NRC INSPECTION MANUAL IRIB

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| INSPECTION PROCEDURE 71111 ATTACHMENT 22 |

SURVEILLANCE TESTING

Effective Date: July 1, 2021

PROGRAM APPLICABILITY: IMC 2515 A

CORNERSTONES: Mitigating Systems

Barrier Integrity

INSPECTION BASES: See IMC 0308 Attachment 2

SAMPLE REQUIREMENTS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sample Requirements | | Minimum Baseline Completion Sample Requirements | | Budgeted Range | |
| Sample Type | Section | Frequency | Sample Size | Samples | Hours |
| Surveillance Test | 03.01 | Annual | 10 per site  5 at Vogtle Units 3 & 4 | 13 to 21 per site  5 to 7 at Vogtle Units 3 & 4 | 100 hours per site  45 hours at Vogtle  Units 3 & 4 |
| Inservice Test | Annual | 3 per site  1 at Vogtle Units 3 & 4\* |
| Containment Isolation Valve Test | When Required\* | 1 per unit |
| Ice Condenser Test\*\* | When Required\* | 1 per unit |
| Reactor Coolant System Leakage Detection Test | When monitoring for increasing reactor coolant leakage occurs\* | |
| Diverse and Flexible Coping Strategies (FLEX) Testing | 03.02 | Annual | 1 | 1. per site |

\*Required Each Refueling Outage

\*\*Only applicable to Ice Condenser Units

71111.22-01 INSPECTION OBJECTIVE

* 1. Verify that surveillance testing (including inservice testing (IST)) activities provide objective evidence that risk- or safety‑significant structures, systems, and components (SSCs) remain capable of performing their intended safety functions and maintain their operational readiness consistent with their design and licensing bases (i.e., will operate within safety limits and limiting conditions for operation will be met).
  2. Verify that testing activities provide objective evidence that FLEX SSCs remain capable of performing their intended functions and maintain their operational readiness consistent with their licensing bases.

71111.22-02 GENERAL GUIDANCE

The following table outlines additional inspection guidance for selecting risk- or safety-significant systems.

|  |  |
| --- | --- |
| Mitigating Systems - Identify any mitigating system, credited by the licensee as operable when assessing risk, which is adversely impacted by surveillance testing related failures such as failure to adequately test, failure to meet test criteria or, failure to realign equipment after the surveillance. | |
| Risk Priority | Example |
| Focus in areas with potential for common mode failures.  Select surveillance tests which cross technical disciplines (electrical, mechanical, instrument and control)  IST of pumps and valves that perform important functions in mitigating systems. (For additional guidance on IST inspection refer to IP 73756, “In-service Testing of Pumps and Valves” and NUREG-1482, “Guidelines for Inservice Testing at Nuclear Power Plants.”) | Integrated safeguards testing  Emergency diesel start/load testing  Battery performance testing  Reactor protection, Reactor Coolant System (RCS) leakage detection, and safety injection instrumentation testing  Safety bus loss of voltage and degraded voltage relay testing  Pumps that provide injection water flow and valves that change position to provide injection water flow to the reactor coolant system. |
| Barrier Integrity - Identify any containment integrity supporting system, credited by the licensee as operable when assessing risk, which is adversely impacted by surveillance test failures such as failure to adequately test, failure to meet test criteria or failure to realign equipment after the test. | |
| Risk Priority | Example |
|  | Containment isolation valve testing, ventilation/filtration system testing |

Consider selection of the IST activity based on the component or system performance history (known deficiencies), or if the component or system had recently undergone corrective or preventive maintenance.

For sites that have Lead Test Assemblies loaded in operating cores, consider selecting a sample to verify that RCS Specific Activity is within limits. NRC Memorandum titled “Clarification of Regulatory Path for Lead Test Assemblies,” ([ML18323A169](https://www.nrc.gov/docs/ML1832/ML18323A169.pdf)) has additional background information.

For AP1000 designs, in addition to safety-related structures, SSCs, focus on systems classified as regulatory treatment of nonsafety systems (RTNSS) of high or intermediate importance, which are used for protecting utilities investment and for preventing and mitigating severe accidents. A list of SSCs classified as RTNSS is in Chapter 16 of the Vogtle Electric Generating Plant (VEGP) Updated Final Safety Analysis Report (UFSAR), Table 16.3-1. The list of Risk-Significant SSCs within the Scope of Design Reliability Program, which evaluates the design of the AP1000 and identifies the aspects of plant operation, maintenance, and performance monitoring pertinent to risk-significant SSCs, is in Chapter 17 of the VEGP UFSAR, Table 17.4-1. RTNSS is discussed in Section C.IV.9 “Regulatory Treatment of Nonsafety Systems” of Regulatory Guide 1.206, “Applications for Nuclear Power Plants.”

During plant outages, sample selection should focus on infrequent surveillance tests, and particularly large-scale actuation tests and full-flow engineered safety feature pump testing, as well as inspections of normally inaccessible SSCs (e.g., containment sump inspections, refueling water storage tank or condensate storage tank internal inspections).

As part of the sample, consider reviewing surveillance tests in which there was a modification of the surveillance frequency in accordance with the Risk Management Technical Specification (TS) Initiative 5b Surveillance Frequency Control Program.

For plants that have implemented the requirements of 10 CFR 50.69, sample selection should include consideration of SSCs that have been categorized as RISC-2, nonsafety-related SSCs that perform safety significant functions. Refer to inspection procedure (IP) 37060, “10 CFR 50.69 Risk-Informed Categorization and Treatment of Structures, Systems, and Components Inspection” for additional information.

After Fukushima, the NRC ordered every U.S. commercial reactor to have mitigation strategies for dealing with the long-term loss of normal safety systems following the occurrence of a beyond-design-basis external event (NRC Order EA-12-049, [ML12054A735](https://www.nrc.gov/docs/ML1205/ML12054A735.pdf)). Because of the low probability of an external event causing a simultaneous loss of all AC and normal access to the ultimate heat sink, FLEX equipment may not be risk/safety significant. However, FLEX increases defense-in-depth for beyond-design-basis scenarios to address loss of power and loss of the ultimate heat sink occurring simultaneously at all units on a site.

Implementation guidance for FLEX is found in Nuclear Energy Institute (NEI) 12-06, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide,” and endorsed via Japan Lessons Learned Project Directorate Interim Staff Guidance (JLD-ISG) 2012-01, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.” Various revisions are in effect. NEI 12-06, Revision 0 ([ML12242A378](https://www.nrc.gov/docs/ML1224/ML12242A378.pdf)) is endorsed via JLD-ISG 2012-01, Revision 0 ([ML12229A174](https://www.nrc.gov/docs/ML1222/ML12229A174.pdf)). NEI 12-06, Revision 2 ([ML15348A015](https://www.nrc.gov/docs/ML1534/ML15348A015.pdf)) is endorsed via JLD-ISG 2012-01, Revision 1 ([ML15357A163](https://www.nrc.gov/docs/ML1535/ML15357A163.pdf)). NEI 12-06, Revision 4 ([ML16354B421](https://www.nrc.gov/docs/ML1635/ML16354B421.pdf)) is endorsed via JLD-ISG 2012-01, Revision 2 ([ML17005A188](https://www.nrc.gov/docs/ML1700/ML17005A188.pdf)). It should be noted that not all revisions of NEI 12-06 are endorsed.

Verification of activities under this procedure should focus on performance-based field observations of complete surveillance / testing evolutions, followed by verification of the bases and of the proper demonstration of performance that supports operability / functionality determinations.

For each sample, conduct a routine review of problem identification and resolution activities using IP 71152, “Problem Identification and Resolution.” Examples of significant surveillance testing problems and appropriate inspector follow-up include:

1. Licensee actions to addressed measuring and test equipment (M&TE) that fails calibration. Inspectors should assess the adequacy of the licensee’s corrective actions, considering the following: the licensee tracks which surveillance tests used each piece of M&TE, compares the failed M&TE calibration information to each surveillance test that used that M&TE, and then assesses the impact to the operability of the affected system. Inspectors should also consider performing a 71111.15, “Operability Determinations and Functionality Assessments,” sample to more thoroughly assess the potential effects on operability.
2. Licensee actions to address degraded system performance identified during in-service testing. When degraded performance is revealed, inspectors should review the condition reporting data base to determine if the licensee is implementing appropriate corrective actions, such as testing with increased frequency in accordance with American Society of Mechanical Engineers (ASME) Code, Surveillance Frequency Control Program, or other applicable requirements.

71111.22-03 INSPECTION SAMPLES

03.01 Surveillance Test

**Verify by witnessing surveillance tests and/or reviewing the test data, that surveillance testing activities and results provide objective evidence that the affected SSCs remain capable of performing their intended safety functions (under conditions as close as practical to design bases conditions or as required by TS) and maintain their operational readiness consistent with the facility’s current licensing basis**.

Specific Guidance

Significant surveillance test attributes for consideration include the following:

1. Effect of testing on plant operations has been adequately addressed by licensee (control room and/or engineering) personnel.
2. Preconditioning of SSCs prior to or post-testing. Unacceptable preconditioning is defined as the alteration; variation; manipulation; or adjustment of the physical condition of an SSC before or during TS surveillance or ASME Code testing such that it will alter one or more of SSCs operational parameters, which results in acceptable test results. Such changes could mask the actual as-found condition of the SSC and possibly result in an inability to verify the operability of the SSC. In addition, preconditioning could make it difficult to determine whether the SSC would perform its intended function during a design basis event in which the SSC might be needed (See Inspection Manual Part 9900, Technical Guidance, “Maintenance – Preconditioning of Structures, Systems, and Components Before Determining Operability,” for additional guidance).
3. Acceptance criteria are clearly derived from the supporting technical bases (design bases, setpoint calculations, UFSAR, TS Bases, etc.) and demonstrate operational readiness consistent with the facility’s current licensing basis.
4. M&TE specified in procedures are part of the measuring and test equipment program, their calibration status is within acceptable limits, and their range and accuracy are consistent with the application as supported by design bases documents. Plant equipment calibration is correct, accurate, properly documented and the calibration frequency is in accordance with TS, UFSAR, licensee procedures and commitments.
5. Test is performed in sequence and in accordance with written procedure.
6. Jumpers installed or leads lifted during testing are properly controlled.
7. Electrical connections are properly torqued, secure, and maintain their intended design function.
8. For cases where the licensee relies on multiple surveillance tests to satisfy a surveillance requirement, the affected surveillance test procedures collectively accomplish the entire scope of the surveillance requirement.
9. Setpoints, required test accuracy, test frequency, and allowable setpoint drift for selected safety-related instrumentation and control surveillance tests (i.e., RPS, NIs, etc.) conform to applicable setpoint calculations. Reference setpoint data has been accurately incorporated into the applicable test procedure(s). *To determine whether open phase condition (OPC) detection and protection circuits (as applicable) are functional, review OPC alarm setpoints and alarm response procedure(s) to verify whether operators can take timely manual actions consistent with the licensee’s commitments to the OPC Voluntary Industry Initiative.* [C2]
10. Annunciator and other alarms are demonstrated to be functional and setpoints are consistent with design bases documents. Alarm response procedure entry points and actions are consistent with plant design/licensing bases documents.
11. Testing methods, acceptance criteria, and required corrective actions for IST activities meet with the applicable version of the ASME Code, Section XI. In concert with TS requirements, IST programs are intended to ensure the operational readiness of certain safety-related pumps and valves. Inspectors must review reference values or changes to reference values for consistency with the design bases and verify that the current acceptance criteria match the most recent reference test data. For pump testing, the inspectors should verify that the licensee established system operating conditions that reflect limiting operational conditions and are sufficiently repeatable to allow performance trending. Inspectors should also review sufficient test performance history to verify that the licensee identified and is addressing any adverse trends.
12. For local leak rate testing, isolation valves inside and outside containment are each tested with pressure exerted in a direction consistent with expected accident conditions. The inspectors should verify that the licensee updates the total containment leak rate data with the new measured value and confirm that the overall leak rate is still within acceptable limits. The inspectors should verify that the licensee schedules the isolation valve(s) for maintenance if administrative limits are exceeded. The inspectors should also verify that the containment penetration(s) is declared inoperable if acceptance criteria are exceeded.
13. Test frequency was adequate to demonstrate operability (meets TS requirements), and reliability. Appendix A, “Risk Management TS Initiative 5b Surveillance Frequency Control Program,” provides additional guidance if a selected sample is associated with the application of the Risk Management TS Initiative 5b Surveillance Frequency Control Program.
14. *If an adverse trend in RCS leakage is being monitored by the licensee, the inspectors should verify that the licensee has programs and processes in place to (1) monitor plant-specific instrumentation that could indicate potential RCS leakage, (2) meet existing requirements related to degraded or inoperable leakage detection instruments, (3) use an inventory balance check when there is unidentified leakage (4) take appropriate corrective action for adverse trends in unidentified leak rates, and (5) pay particular attention to changes in unidentified leakage.* [C1]
15. Unavailability of the tested equipment is appropriately considered in the licensee’s Mitigating System Performance Index data.
16. After completion of testing, equipment is returned to the positions/status required for the SSCs to perform its intended safety function.
17. Test equipment is removed after testing.
18. Test data is complete, verified, and meets procedure requirements.
19. For test results that do not meet the acceptance criteria, the results of licensee engineering evaluations provide an acceptable bases for returning affected SSCs to an operable status.
20. Performance trends for the last several completed tests are appropriately documented and addressed. If testing indicates unacceptable setpoint drift or otherwise demonstrates degradation, the inspector must assess the adequacy of the licensee’s corrective actions. These may include component replacement and/or increased frequency of testing, for example.

03.02 FLEX Testing

**Verify by witnessing tests and/or reviewing the test data, that testing activities and results provide objective evidence that FLEX SSCs remain capable of performing their intended functions (under conditions as close as practical to licensing conditions) and maintain their operational readiness consistent with the facility’s current licensing basis**.

Specific Guidance

Section 11.5 of NEI 12-06 contains guidance on FLEX maintenance and testing. If needed, questions regarding FLEX issues can be raised with either the regional Technical Support Branch Chief or with the NRR Beyond Design Basis Engineering Branch (via the NRR DORL PM).

71111.22‑04 REFERENCES

Cross Reference of Generic Communications to IP 71111.22 and Inspection Resources: <https://drupal.nrc.gov/nrr/ope/34018> (nonpublic)

Operating Experience: <http://drupal.nrc.gov/nrr/ope> (nonpublic)

IHS Codes and Standards: <https://drupal.nrc.gov/tech-lib/35748> (nonpublic)

IMC 2515, “Light-Water Reactor Inspection Program - Operations Phase”

IMC 2515, Appendix A, “Risk-Informed Baseline Inspection Program”

IP 73756, “Inservice Testing of Pumps and Valves”

IP 61720, “Containment Local Leak Rate Testing”

IP 71152, “Problem Identification and Resolution”

IP 37060, “10 CFR 50.69 Risk-Informed Categorization and Treatment of Structures, Systems, and Components Inspection”

Bulletin 88‑04, "Potential Safety‑Related Pump Loss," May 5, 1988.

Code of Federal Regulations, Title 10, Part 50, Section 50.55a, "Codes and Standards."

Generic Letter 89‑04, "Guidance on Developing Acceptable Inservice Testing Programs," April 3, 1989.

Information Notice 97‑90, “Use of Nonconservative Acceptance Criteria in Safety‑Related Pump Surveillance Tests,” December 30, 1997

10 CFR 50, Appendix J, including Option B.

NUREG‑1482, “Guidelines for Inservice Testing at Nuclear Power Plants”

ASME Boiler and Pressure Vessel Code, Section XI, “Rules for Inservice Inspection of Nuclear Power Plant Components”

Inspection Manual Part 9900, Technical guidance, “Maintenance - Preconditioning of Structures, Systems, and Components Before Determining Operability”

Regulatory Guide (RG), 1.45, “Reactor Coolant Pressure Boundary Leakage Detection Systems”

Regulatory Issue Summary 06‑17, “NRC Staff Position on the Requirements of 10 CFR 50.36, Technical Specifications, Regarding Limiting Safety System Settings During Periodic Testing and Calibration of Instrument Channels”

Information Notice 2010-25, “Inadequate Electrical Connections”

NEI 12-06, Revision 0, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide,” ([ML12242A378](https://www.nrc.gov/docs/ML1224/ML12242A378.pdf))

NEI 12-06, Revision 2, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide,” ([ML15348A015](https://www.nrc.gov/docs/ML1534/ML15348A015.pdf))

NEI 12-06, Revision 4, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide,” ([ML16354B421](https://www.nrc.gov/docs/ML1635/ML16354B421.pdf))

JLD-ISG 2012-01, Revision 0, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,” ([ML12229A174](https://www.nrc.gov/docs/ML1222/ML12229A174.pdf))

JLD-ISG 2012-01, Revision 1, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,” ([ML15357A163](https://www.nrc.gov/docs/ML1535/ML15357A163.pdf))

JLD-ISG 2012-01, Revision 2, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,” ([ML17005A188](https://www.nrc.gov/docs/ML1700/ML17005A188.pdf))

RG 1.200, “An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities,” U.S. Nuclear Regulatory Commission, Washington, DC. ([ML090410014](https://www.nrc.gov/docs/ML0904/ML090410014.pdf))

RG 1.201 “Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants according to Their Safety Significance,” U.S. Nuclear Regulatory Commission, Washington, DC. ([ML061090627](https://www.nrc.gov/docs/ML0610/ML061090627.pdf))

NEI 00-04, “10 CFR 50.69 SSC Categorization Guideline,” Nuclear Energy Institute, Washington, DC, July 31, 2005. ([ML052900163](https://www.nrc.gov/docs/ML0529/ML052900163.pdf))

NRC Memorandum “Clarification of Regulatory Path for Lead Test Assemblies,” ([ML18323A169](https://www.nrc.gov/docs/ML1832/ML18323A169.pdf))

END

APPENDIX A

RISK MANAGEMENT TECHNICAL SPECIFICATIONS (TS) INITIATIVE 5b SURVEILLANCE FREQUENCY CONTROL PROGRAM (SFCP) GUIDANCE

71111.22A-01 INSPECTION OBJECTIVE

The objective of this Appendix is to provide additional guidance if a selected sample is associated with a licensees’ implementation of the risk management TS (RMTS) Initiative 5b, described in the RMTS Guidelines Document NEI 04-10, Risk Informed Method for Control of Surveillance Frequencies.

71111.22A-02 GENERAL GUIDANCE

A highlight of the SFCP change process is found in the specific guidance below. The SFCP change process does allow for extending Surveillance Test Intervals (STIs) even when SSCs have had prior failures. However, focus should be placed on previous SSC performance.

The surveillance frequency should be adequate to demonstrate operability. As indicated in Surveillance Requirement (SR) 3.0.1, SRs shall be met during the Modes or other specified conditions in the Applicability for individual Limited Conditions for Operations, unless otherwise stated in the SR. A Surveillance is met only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being performed, constitutes a Surveillance not met. Given an SSC’s previous performance, the Surveillance will still need to be met during the extended STI. Any concerns associated with extending STIs given prior SSC performance can be raised with NRR/DRO/IRIB.

71111.22A-03 INSPECTION SAMPLES

See Section 03.01 of IP 71111.22.

Specific Guidance:

The following guidance highlights the SFCP change process, as recommended in NEI 04-10, “Risk-Informed Technical Specifications Initiative 5b, Risk Informed Method for Control of Surveillance Frequencies, Industry Guidance Document” (see list of References for the applicable revision).

If the STI was previously extended through the SFCP, a minimum number of surveillance intervals is needed per the NEI guidance prior to further extending the STI. A minimum of three successive satisfactory performances of the surveillance is needed when the STI is less than or equal to six months, and a minimum of two successive satisfactory performances of the surveillance is needed when the STI is greater than six months.

Surveillance frequency change was evaluated by the licensee for prohibitive commitments, and either no such commitments existed, or they were revised prior to implementation of the STI change.

The qualitative evaluation by the licensee included, as a minimum, the items identified in NEI 04-10, step 7. Some of the items identified include considerations for SSC performance history, vendor specified maintenance frequency, and test intervals specified in applicable industry codes and standards.

If the affected component or system is modeled in the PRA, or was added to the PRA model to support application of the SFCP: The acceptance criteria for licensee’s evaluation, using the licensee's PRA model, is <1 E-6 ΔCDF and <1 E-7 ΔLERF. If the affected component or system is not modeled in the PRA: The acceptance criteria for the licensee’s qualitative or bounding analyses is the acceptance criteria of <1 E-7 ΔCDF and <1 E-8 ΔLERF. The acceptance criteria for the cumulative impact of all STI changes is <1 E-5 ΔCDF and <1 E-6 ΔLERF. Sensitivity studies associated with the revised STI are performed by the licensee. An in-depth review of the licensee’s PRA evaluation or analysis is not required.

An Independent Decisionmaking Panel (IDP) approves the STI change. The IDP is comprised of the site Maintenance Rule Expert Panel, a Surveillance Test Coordinator, and a Subject Matter Expert. If approved, the STI changes are appropriately implemented by revising plant procedures and affected documents, and training personnel as needed. SSC performance associated with the revised STI is also monitored by the licensee. SSC performance is considered during periodic re-assessments.

71111.22A-04 REFERENCES

IMC  2515, Appendix A, “Risk‑Informed Baseline Inspection Program”

IMC 0308, Attachment 2, “Technical Basis for Inspection Program”

IP 71111.13, Maintenance Risk Assessments and Emergent Work Control.

RG 1.174, An Approach for Using Probabilistic Risk Assessment in Risk Informed Decisions on Plant Specific Changes to the Licensing Basis.

RG 1.177, An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications.

RG 1.200, An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk Informed Activities.

EPRI 1009474, Dec 2004 RMTS Guidelines.

Licensee Safety Evaluation Report (SER) for the license amendments adopting RITS 5b.

NEI 04-10 Revision 0[[1]](#footnote-1), Risk-Informed Technical Specifications Initiative 5b, Risk Informed Method for Control of Surveillance Frequencies, Industry Guidance Document ([ML062570416](https://www.nrc.gov/docs/ML0625/ML062570416.pdf)).

NEI 04-10 Revision 1, Risk-Informed Technical Specifications Initiative 5b, Risk Informed Method for Control of Surveillance Frequencies, Industry Guidance Document ([ML071360456](https://www.nrc.gov/docs/ML0713/ML071360456.pdf)).

NUMARC 93-01, NEI – Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 3.

GDC in 10 CFR Part 50, Appendix A.

NEI 00-04, Revision 0, 10 CFR 50.69 SSC Categorization Guideline ([ML052900163](https://www.nrc.gov/docs/ML0529/ML052900163.pdf)).

END

Attachment 1 – Revision History for IP 71111.22

| 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 | 01/17/2002  CN 02-001 | Revised to incorporate minor changes to the inspection requirements. In addition, inspection resource estimates and inspection level of effort are revised to provide a band for more inspection flexibility. | NO | N/A |
| C1  Reference: Davis-Besse Lessons Learned Task Force Item 3.2.1(3) | ML041340229  05/11/2004  CN 04-013 | Revised to include RCS leak detection system surveillance as part of the surveillance testing samples. Revision also includes surveillance testing attributes for reviewing annunciator/alarm setpoints and alarm response procedure actions.  DBLLTF Report: [ML022760172](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML022760172) | YES  9/24/2003 | N/A |
| N/A | [ML053490179](https://www.nrc.gov/docs/ML0534/ML053490179.pdf)  01/05/2006  CN 06-001 | Reduced the estimated resources required to complete this inspection activity based on inspection hours charged to this IP during last several ROP cycles. Completed historical CN search. | NO | N/A |
| N/A | [ML070540275](https://www.nrc.gov/docs/ML0705/ML070540275.pdf)  02/27/07  CN-07-007 | IP 71111.22 address feedback form 71111.22‑912 to clarify Section 02.02 to more clearly describe what is to be accomplished when conducting the leakage detection surveillance inspection. | NO | N/A |
| N/A | [ML092780504](https://www.nrc.gov/docs/ML0504/ML092780504.pdf)  12/24/09  CN-09-032 | Revised IP to make changes recommended by 2009 ROP Realignment process. (Ref. ML092090312.)   * Did not make changes recommended by FF71111.19-1334; see FF for details. * Incorporated FF2515-1309 by adding reference to IMC 2515 in Section 2.02 to emphasize observation of plant activities. * Incorporated FF2515-1325 by removing quarterly sample requirements in Level Of Effort section and Section 2.01. Quarterly samples are not required by IMC 2515.   In Section 04, reduced the resource estimate by 5 hours. | NO | N/A |
| N/A | [ML11213A004](https://www.nrc.gov/docs/ML1121/ML11213A004.pdf)  11/08/11  CN 11-031 | Revised to incorporate feedback associated with Feedback Form No. 71111.22-1550. | NO | [ML112840035](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML112840035) |
| N/A | [ML12086A064](https://www.nrc.gov/docs/ML1208/ML12086A064.pdf)  04/12/2012  CN 12-005 | Revised to reflect NRC approval of Risk Management Technical Specification Initiative 5b Surveillance Frequency Control Program. | YES  To be conducted by NRR after IP issuance. | [ML12086A084](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML12086A084) |
| N/A | [ML15040A283](https://www.nrc.gov/docs/ML1504/ML15040A283.pdf)  06/15/15  CN 15-011 | Revised to incorporate feedback associated with the ROP Enhancement Project. | NO | [ML15127A419](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML15127A419) |
| N/A | [ML18177A109](https://www.nrc.gov/docs/ML1817/ML18177A109.pdf)  11/19/18  CN 18-039 | Revisions are made to:  (1) Address recommendations from the working group established to update the ROP for regulatory actions taken following the Fukushima Dai-ichi accident. IP revised to allow for oversight of FLEX testing, and as a minimum, require one inspection sample per year. (2) Conform to new IP format requirements found in IMC 0040. | None | [ML18179A042](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML18179A042) |
| N/A | [ML19197A106](https://www.nrc.gov/docs/ML1919/ML19197A106.pdf)  12/20/19  CN 19-041 | Added AP 1000 Sampling Requirements. Revised to provide additional guidance associated with inspection of Risk Management Technical Specification Initiative 5b Surveillance Frequency Control Program. Addresses concerns raised in Feedback Form 71111.22A-1857. Removed language regarding vertical slice (Feedback Form 71111.22-2329). | None | [ML19210C941](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML19210C941)  71111.22-2329  [ML19301A005](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML19301A005)  71111.22-1857  [ML19233A026](https://nrodrp.nrc.gov/idmws/ViewDocByAccession.asp?AccessionNumber=ML19233A026) |
| N/A | ML20191A205  10/06/20  CN 20-047 | Revised AP1000 baseline sampling range from 5 to 9 to 5 to 7. Added references for operating experience. | None | ML20233A522 |
|  | ML20324A093  11/20/20  CN 20-064 | Administrative change to clarify information in the Sample Requirements table. | None | N/A |
| C2  SRM-SECY  16-0068 | ML21033A557  03/21/19  CN 21-015 | Revised to incorporate Commission direction in SRM-SECY-16-0068 to update the ROP to provide periodic oversight of the industry’s Open Phase Condition initiative | None | ML21035A251 |

1. NEI 04-10, Revision 0, is referenced in the Limerick Generating Station technical specification surveillance frequency control program. All other licensees reference NEI 04-10, Revision 1. [↑](#footnote-ref-1)