IMC 0351 guidance was established in 2011 to assist the regional offices in anticipating the impact on routine ROP activities and developing innovative approaches to implementing the ROP. The staff revised this IMC in November 2015 in response to lessons learned from the San Onofre steam generator tube degradation event. The staff also revised the numbering of this IMC to IMC 0375 in response to feedback that the negative connotation of IMC 0350 was inferred on plants operating under IMC 0351 due to the similarity in numbering. While a plant in extended shutdown (under IMC 0375) is still assessed using IMC 0305, the guidance in this chapter will help maintain consistent, reliable, and transparent oversight.

A plant will be considered for placement in IMC 0375 when the plant is in, or the licensee anticipates, an extended shutdown. When considering guidance of this IMC, regional management should carefully consider the following: (1) expected length of the plant shutdown, (2) the degree to which the licensee has performed an 'extent-of-condition' evaluation pertaining to the reasons for the shutdown, and (3) the amount of discovery still required of the licensee to identify all of the technical and/or design problems associated with the shutdown.

Recognizing that application of this guidance may not be necessary in all cases, regional management has the discretion not to implement the IMC 0375 guidance even though a plant may be in an extended shutdown.

0375-04 RESPONSIBILITIES AND AUTHORITIES

04.01 Director, Office of Nuclear Reactor Regulation (NRR).

- a. Develops assessment program policies and procedures.
- b. Ensures uniform program implementation and effectiveness.

04.02 Director, Division of Reactor Projects (DRP), applicable Region.

- a. Determines the applicability of this manual with input from NRR/DRO, Resident Inspectors and Special Inspection Team (SIT), Augmented Inspection Team (AIT) or Incident Inspection Team (IIT) as appropriate.

- b. Responsible (delegates as necessary) for the development of the Inspection and Communication Plan.
- c. Identifies the need for an IMC 0375 Coordination Panel (also referred to as Panel) and recommends the institution of a Panel to the Regional Administrator, as needed.

04.03 Regional Administrator

- a. Approves the institution of an IMC 0375 Coordination Panel, as needed.
- b. Selects the Chairman of the Panel and establishes the Panel's composition and responsibilities.

04.04 Director, Division of Reactor Oversight (DRO), NRR.

- a. Concurs with the Regional decision to implement this IMC and any associated inspection plan.
- b. Consults with the DRP Director to recommend instituting an IMC 0375 Coordination Panel.

04.05 Director, Division of Operating Reactor Licensing (DORL), NRR.

- a. Coordinates staff reviews of licensing actions and, where applicable, staff interaction with other federal agencies (e.g. FEMA, EPA, DHS, DOJ,) pursuant to any applicable memoranda of understanding.
- b. Serves as Vice Chairman of the 0375 Coordination Panel, if instituted.

04.06 Director, Division of Preparedness and Response (DPR), Office of Nuclear Security and Incident Response (NSIR).

Coordinates with FEMA and the Region regarding the offsite infrastructure and emergency preparedness capabilities to support plant restart in accordance with IMC 1601, "Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness Following a Natural Disaster, Malevolent Act, or Extended Plant Shutdown."

04.07 Director, Division of Security Operations (DSO), NSIR.

Concurs on the security inspection plan developed by the Region and coordinates with the Director, Division of Reactor Safety in the appropriate Region for the conduct of those inspections.

04.08 Chairman, IMC 0375 Coordination Panel

- a. Coordinates the Panel's activities and develops an IMC 0375 Coordination Plan to assign responsibilities and schedule any necessary actions and interactions with the licensee and outside organizations.
- b. In conjunction with the Director of the Division of Operating Reactor Licensing (Vice Chairman), ensures that the Regional Administrator and Director of NRR are directly

involved, when appropriate, in agency policy or regulatory oversight decisions.

0375-05 GUIDANCE

05.01 IMC 0375 Coordination Panel.

A Coordination Panel may be established at the discretion of the regional management to effectively and efficiently administer the guidance for oversight activities provided in this IMC. Establishment of the Panel may help in providing additional management focus when complex issues arise. The DRP Director will identify a need for a Panel in consultation with the DIRS Director. Some guidelines to determine if Panel formation is warranted are:

- Level of complexity or uniqueness of event
- Difficulty in reaching alignment on issues involving multiple offices
- Establishment of special projects branches
- The potential for concurrent licensing and oversight activities
- High levels of interest from external stakeholders

A schematic providing a general approach for consideration of IMC 0375 implementation can be found in Figure 1. The DRP Director will recommend establishing an IMC 0375 Coordination Panel to the Regional Administrator, if warranted. The Regional Administrator will decide if a Panel is to be implemented. The Regional Administrator selects the Chairman of the Panel and establishes the Panel's composition and responsibilities. The Regional Administrator will issue a Panel Charter including purpose and objectives of the Panel, Panel membership, and quorum requirements. The Panel will typically consist of the following individuals, or those in similar positions:

- Director or Deputy Director, DRP or Division of Reactor Safety (DRS) (Chairman)
- Director or Deputy Director, NRR/DORL (Vice Chairman)
- Responsible regional office DRP Branch Chief
- Responsible regional office DRS Branch Chief (as needed)
- Responsible Project Manager, NRR/DORL (or Branch Chief)
- Responsible Senior Resident Inspector
- Responsible regional office Senior Risk Analyst (as needed)
- Director or Deputy Director, Division of Preparedness and Response, NSIR

Members can be added to or removed from the Panel, as appropriate, depending on the specific details of the problems leading to the plant shutdown and the matters to be evaluated before restart is authorized. Though not typically a member of the Panel, the Chief of the ROP Assessment Branch in NRR (or designee) will provide support to Panel activities to ensure proper implementation of the IMC 0375 process.

Quorum requirements for Panel meetings should be established and included in the Panel Charter to ensure proper and consistent authority for panel decisions. The quorum would typically consist of the Panel Chairman, the Vice Chairman, and at least two other cognizant members of the Panel.

The Panel should develop an IMC 0375 Coordination Plan for the implementation of this IMC. The Coordination Plan should provide the following: (a) risk-significant issues related to the reason for the shutdown that must be resolved before restart (i.e., restart issues); (b) the specific inspection and oversight activities by which the NRC will determine the licensee's readiness for restart; and (c) who has lead responsibility for each action.

The Coordination Plan: (1) ensures that there is an adequate inspection plan and that there is a record to support the restart determination; (2) tracks restart issue status and reference documents which contain the inspection results associated with the resolution of the issues; (3) addresses new issues, including items identified by the extent-of-condition reviews; (4) incorporates the Communications Plan (as detailed in section 06.04); and (5) establishes the plant-specific criteria for terminating the implementation of IMC 0375.

05.02 Inspection Plan.

If warranted, the Region can develop a unique inspection plan or modify the existing site inspection program to examine the root cause and corrective actions for any potential technical and/or design issues, and readiness to return the plant to full operational status. Specific areas of inspection will be dictated by the circumstances causing the extended shutdown and may change in focus or scope as shutdown activities progress. Inspection activities commensurate with the applicable column of the Action Matrix should be utilized to the maximum extent possible. When developing and modifying the inspection plan, the Region should use the baseline inspection procedures in accordance with Appendix A of IMC 2515, "Light Water Inspection Program – Operations Phase," to the extent they are practical based on plant conditions, the availability of samples, and anticipated plant activities. The inspection plan can include status of ongoing and completed inspection activities related to the extended shutdown as well as future inspection activities given the current schedule and known circumstances at the time that the inspection report is developed.

Although some samples may not be inspected because of plant conditions, the intent of the baseline inspection program may still be met without an increase of inspection resources by performing alternate inspections. Inspection samples and hours specifically related to operations may need to be decreased because of plant conditions, while hours and samples may be increased in the areas of problem identification and resolution and refueling/outage activities. If inspection sample size must be reduced, guidance of Section 08.04 of IMC 2515 shall be followed. Additionally, inspections listed in Appendix C of IMC 2515 can be performed with Regional Administrator approval in accordance with IMC 2515. Opportunities for completing the baseline inspection by performing alternate inspections shall be included in the inspection plan. If re-allocation of the baseline inspection is necessary for a particular shutdown, the Director, DRO/NRR (or designee), will concur with the inspection plan.

An area that might warrant inspection is the operational readiness of the licensee for reactor restart. Because the length of the outage can present challenges to the licensee's operational readiness, the number of units at the site is one variable that should be considered when assessing operational readiness. For example, a dual unit site may rotate operators between the shutdown plant and the operating plant while single unit site operators have no such

opportunities to maintain their operational knowledge and skill and have a greater challenge of maintaining operational readiness. Equipment upgrades and maintenance, procedure updates, facilities maintenance, and the status of the corrective action program should be considered as potential areas for additional inspection. Ensuring the licensee has maintained safety-related equipment current by incorporating the latest vendor bulletins and other important information into plant procedures could be another area for additional inspection during an extended shutdown because some of these systems may not be required during a shutdown. The Region should also consider other opportunities for inspection not explicitly listed in this IMC when modifying the inspection plan.

If the circumstances require a unique inspection that is not currently documented in an inspection procedure, the inspection plan must be of sufficient detail for the inspectors to meet the clearly defined inspection objectives. The need for a new inspection procedure or temporary instruction to be created and issued in accordance with IMC 0040, "Preparing, Revising, and Issuing Documents for the NRC Inspection Manual," should be considered if the shutdown is generic in nature and may apply to other operating reactors.

Effort spent on baseline and supplemental inspections should be charged to the appropriate inspection procedure in accordance with IMC 0306, "**Planning, Scheduling, Tracking and Reporting of the Reactor Oversight Process (ROP)**." Section 06.04 of IMC 0306 also provides guidance on documenting inspection procedures if the sample size must be modified. Direct inspection effort spent on special inspections as a result of an event should be charged to Inspection Procedure (IP) 93812, "Special Inspection", using the event response (ER) code, and the associated preparation and documentation should be charged to IP 93812 using the ERP and ERD activity codes respectively. Inspection results should be documented in accordance with IMC 0611, "Power Reactor Inspection Reports," to the extent practical. Areas where no findings are identified may be documented in greater detail than required by IMC 0611, specifically the results of those inspection activities relating to an event, the basis for the extended shutdown, or operational/restart readiness.

The Inspection Plan should be reviewed and modified as necessary on at least a quarterly basis, to ensure that the inspection schedule is optimized with anticipated plant activities. Specific licensee actions directly related to reason(s) for shutdown and the corresponding NRC activities can be listed in the inspection plan if deemed necessary by regional management.

05.03 Performance Indicator Impacts.

Plants should continue to gather and submit PI data in accordance with IMC 0608 to the extent that the data is available under extended shutdown conditions. Some PIs in the initiating events, mitigating systems, and barrier integrity cornerstones may either be lapsed or may lack current data due to the extended shutdown, but PIs in the other cornerstones still provide useful indications of plant performance. The inspection plan should include consideration of any inspections necessary to compensate for PIs that lack current data.

Upon restart, several PIs will remain invalid until sufficient data have been collected to calculate each specific PI. In other words, the validity of each PI is dependent on the data needed to calculate the specific PI. The algorithms for calculating the different PIs, and in some cases the thresholds to determine their validity, are contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline." As an example, since the Unplanned Scrams and Unplanned Power Changes PIs in the Initiating Events cornerstone are not considered valid if there are fewer than 2,400 critical hours in the previous four quarters, it would typically take two quarters

of operational data following restart for these indicators to be considered valid. Furthermore, starting up with only two quarters of critical hours makes this PI more volatile, meaning it could cross a threshold with a lower number of scrams than was intended. Mitigating System Performance Index (MSPI) is a valid indicator if supported by 3 years of data. The staff and industry representatives have discussed the validity of MSPI indicators after extended shutdown and concluded that at least four quarters of operational data are required prior to making these PIs valid for assessment purposes. The staff will evaluate the validity of MSPI indicators on a plant-specific basis via the ROP Working Group and Frequently Asked Questions process (reference January 2014 ROP Public Meeting Summary; ML14041A236). On the other hand, the Reactor Coolant System (RCS) Activity and RCS Leakage PIs in the Barrier Integrity cornerstone are considered valid with the first quarterly data submittal following restart because the PIs can be calculated using a single month's reported value at steady state power. Questions regarding the potential validity of specific indicators should be referred to the Performance Assessment Branch in NRR.

05.04 Communication Plan.

The Region will consider development of a communication plan to ensure effective communication with internal and external stakeholders and openness in the status of ongoing licensee activities and associated inspection activities, including the responsibilities and methodologies for interactions with the Commission; the Advisory Committee on Reactor Safeguards (ACRS); the media; Federal, State, and local officials; and other stakeholders. The Communication Plan should consider frequency, extent, and methods to be used for meetings with the licensee and the public. Some communication methods to inform the public about IMC 0375 implementation to be considered are: a site-specific oversight Web page; NRC **social media** posts; public meetings; and/or, press releases. In addition to a general Communication Plan for routine interactions with internal and external stakeholders, the Region will follow guidelines of IMC 1601, "Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness."

Regional management will determine the need for, and the level of, NRC participation with public stakeholders on a case-by-case basis. The level of appropriate public stakeholder participation varies greatly and depends on the cause of the shutdown; the interest of State and local citizens, public interest groups, the media, and elected officials; and the concerns of other government agencies. Public stakeholder meetings have proven to be a valuable vehicle for communications with external stakeholders. These meetings are held to describe the results of the NRC's review of the licensee's activities. Public stakeholder meetings in the local area should be strongly considered so that the concerns and comments on the licensee's shutdown activities can be heard. FEMA, as well as local, State, and Federal Law Enforcement and other emergency response/support agencies should be involved in public stakeholder meetings that may include significant discussion of the adequacy of offsite emergency preparedness to support plant restart, when appropriate. Furthermore, the Region, in coordination with NSIR, should anticipate and allow adequate time for FEMA to make a determination regarding the status of offsite emergency preparedness, as stipulated in IMC 1601.

The Region will ensure that efforts have been made to establish an open dialogue with local and State government officials and agencies. The Region should ensure that inquiries from the Congress, local and State government agencies, and various Federal agencies are promptly addressed. Inquiries regarding the adequacy of offsite emergency preparedness should be coordinated with FEMA. Appropriate caution should be exercised to avoid the release of pre-decisional, proprietary, or Safeguards Information when responding to inquiries. When interest

extends to a foreign government (e.g., Canada), the Office of International Programs or its designee shall brief the foreign officials if the EDO deems a briefing appropriate.

05.05 ROP Web Page.

PIs, inspection findings, and other applicable oversight information will be posted to the ROP Web page in accordance with IMC 0306. Because plants under the guidance of IMC 0375 do not fall outside of the routine ROP, the applicable Column and description in the Action Matrix will be listed in accordance with IMC 0306. The Region should also consider developing and maintaining a specific Web page to facilitate ease of public access to key information. The Web site should contain important correspondence, public meeting slides and transcripts, NRC inspection reports, and other relevant information.

05.06 Termination of IMC 0375 Implementation.

Once the licensee has successfully resolved the issues causing the extended shutdown and completed applicable corrective actions, there are no prescribed criteria needed to terminate implementation of this IMC. Staff must only document the activities and decisions performed under this IMC. The DRP Director, or Panel Chairman if instituted, should compile any lessons learned from the implementation of IMC 0375 and submit a written lesson learned report to the NRR/DRO Director.

The Regional Administrator will inform the licensee about the termination of IMC 0375 implementation at the plant in writing via the next regularly scheduled assessment letter (i.e., mid-cycle or annual) following conclusion of the guidance's implementation.

05.07 Records

Information on NRC and licensee actions related to the extended shutdown should be considered for inclusion in NRC inspection reports. Other forums, such as public correspondence between the licensee and the NRC or Commission papers, may be acceptable as well. The records developed for the shutdown could consist of the following, if applicable:

- a. The Inspection Plan.
- b. The Communication Plan.
- c. Coordination Panel Charter and Plan (as applicable).
- d. Inspection reports and related correspondence.
- e. Pertinent licensing actions completed by the NRC.
- f. Other agency and Government actions communicated to the NRC.
- g. Applicable documents that reflect the implementation of IMC 0375 at the site.
- h. ROP Feedback Form via IMC 0801, "Inspection Program Feedback Process," or memorandum to DRO providing the lessons learned to be considered for incorporation in the next revision to IMC 0375.

All documents relating to the extended shutdown may be included in the docket file and, to the extent permitted by 10 CFR 2.790, made public in accordance with NRC policy. Pre-decisional information will not be made public until after the applicable decision has been made.

0375-06 REFERENCES

IMC 0040, "Preparing, Revising, and Issuing Documents for the NRC Inspection Manual."

IMC 0305, "Operating Reactor Assessment Program."

IMC 0306, "Planning, Scheduling, Tracking and Reporting of the Reactor Oversight Process (ROP)."

IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns."

IMC 0608, "Performance Indicator Program."

IMC 0609, "Significance Determination Process."

IMC 0611, "Power Reactor Inspection Reports."

IMC 0801, "Inspection Program Feedback Process."

IMC 1601, "Communication and Coordination Protocol for Determining the Status of Offsite Emergency Preparedness."

IMC 2515, "Light Water Reactor Inspection Program."

NRC Management Directive 8.3, "NRC Incident Investigation Program."

"Review of Lessons Learned from the San Onofre Steam Generator Tube Degradation Event," ADAMS Accession No. ML15015A149

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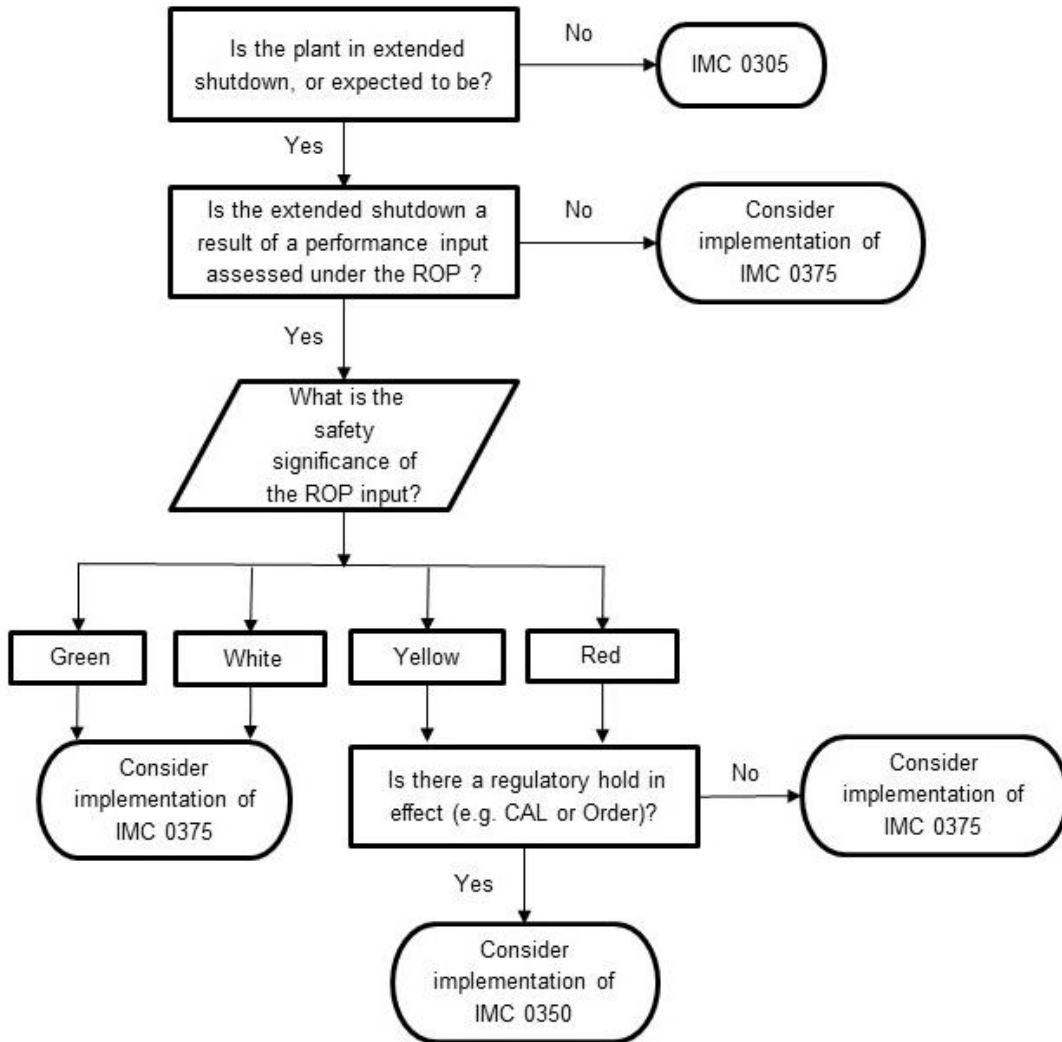
Figure:

1. Reference Schematic for the Decision-Making Process to Implement IMCs 0350 or 0375

Attachment:

1. Revision History for IMC 0375

Figure 1: Reference Schematic for the Decision-Making Process to Implement IMCs 0350 or 0375



ATTACHMENT 1
Revision History for IMC 0375

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 Information)
N/A	ML110030073 04/05/11 CN 11-005	<p>Researched commitments for 4 years and found none.</p> <p>No explicit guidance exists that governs ROP implementation during extended outages not related to performance. In the past, guidance from IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns," has been used in combination with informal email guidance for plants in extended shutdowns. While plants in this condition still fall under the ROP, the reason for the extended shutdown is not related to performance issues so IMC 0350 and the negative connotations associated with the extent of increased oversight are not appropriate.</p>	N/A	ML11082A009
N/A	ML15247A274 11/13/15 CN 15-024	<p>Addressed recommendations from the SONGS Lessons Learned report.</p> <p>Clarified guidance for the use of this IMC and implementation of a Coordination Panel.</p> <p>Revised numbering of the guidance to avoid confusion with IMC 0350.</p>	N/A	ML15247A268
N/A	ML20218A5630 8/12/20 CN 20-038	<p>Routine editorial updates for the five year periodic review.</p>	N/A	N/A